

Design of a Bahasa Melayu Grammar Online Learning Portal for Form Two Students Using Delphi Technique

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ABSTRACT

This study was aimed at developing a Bahasa Melayu grammar learning portal for Form Two students (BMGLP). A developmental approach was used in this study. Needs analysis was carried out on the Bahasa Melayu teachers and Form Two students. The results of needs analysis on Form Two students showed that they preferred topics such as question answering techniques, and proverbs. The Delphi technique using consensus of experts in Bahasa Melayu was carried out in three rounds. The findings have resulted in successful development of a Bahasa Melayu Grammar Learning Portal for Form Two students. Hence it can be concluded that the BMGLP was successfully developed and can help students to acquire Bahasa Melayu grammar efficiently. Lastly, based on the findings, it is suggested that teachers and students use web portal materials as supplementary resources to diversify their learning activities besides enriching their knowledge of Bahasa Melayu grammar.

Keywords: *Learning portal, Delphi technique*

INTRODUCTION

Development of a Bahasa Melayu Grammar Learning Portal for Form Two Students (henceforth BMGLP) can result in a conducive teaching and learning environment for Bahasa Melayu teachers and Form Two students in Malaysia. The teachers and Form Two students can access information at any time and place through the portal, and this will motivate the students in self learning using the BMGLP.

The rationale for building the BMGP was to help Form Two students in their online learning so that they can use the portal resources to supplement their classroom texts. The BMGLP was developed not only for use by Form Two students but it can also be accessed by Form One and Form Three students. It can be said that online Bahasa Melayu grammar learning materials for Form Two students are lacking. The existing online Bahasa Melayu grammar learning materials only cover limited topics. Chiero (1997) noted that insufficient training is the main obstacle in computer usage. Hence, teachers and students need to be given exposure through courses on ways to access the Internet, computer use, searching for resources on websites appropriate to the syllabus and students' cognitive level. The limited knowledge and expertise received enable Bahasa Melayu teachers to practice technology use as instructional aids when teaching the Bahasa Melayu subject in class (Zamri Mahamad & Mohamed Amin Embi, 2001).

Mohd. Arif Hj. Ismail and Mohd. Jasmy Abd. Rahman (2000, p. 261) suggest that developing one's own website offers many advantages such as: websites are a good alternative to the use of CD-ROMs as teaching resources; they can be developed taking into account aspects such as suitability to potential, level and interest of students; they can be accessed by students, parents and educators without restriction of space or time; they allow practical preparation for instructors and students before attending classes or lectures; they encourage Self-Access Learning; and, the website developed can be linked to other sites and integrated into other Internet applications such as e-mail, List Serv or Internet Relay Chat.

The use of Internet applications represent an innovation to teachers interested in attracting students to reading and information retrieval (Jamaludin Badusah & Hashimah Haji Hashim, 2005). Teachers can encourage students to use the Internet in the teaching and learning process in the computer laboratory. In the teaching of Bahasa Melayu, teachers can integrate use of web resources as a medium of teaching and learning and produce teaching materials for the classroom.

Besides that, resources in the BMGLP allow teachers and students to enhance their knowledge, access information and materials quickly at negligible cost. The system allows teachers and students to use grammar learning resources without restriction of time or place and indirectly encourages self-access learning among secondary school students. Internet curriculum materials are suitable for self-study and problem solving and the potential of the Internet lies in promotion of literacy and higher order thinking (Mike, 1996).

According to Mohd Arif Ismail, Zamri Mahamod dan Norizan Abdul Razak (2000) from the aspect of Bahasa Melayu learning, Internet use is able to enhance the effectiveness of teaching and can enhance learner enthusiasm effectively; learners can understand a topic easily. Internet use can support multiple types of learning approaches, lessen the obstacles of time and place and dependence on resources for learning, make available resources for lifelong learning; and support collaborative learning activities that researchers believe are important in the learning experience (Jefferies & Fiaz Hussain, 1998).

PURPOSE OF THE STUDY

This study was aimed at identifying the needs of Bahasa Melayu teachers and Form Two students from the aspect of grammar learning resources needed for the BMGLP. It is also aimed at identifying the major components, learning topics, type of exercises, activities, type of assesment questions and grammar learning resources required by Form Two students and teachers in the BMGLP. This study also is targeted at identifying the main problems faced by Bahasa Melayu teachers in teaching activities and learning of grammar among Form Two students in school. It is also aimed at eliciting opinions from Bahasa Melayu outstanding teachers regarding topics, exercises, activities, assessment questions, and grammar learning materials for inclusion in the BMGLP.

RESEARCH OBJECTIVES

The research objectives are as follows:

- To obtain feedback, opinions, and suggestions from Bahasa Melayu experts and Form Two teachers regarding topics, exercises and grammar learning materials to be included in the BMGLP.
- To obtain from Bahasa Melayu experts information on what are considered appropriate techniques and approaches to teaching of Bahasa Melayu grammar in the BMGLP.

RESEARCH QUESTIONS

1. What are the contents for developing the BMGLP?
 - a. What grammar learning materials are suitable for inclusion in the BMGLP according to the opinion of Bahasa Melayu experts?
 - b. What are the main components for building the BMGLP in the opinion of Bahasa Melayu experts?
 - c. What are the grammar topics that need to be included in the BMGLP?
 - d. What types of exercises need to be included in the BMGLP according to the Bahasa Melayu experts?
 - e. What types of grammar activities must be included in the BMGLP according to the Bahasa Melayu experts?
2. What are the techniques and approaches through the BMGLP that are considered appropriate according to the view of Bahasa Melayu experts?
3. What types of assessment questions need to be developed for the BMGLP in the opinion of the Bahasa Melayu experts?
4. What information sources should be included in the BMGLP?

5. How can the BMGLP be used to enrich the grammar learning strategies among the Form Two students in the classroom?

THE DELPHI TECHNIQUE

The Delphi technique was developed to collect opinions from experts in a certain field (Winzenried, 1997). The technique uses a series of questionnaires to collect knowledge, judgment or opinions of experts in answering a complex question (Roth, 1990). Delphi is a way to achieve consensus using expert opinions (Kalivoda & Simpson, 1992); it involves experts cooperating in solving a general problem (Buckley, 1995). The Delphi technique is one way to obtain an exact opinion arrived at by consensus of experts (Saedah Siraj, 2008). It is categorized as an approach for structuring the group communication process so that it is effective in allowing a group of individuals to solve a complex problem (Linstone & Turoff, 2002).

According to Linstone (1978, p. 405), in its simplest form, the Delphi technique is a carefully designed series of individual interrogations (usually conducted by written questionnaires) interspersed with information and opinion feedback. In the Delphi process, the focus is on how the opinion of experts in the group regarding the discussion differs in defending various types of situations and how the opinion of group members differs among themselves (Wilhelm, 2001). A Delphi study is aimed at achieving expert consensus and consistent opinions from a panel of experts in two or more successful rounds in a particular research subject (Yang Yu Nu, 2003). In this study, the Delphi technique is used to achieve consensus among Bahasa Melayu experts in developing learning materials.

DEVELOPING A WEB PORTAL FOR USE BY TEACHERS AND STUDENTS

According to Mohamed Amin Embi, Zalizan Mohd Jelas dan Sidek Ab Aziz (2001, p. 114), online programs in Bahasa Melayu specifically targeted at teachers are lacking; hence online resources need to be developed for teacher professional development using Bahasa Melayu and English as a communication medium.

VirTEC was developed in conjunction with UNESCO 2000/2001 by a group of researchers from Universiti Kebangsaan Malaysia (UKM), Universiti Putra Malaysia (UPM) dan Universiti Teknologi Malaysia (UTM) as a self-access portal for teacher professional education. Through VirTEC, teachers can access e-learning modules and other resources developed by teacher educators for teacher trainees and in-service candidates (Mohamed Amin Embi, Zalizan Mohd Jelas et al., 2001). Resources for English teachers in VirTEC include course information, e-lectures, tutorials, quizzes, the latest references, forums, bulletins, research and development projects, e-experts, e-conferences, lesson plans, teaching tips and teacher network (please see <http://web.myvirtec.net/home.cgi>).

A portal for English language learning in Malaysia called SMART Net was developed by Mohamed Amin Embi. Teachers and students can master English language learning strategies through SMART Net (<http://www.fpend.ukm.my/smartnet/index.htm>). According to Mohamed Amin Embi (1998, p. 161), teachers can use and integrate the web resources with teaching and learning of English language all over the world; the resources have been categorized according to language skills and fields of language. The SMART Net model encompasses grammar learning strategy, improvement of writing, oral communication skills, listening and vocabulary. Another study by Mohamed Amin Embi (2000) showed that teachers believed that SMART Net can be an Internet-based tool for raising the level of language teaching and learning.

A study was carried out using a survey questionnaire containing 12 items using a four point Likert Scale to investigate the perceptions of trainee teachers (n=167) regarding the capability and suitability of SMART Net as an Internet based learning tool for English language, Bahasa Melayu dan Arabic language. The survey findings showed that teachers had a positive view of the suitability and usability of SMART Net as a teaching learning tool for languages. However, TESL teachers had a more positive view as opposed to that of language and literature teachers and Islamic Education teachers (Mohamed Amin Embi, Jamaludin Badusah, Mohd Isa Hamzah & Alias Baba, 2000, p. 186).

Among the websites developed for facilitating the learning process is the SMIT-TeReC (*Science, Mathematics and Information Technology Online Teacher Resource Center*) also known as ELT-Trec or English Language Teaching Online Resource Centre. Developed as an online networking resource for teachers of science, mathematics and Information Technology, SMIT-TeReC (<http://www.smit.upm.edu.my>) helped in teacher professional development by offering online self-learning modules for science, mathematics and information technology teachers

(Mohamed Amin Embi, Afendi Hamat & Muhammad Kamarul Kabilan, 2004).

Meanwhile, the SaLMas (*Self-access E-learning Management System*) was developed to help teachers develop and manage online learning activities (<http://www.eltreciukm.my/SaLMas>). SaLMas is a system for online lesson delivery that can be used by educators for self access for managing online teaching and learning (Mohamed Amin Embi & Afendi Hamat, 2004).

Besides that, University of Lapland (Finland) had developed an online curriculum based on Internet Web Portal as a pilot project for one course from 2001 until 2003 to integrate learning resources through the online curriculum or online syllabus (http://www.urova.fi/home/ktk/opettajankoulutus/tekhinen_tyol/). According to Miika (2003, p. 3), the portal is used for projects and studies related to various electronic resources and tools such as simulations in the context of Technology Education and provides resource integration and virtual learning activities in student learning. Studies show that students want to obtain resources for learning in their courses. The findings by Miika (2003) showed that students benefited from the system by having all the resources in one place, easily access updated data, and have access to links enabling collaboration through web applications.

METHODOLOGY

This study used the Delphi technique (three rounds) to obtain feedback from ten Bahasa Melayu experts through interview questions.

Sample

Bahasa Melayu experts were interviewed through the Delphi technique to elicit their feedback regarding the techniques for teaching grammar and what resources need to be placed in the grammar learning portal.

Research Instruments in Delphi Technique

Three rounds of the Delphi technique were used to elicit the views and feedback of Bahasa Melayu experts regarding the grammar teaching techniques and grammar learning materials appropriate for application in the classroom using the BMGLP. The instrument (interview) is appropriate for the sample size in this study.

ANALYSIS OF THE FIRST ROUND OF THE DELPHI TECHNIQUE

Interviews were carried out with 10 Bahasa Melayu experts to elicit their views regarding grammar teaching materials required and appropriate for inclusion in the web portal. Delphi technique was used to achieve consensus among the Bahasa Melayu experts. Data for the study were compiled through three rounds of interviews. The first round showed that the main components required in the BMGLP were exercises and information on word usage, affixes, grammar errors; notes; question bank; and the latest information.

The findings from interviews with Bahasa Melayu experts will be analyzed. The findings in the form of opinions and suggestions from experts in the first round will be used in the questionnaire for the second round. The findings from round one will be arranged according to themes and a 4-point Likert scale will be used to ascertain the agreement of the Bahasa Melayu experts.

ANALYSIS OF THE SECOND ROUND OF DELPHI TECHNIQUE

In the second round, a survey form in three parts (Part A on main components for building the web portal; Part B on Bahasa Melayu experts' opinion regarding techniques and approaches using the BMGLP; and Part C on the problems in learning Bahasa Melayu grammar faced by Form Two students) was distributed to ten Bahasa Melayu experts. The findings of Delphi Round Two were based on a 4-point Likert scale. In the Second Round, the median and interquartile range was calculated. The aim was to achieve consensus among the experts (the scale was: 1 = Highly disagree; 2 = Disagree; 3 = Agree; and 4 = Highly agree.)

Analysis of the Second Round was based on the median and interquartile range of responses. Items were arranged in descending order starting from the highest.

The items in the second round were based on the first round findings from the interviews with experts. The questionnaire was in three sections and responses were based on a four point Likert scale as in Round One. The

second round aimed at achieving consensus among Bahasa Melayu experts. Analysis of the results from this round involved the median and interquartile range. The median score was used to analyze the level of consensus of experts. Findings from this round showed that all items achieved consensus among Bahasa Melayu experts although there were differences in the level of agreement and extent of consensus among the Bahasa Melayu experts. Hence there were no significant differences between the experts regarding the items in Round Two.

ANALYSIS OF THE THIRD ROUND OF THE DELPHI TECHNIQUE

The Bahasa Melayu experts were given three weeks to answer the survey questionnaire. In the third round, analysis of the second round and their original answers were sent to the Bahasa Melayu experts; the survey form was the same as that in Round Two, together with additional items. The questionnaire in the third round also included the median and interquartile range to allow the Bahasa Melayu experts to reconsider their answers in the third round by referring to the answers given by the group members. The Bahasa Melayu experts were given the opportunity to compare their answers with those of other expert group members.

In the third round, the experts can retain their original answer as given in round two where their answers are given as interquartile ranges. The Bahasa Melayu experts might change their answer in the third round if their initial responses fell outside the interquartile range or the experts may choose to retain their answers that fall outside the interquartile range, and give their reasons for retaining their answers. The third round is aimed at achieving consensus and narrowing the range of differences in opinion among the experts. After the third round, the data were analyzed and the median as well as interquartile range calculated. Findings from the Delphi third round were used to answer the research question.

GRAMMAR LEARNING RESOURCES ACCORDING TO BAHASA MELAYU EXPERTS

This section answers research question 1a, namely:

1. What are the contents for developing the BMGLP?

1a. What grammar learning materials are suitable for inclusion in the BMGLP according to the opinion of Bahasa Melayu experts?

Table 1. The Grammar Learning Resources Suitable for Inclusion in the BMGLP

Item No.	Bahasa Melayu grammar learning materials	Position	Median	Quartile 1	Quartile 3	Interquartile Range
17	Materials on culture and literature	5.5	4	3	4	1
3	Audio, video, visual kinetic and music	5.5	4	4	4	0
5	Grammar learning materials suited to students' style and characteristics	5.5	4	3	4	1
16	<i>Dewan Bahasa Dan Pustaka</i> magazine	5.5	4	4	4	0
1	Materials on right usage of connectives/conjunctions	5.5	4	4	4	0
14	Radio and television materials	5.5	4	3	4	1
9	Materials on grammar error analysis	5.5	4	4	4	0
2	Newspapers, academic magazines and materials from story books	5.5	4	3	4	1
8	Materials from software (PowerPoint)	5.5	4	3	4	1
7	Illustrated charts	5.5	4	3	4	1
19	Materials on usage of verbs, adverbs, and others	13.5	3.5	3	4	1
21	Cartoons	13.5	3.5	3	4	1
11	Crossword puzzles	13.5	3.5	3	4	1
13	Materials on commentaries, focus of discussion and newspaper advertisements	13.5	3.5	3	4	1

15	Radio and television materials	13.5	3.5	3	4	1
22	Materials from outside the language field	13.5	3.5	3	4	1
23	Academic notes	20	3	3	4	1
12	Exercises on giving meaning to words	20	3	3	4	1
10	Quizzes	20	3	3	4	1
6	Notes on collective nouns	20	3	3	4	1
20	Song lyrics	20	3	3	4	1
4	Reference books	20	3	3	4	1
18	Traditional and modern literature texts	20	3	3	4	1

Table 1 shows that the choice of items did not change much between the second and third rounds. Based on the findings of the third round, grammar learning materials for inclusion in the portal were as follows: literature materials, materials on right use of connectives, materials on grammar error analysis, academic magazines and story books, materials on usage of *kata pemerl*, verbs, crossword puzzles, non-language materials, academic notes, exercises on word meanings, quizzes, notes on collective nouns, reference books and traditional as well as modern literary works.

MAIN COMPONENTS OF THE BMGLP

This section answers the research question 1b, namely: What are the main components for building the BMGLP according to the Bahasa Melayu experts?

Table 2. Main Components for Building the BMGLP

Item No.	Main Components of the BMGLP	Position	Median	Quartile 1	Quartile 3	Inter Quartile Range
11.	The latest spelling (as defined by the Language and Literary Agency)	3.5	4	4	4	0
7	Latest information	3.5	4	4	4	0
13	Grammar enrichment in various forms	3.5	4	4	4	0
3	Explanation/description of grammar errors	3.5	4	3	4	1
4	Notes with examples of sentences following the latest syllabus	3.5	4	3	4	1
8	Grammar exercises according to context and flow	3.5	4	3	4	1
1	Word usage	8.5	3.5	3	4	1
12	Language enrichment	8.5	3.5	3	4	1
5	Question bank	8.5	3.5	3	4	1
9	Errors in terminology/phrases	8.5	3.5	3	4	1
2	Use of prefixes and suffixes	12	3	3	4	1
6	Varied grammar exercises such as exercises on comparing differences in word usage in sentences	12	3	3	4	1
10	Proverbs/words of wisdom and others	12	3	3	4	1

Note. The item number is based on findings of the Delphi Round One
 Inter quartile range (IQ) = Q3 – Q1

In the third round of the Delphi technique, the questionnaire together with the answers from the second round were sent to the Bahasa Melayu experts; the experts were allowed to retain the answers they gave in Round Two or to change their answers in the Third Round after considering the opinions of the other experts.

Based on Table 2, the Bahasa Melayu expert panel members retained their initial opinion regarding many of the items. Main components suggested for inclusion in the BMGLP as concluded by consensus of experts were the

following: notes on spelling, grammar enrichment, analysis of grammar errors, sentence examples, question bank, analysis of terminology and phrasal errors, use of affixes, and exercises on comparing word usage in sentences and use of proverbs.

GRAMMAR TOPICS ACCORDING TO BAHASA MELAYU EXPERTS

This section will answer research question 1c, namely:

1c. What grammar topics need to be included in the BMGLP?

Table 3. Grammar Learning Topics for the Bahasa Melayu Grammar Learning Portal

Item No.	Topics in Bahasa Melayu grammar learning in the BMGLP	Position	Median	Quartile 1	Quartile 3	Inter Quartile Range
7	Use of adjective according to sentence context	5.5	4	4	4	0
1	Types of words	5.5	4	4	4	0
2	Type sof sentences	5.5	4	4	4	0
3	Building sentences	5.5	4	4	4	0
4	Spelling system	5.5	4	4	4	0
5	Grammar errors	5.5	4	3	4	1
6	Use of affixes	5.5	4	3	4	1
15	Application of grammar required in contexts and situations	5.5	4	3	4	1
11	Grammar topics integrated into aspects of reading and writing skills	5.5	4	3	4	1
14	Application of grammar in writing essays	5.5	4	3	4	1
10	Exercises suitable to grammar topics	12.5	3.5	3	4	1
9	Identifying nouns and adjectives in context	12.5	3.5	3	4	1
12	Identifying adjectives and adverbs according to context	12.5	3.5	3	4	1
13	Errors in terminology	12.5	3.5	3	4	1
8	Function/Usage of words in sentences	15	3	3	4	1

As seen in Table 3, topics recommended for the BMGLP include types of words, types of sentences, spelling system, grammar errors, use of affixes and use of words in sentences.

TYPES OF GRAMMAR EXERCISES

This section answers the research question 1d, that is:

1d. What are the types of grammar exercises that need to be included in the BMGLP according to the Bahasa Melayu experts?

In Table 4, the Bahasa Melayu experts had retained their answers to most of the items. According to the Bahasa Melayu experts the exercises in the BMGLP should include exercises on rearranging sentences, identifying errors in usage of connectives usage of affixes in sentences, correcting sentence errors, sentence building, sentence structure analysis, word usage in sentences analysis, improving word usage in sentences and language games.

Table 4. Types of Grammar Exercises for the Bahasa Melayu Grammar Learning Portal

Item No.	Type of grammar exercise	Position	Median	Quartile 1	Quartile 3	Inter Quartile Range
8	Exercises in arranging sentences correctly	6.5	4	4	4	0
1	Exercises on identifying errors in use of conjunctions and affixes in sentences	6.5	4	4	4	0
5	Exercises in grammar use in various contexts	6.5	4	4	4	0
6	Exercises on sentence error correction	6.5	4	4	4	0
7	Exercises on sentence building	6.5	4	4	4	0
9	Exercises on grammar error analysis	6.5	4	4	4	0
11	Exercises on writing and speaking	6.5	4	3	4	1
2	Types of exercises on grammar applications learned by students	6.5	4	3	4	1
12	Exercises on analyzing word usage in sentences	6.5	4	3	4	1
13	Exercises on improving words in sentences	6.5	4	3	4	1
4	Exercises of interactive type	6.5	4	3	4	1
14	Self-created activities	6.5	4	3	4	1
3	Function/use of nouns, verbs, adjectives in building sentences	15	3.5	3	4	1
10	Exercises in the form of text analysis	15	3.5	3	4	1
16	Language games	15	3.5	3	4	1
17	Exercises in important contexts	15	3.5	3	4	1
15	Hands-on activities	15	3.5	3	4	1

TYPES OF GRAMMAR ACTIVITIES

This section answers the research question 1e, namely:

1e. What types of grammar activities need to be included in the BMGLP according to the Bahasa Melayu experts?

Table 5. Grammar Activities Suggested for the Bahasa Melayu Grammar Learning Portal

No. Item	Grammar Activities	Position	Median	Quartile 1	Quartile 3	Inter Quartile Range
12	Interactive activities	3.5	4	4	4	0
13	Hands-on activities	3.5	4	4	4	0
5	Language games as enrichment	3.5	4	3	4	1
7	Identifying sentences and correcting errors in sentences	3.5	4	3	4	1
4	Exercises based on illustrations	3.5	4	3	4	1
14	Exercises using words based on context, culture, and discourse	3.5	4	3	4	1
6	Analyzing extracts	7.5	3.5	3	4	1
2	Objective questions	7.5	3.5	3	4	1
9	Exercises in the form of worksheets and question bank	11.5	3	3	4	1
11	Practice in word usage	11.5	3	3	4	1
8	Structured questions/Building sentences from given words	11.5	3	3	4	1
1	Fill in the blanks/cloze exercise	11.5	3	3	4	1
3	Quizzes	11.5	3	3	3	0
10	Exercises on collective nouns	11.5	3	3	3	0

In the third round, Bahasa Melayu experts had suggested that activities in Table 5 were appropriate for Form Two students.

Activities that are required in the learning portal, according to the panel of experts, are language games, correcting errors in sentences, word usage exercises, building sentences from words given, fill in the blanks, quiz questions and exercises on collective nouns.

LEARNING TECHNIQUES AND APPROACHES

This section answers the research question 2a namely:

2a. What are the techniques and teaching approaches through the BMGLP that are thought to be appropriate in the opinion of the Bahasa Melayu experts?

Table 6. Opinion of Bahasa Melayu Experts on Teaching Approaches in the BMGLP

Item No.	Technique/Approach of Grammar Teaching Using the BMGLP	Position	Median	Quartile 1	Quartile 3	Inter Quartile Range
4	'Hands-on' techniques have to be enhanced	7.5	4	3	4	1
5	Word exploration techniques on websites	7.5	4	4	4	0
6	Simulations and role play	7.5	4	3	4	1
7	Creative and Critical Thinking skills and Problem Solving	7.5	4	4	4	0
8	Comparison of word categories	7.5	4	3	4	1
10	Building sentences with and without affixes	7.5	4	3	4	1
13	Contextual activities	7.5	4	3	4	1
1	Drill technique	7.5	4	3	4	1
2	Questioning techniques	7.5	4	4	4	0
3	Interactive techniques	7.5	4	4	4	0
9	Comparison between active and passive sentences	7.5	4	3	4	1
12	Using electronic mail to publicize good essays	7.5	4	3	4	1
16	Smart strategy/smart elements	7.5	4	3	4	1
11	Student interactivity through chatting corner	7.5	4	3	4	1
14	Grammar quiz questions	15.5	3	3	4	1
15	Group activity	15.5	3	3	4	1

The Delphi Round Three results for this category show that items required and suggestions included: contextual activities; interactive techniques; hands-on techniques have to be enhanced; grammar exploration techniques in web sites; problem solving and creative as well as critical thinking skills; drills; simulation and role play; use of e-mail in presenting the best essays; comparison between active and passive sentences; Building sentences without affixes; questioning technique; comparison of word categories and smart strategies/smart elements. These items received a high level of consensus and the Bahasa Melayu expert panel are in high agreement on them (interquartile range of between 0 to 1.0 and a median value of 4).

OTHER FINDINGS FROM THE STUDY

This section answers the research question on the assessment/evaluation questions that need to be developed in the BMGLP; the information sources required by students for inclusion in the BMGLP; and how the BMGLP can be used to enrich grammar learning strategies among Form Two students in class.

The majority of Bahasa Melayu experts were in high agreement with items related to assessment and evaluation. They were of the opinion that grammar assessment questions were appropriate and very helpful in evaluating student understanding. The type of questions suggested for the portal by the experts included questions on correcting errors in affix usage, word categories, correction of sentence errors, building simple sentences, completing sentences, rearranging sentences, objective questions, cloze exercises and fill-in-the-blanks.

The median value for all items on information sources showed that the majority of experts very strongly agreed that and achieved consensus between 0 and 1. The majority of Bahasa Melayu experts strongly agreed and achieved consensus on all items related to information sources. They suggested that the web addresses are required as references for students. Resources recommended for inclusion in the portal included grammar reference books, websites on grammar, *Dewan Sastera* and *Dewan Pelajar* magazines and links to other Bahasa Melayu web sites. Given the consensus of experts, the fourth round was avoided. This shows that Bahasa Melayu experts achieved consensus regarding the main components in the BMGLP, topics for learning grammar, type of exercises, grammar activities, type of evaluation and assessment questions, reference sources, grammar learning materials, website address, learning problems and how to overcome them, besides the way to teach weak students in mastering Bahasa Melayu.

The respondents revealed that strategies used in learning grammar include *hands-on activities*, web surfing, referring to the latest information in the BMGLP, using web portal materials as exercises for students, encouraging students to surf the Internet, searching for information and other resources on the Internet, and referring to the Web portal as a learning resource.

CONCLUSION

The findings of this study enable the researchers to identify the needs of Form Two students from the viewpoint of grammar learning resources and building of the BMGLP for the use of Form Two students and Bahasa Melayu teachers. Students can use the grammar learning materials found in the BMGLP as grammar learning resources or revision materials in their grammar learning.

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