

## Trainees' Perception of SMART Net as an Internet-Based Language Teaching and Learning Tool

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### ABSTRAK

*Kertas ini memperihalkan satu kajian yang direka bentuk untuk mengkaji pandangan guru pelatih terhadap satu model belajar cara belajar secara online yang dikenali sebagai tapak induk SMART Net dari segi 1) kesesuaian dan 2) kebolehgunaannya sebagai satu alat pengajaran dan pembelajaran berasaskan Internet. Seramai 167 guru pelatih di Fakulti Pendidikan, Universiti Kebangsaan Malaysia memberi reaksi mereka terhadap satu set soal selidik sendiri yang mengandungi 45 item menggunakan skala Likert 1-4. Soal selidik tersebut mempunyai tiga bahagian : 1) maklumat latar belakang, 2) penilaian tentang tapak induk SMART Net (12 item), dan, 3) penilaian tentang laman web yang berkaitan (yakni SMART English Learning, SMART Malay Learning dan SMART Arabic Learning) yang mengandungi 33 item setiap satu. Statistik deskriptif menggunakan kekerapan dan skor min digunakan untuk analisis data. Skor min antara 0 – 1.25 dikategorikan sebagai menunjukkan reaksi yang sangat negatif, skor min antara 1.26 – 2.50 dikategorikan sebagai menunjukkan reaksi yang negatif, skor min antara 2.51 – 3.25 dikategorikan sebagai menunjukkan reaksi yang positif dan skor min antara 3.26 – 4.00 dikategorikan sebagai menunjukkan reaksi yang sangat positif. Dapatan kajian menunjukkan bahawa, secara keseluruhannya, responden menunjukkan reaksi yang positif terhadap kesesuaian dan kebolehgunaan tapak induk SMART Net sebagai alat pengajaran dan pembelajaran berasaskan Internet. Skor min untuk item yang menguji 1) kebolehgunaan SMART Net untuk pengajaran (3.57), 2) kebolehgunaan SMART Net untuk pembelajaran (3.54), 3) kesesuaian SMART Net sebagai satu alat pengajaran (3.35), dan 4) kebolehgunaan SMART Net sebagai satu alat pembelajaran (3.41) mencapai tahap reaksi yang sangat positif (3.26 – 4.00). Item-item yang menguji ciri-ciri SMART Net termasuklah 1) inovatif (3.23), 2) interaktif (3.15), 3) mesra pengguna (3.07), 4) asli (3.07), 5) integrasi multimedia (3.32), 6) penggunaan grafik (3.32), 7) penggunaan animasi (3.28), dan 8) penggunaan musik latar (3.23) mencapai tahap antara reaksi positif (2.50 – 3.25) dan sangat positif (3.26 – 4.00). Tiada item yang mencapai skor min pada tahap yang negatif. Perangkaan ini menunjukkan bahawa tapak induk SMART Net berpotensi sebagai satu alat berasaskan Internet yang*

*berguna dan sesuai untuk pengajaran dan pembelajaran. Dapatan kajian juga menyokong aliran penyelidikan yang terdahulu (contohnya Holte 1995) mengenai kebolegunaan bahan pengajaran dan pembelajaran berasaskan Internet.*

#### ABSTRACT

*The paper describes a study designed to examine teacher trainees' opinion regarding an on line learning-to-learn model known as SMART Net in terms of its 1) suitability and 2) usefulness as an Internet-based teaching and learning tool. A total of 167 teacher trainees at the Faculty of Education, Universiti Kebangsaan Malaysia responded to a self-report questionnaire consisting of a 45-item using a 1-4 Likert Scale instrument. The self-report questionnaire is divided into three parts: 1) background information, 2) evaluation of SMART Net (12 items), and 3) evaluation of the related web pages (i.e. SMART English Learning, SMART Malay Learning and SMART Arabic Learning) consisting of 33 items each. A descriptive statistic using frequency count and mean score is used in the data analysis. A mean score between 0 – 1.25 is categorised as a very negative response, a mean score between 1.26 – 2.50 is categorised as a negative response, a mean score between 2.51 – 3.25 is categorised as a positive response and a mean score between 3.26 – 4.00 is categorised as a very positive response. The results show that as a whole, the respondents indicated positive reaction toward the usability and suitability of SMART Net as an Internet-based tool for teaching and learning. The mean score for items testing the 1) usability of SMART Net in teaching (3.57), 2) usability of SMART Net in learning (3.54), 3) suitability of SMART Net as a tool for teaching (3.35), and 4) suitability of SMART Net as a tool for learning (3.41) fared very positively (3.26 – 4.00). In a similar fashion, items evaluating the characteristics of SMART Net including 1) innovative (3.23), 2) interactive (3.15), 3) user-friendly (3.07), 4) authentic (3.07), 5) multimedia integration (3.32), 6) use of graphic (3.32), 7) use of animation (3.28), and 8) use of background music (3.23) scored between positive (2.50 – 3.25) and very positive (3.26 – 4.00). No items scored negatively. These figures show that SMART Net is a potentially useful and suitable Internet-based tool for teaching and learning. The findings also support results of previous related studies (eg. Holte 1995) regarding the usefulness of IT-based materials for teaching and learning.*

#### INTRODUCTION

The era of IT and globalisation has seen the growing use of Internet as a potential tool for enhancing teaching and learning. According to Maddux, Johnson and Willis (1997), the capability of the Internet as an educational tool is only

limited by the imagination and creativity of teachers and learners. However, the success of this tool will depend on teachers' and learners' ability to 1) examine and make sense of the information they access, and 2) evaluate the merits of the information encountered. Ryder and Hughes (1997) postulate that due to the vast amount of information available in the Internet, a systematic evaluation of web sites is imperative. This study is designed to examine trainee teachers' opinion regarding the suitability and usability of an online learning-to-learn model known as SMART Net (Mohamed Amin 1998) and its related web pages which include 1) SMART English Learning (Mohamed Amin 1999), 2) SMART Malay Learning (Mohamed Amin, Zamri & Jamaluddin 1999), and 3) SMART Arabic Learning (Mohamed Amin, Mohd. Isa & Jamaluddin 1999) as an Internet-based teaching and learning tool.

For teachers and learners to make good use of the Internet, they need criteria to use in evaluating the information found. According to Rettig (1996), many Internet sites that select and review Internet information rely on subjective values of style instead of focusing on information content. Katz (1992) suggests the following criteria for evaluating information on the Internet:

1. Purpose and Audience – What is the intent of this information? Why is it being communicated?
2. Authority – What are the credentials of the individual(s) or group(s) presenting this information?
3. Scope – What is the breadth, detail of the information provided?
4. Format – How is the information provided? Can it be easily interpreted? Can it be readily acquired or reproduced?
5. Acceptance of Material – What is the opinion that others have of this material?

In evaluating content, Piontek and Garlock (1995) make a distinction between sites that only provide links to other resources, and those that provide original information. Smith (1997) suggests a toolbox of criteria approach for evaluating information in the Internet. Among the criteria relevant to this study are:

1. Scope – What items are included in the web site?
2. Content – Is the information fact or opinion? Does the site contain original information or simply links?
3. Accuracy – Is the information in the web site accurate?
4. Authority – Does the author have standing in the field? Can the author be contacted for clarification?
5. Currency – Is the resource updated or static?
6. Uniqueness – What advantages does this particular site have?
7. Links Made to Other Resources – Are the links kept up to date?

8. Quality of Writing – Is the text well written?
9. Graphic and Multimedia Design – Is the resource interesting to look at?
10. Purpose and Audience – What is the purpose of the web site? Is it clearly stated?
11. Workability – Is the resource convenient, and can it be used effectively?
12. User Friendliness – Is the web site easy to use?
13. Browsability and Organisation – Is the resource in a logical manner to facilitate the location of information?
14. Interactivity – Where features such as forms scripts are provided, do they work?
15. Connectivity – Can the web site be accessed reliably?

In the present study, trainee teachers' opinion is sought regarding SMART Net and its related web pages (i.e. SMART English Learning, SMART Malay Learning and SMART Arabic Learning) in terms of its 1) suitability and 2) usefulness as an Internet-based teaching and learning tool. Criteria such as 1) interactivity, 2) innovativeness, 3) originality and 4) user-friendliness are included in the evaluation. In addition, appearance of the web site is also evaluated in terms of the effectiveness of the use of 1) graphic, 2) animation, 3) background music and 4) multimedia integration.

## METHODOLOGY

A total of 167 teacher trainees (108 trainees specialising in TESL, 26 trainees specialising in Malay Literature Education and 33 trainees specialising in Islamic Education) at the Faculty of Education, Universiti Kebangsaan Malaysia responded to a self-report questionnaire consisting of a 45-item, using a 1-4 Likert Scale instrument (1 = Strongly Disagree, 2 = Disagree, 3 = Agree, and 4 = Strongly Disagree). The self-report questionnaire is divided in three parts: 1) background information, 2) evaluation of SMART Net (12 items), and 3) evaluation of SMART English Learning, SMART Malay Learning and SMART Arabic Learning (33 items each) web pages by trainees specialising in TESL, Malay Literature Education and Islamic Education respectively. A descriptive statistic using frequency count and mean score is used in the data analysis. A mean score between 0 – 1.25 is categorised as a very negative response, a mean score between 1.26 – 2.50 is categorised as a negative response, a mean score between 2.51 – 3.25 is categorised as a positive response and a mean score between 3.26 – 4.00 is categorised as a very positive response. The analysis of the data and discussion of the results will be divided into two main sections: namely, 1) evaluation of SMART Net, and 2) evaluation of its related web pages (SMART English Learning, SMART Malay Learning, and SMART Arabic Learning).

RESULTS AND DISCUSSION

EVALUATION OF SMART NET

Table 1 shows the mean scores for 4 items investigating the 1) usability of SMART Net for teaching 2) usability of SMART Net for learning, 3) suitability of SMART Net as a tool for teaching, and 4) suitability of SMART Net as a tool for learning as well as 8 items evaluating the following characteristics of SMART Net: 1) innovativeness, 2) interactivity, 3) user-friendliness, 4) authenticity, 5) multimedia integration, 6) use of graphic, 7) use of animation, and 8) use of background music.

As a whole, all the respondents (N = 167) showed positive reaction toward the usability and suitability of SMART Net as a tool for language teaching and learning. The mean score for item testing the 1) usability of SMART Net for teaching (3.57), 2) usability of SMART Net for learning (3.54), 3) suitability of SMART Net as a tool for teaching (3.35), and 4) suitability of SMART Net as a tool for learning (3.41) fared very positively (3.26 – 4.00). In a similar fashion, items evaluating the characteristics of SMART Net including 1) innovativeness (3.23), 2) interactivity (3.15), 3) user-friendliness (3.07), 4) authenticity (3.07), 5) multimedia integration (3.32), 6) use of graphic (3.32), 7) use of animation (3.28), and 8) use of background music (3.23) scored between positive (2.50 – 3.25) and very positive (3.26 – 4.00). No items scored negatively.

TABLE 1. Trainees' perception on the usability and suitability of SMART Net as an internet-based tool for language teaching and learning

	Mean Scores
1. SMART Net is useful for teaching	3.57
2. SMART Net is useful for learning	3.54
3. SMART Net is a suitable tool for teaching	3.35
4. SMART Net is a suitable tool for learning	3.41
5. SMART Net is innovative	3.23
6. SMART Net is interactive	3.15
7. SMART Net is user-friendly	3.07
8. SMART Net is authentic	3.07
9. Multimedia integration of SMART Net is effective	3.32
10. Use of graphic in SMART Net is effective	3.32
11. Use of animation in SMART is effective	3.28
12. Use of background music in SMART Net is effective	3.23

Indicators

- 0 – 1.25 Very Negative
- 1.26 – 2.50 Negative
- 2.51 – 3.25 Positive
- 3.26 – 4.00 Very Positive

Table 2 below shows the mean scores of 108 respondents specialising in TESL for 4 items investigating the 1) usability of SMART Net for teaching 2) usability of SMART Net for learning, 3) suitability of SMART Net as a tool for teaching, and 4) suitability of SMART Net as a tool for learning as well as 8 items evaluating the following characteristics of SMART Net: 1) innovativeness 2) interactivity, 3) user-friendliness, 4) authenticity, 5) multimedia integration, 6) use of graphic, 7) use of animation, and 8) use of background music.

The results presented in Table 2 show that beside items 5 (innovativeness) and 6 (interactivity), trainees specialising in TESL provided a very positive reaction toward the usability and suitability of SMART Net as a tool for teaching and learning. The mean score for items testing the 1) usability of SMART Net for teaching (3.68), 2) usability of SMART Net for learning (3.68), 3) suitability of SMART Net as a tool for teaching (3.42), and 4) suitability of SMART Net as a tool for learning (3.51) as well as items evaluating the characteristics of SMART Net such as 1) user-friendliness (3.61), 2) authenticity (3.46), 3) multimedia integration (3.46), 4) use of graphic (3.46), 5) use of animation (3.43), and 6) use of background music (3.38) fared very positively (3.26–4.00). No items were scored negatively. These figures indicate that trainees specialising in TESL felt more positively about the usability and suitability of SMART Net as a tool for teaching and learning than the perception of the group of 167 trainees as a whole.

TABLE 2. Perception of respondents specialising in TESL toward the usability and suitability of SMART Net as an internet-based tool for language teaching and learning (n=108)

	Mean Scores
1. SMART Net is useful for teaching	3.68
2. SMART Net is useful for learning	3.68
3. SMART Net is a suitable tool for teaching	3.42
4. SMART Net is a suitable tool for learning	3.51
5. SMART Net is innovative	3.23
6. SMART Net is interactive	3.15
7. SMART Net is user-friendly	3.61
8. SMART Net is authentic	3.46
9. Multimedia Integration of SMART Net is effective	3.46
10. Use of graphic in SMART Net is effective	3.46
11. Use of animation in SMART Net is effective	3.43
12. Use of background music is effective	3.38

#### Indicators

- 0 – 1.25 Very Negative
- 1.26 – 2.50 Negative
- 2.51 – 3.25 Positive
- 3.26 – 4.00 Very Positive

Table 3 shows the mean scores of 26 respondents specialising in Malay Literature Education for 4 items investigating the 1) usability of SMART Net for teaching 2) usability of SMART Net for learning, 3) suitability of SMART Net as a tool for teaching, and 4) suitability of SMART Net as a tool for learning as well as 8 items evaluating the following characteristics of SMART Net: 1) innovativeness, 2) interactivity, 3) user-friendliness, 4) authenticity, 5) multimedia integration, 6) use of graphic, 7) use of animation, and 8) use of background music.

The figures tabulated in Table 3 show that trainees specialising in Malay Literature Education provided a positive reaction toward the usability and suitability of SMART Net as a tool for language teaching and learning. Only four items which are; 1) usability of SMART Net for teaching (3.57), 2) usability of SMART Net for learning (3.42), 3) suitability of SMART Net as a tool for teaching (3.26), and 4) SMART Net is innovative (3.26) fared very positively (3.26 – 4.00). Whilst, the other 8 items scored positively, no items were scored negatively. These figures indicate that trainees specialising in Malay Literature felt quite positive about the usability and suitability of SMART Net as an Internet-based tool for teaching and learning.

Table 4 shows the mean scores of 33 respondents specialising in Islamic Education for 4 items investigating the 1) usability of SMART Net for teaching 2) usability of SMART Net for learning, 3) suitability of SMART Net as a tool for teaching, and 4) suitability of SMART Net as a tool for learning as well as 8 items

TABLE 3. Perception of respondents specialising in Malay Literature Education toward the usability and suitability of SMART Net as an internet-based tool for teaching and learning (n=26)

	Mean Scores
1. SMART Net is useful for teaching	3.57
2. SMART Net is useful for learning	3.42
3. SMART Net is a suitable tool for teaching	3.26
4. SMART Net is a suitable tool for learning	3.31
5. SMART Net is innovative	3.26
6. SMART Net is interactive	3.11
7. SMART Net is user-friendly	2.81
8. SMART Net is authentic	3.03
9. Multimedia integration of SMART Net is effective	3.11
10. Use of graphic in SMART Net is effective	3.15
11. Use of animation in SMART Net is effective	2.96
12. Use of background music in SMART Net is effective	3.15

Indicators

- 0 – 1.25 Very Negative
- 1.26 – 2.50 Negative
- 2.51 – 3.25 Positive
- 3.26 – 4.00 Very Positive

TABLE 4. Perception of respondents specialising in Islamic Education toward the usability and suitability of SMART Net as an internet-based tool for teaching and learning (n=26)

	Mean Scores
1. SMART Net is useful for teaching	3.21
2. SMART Net is useful for learning	3.12
3. SMART Net is a suitable tool for teaching	3.18
4. SMART Net is a suitable tool for learning	3.12
5. SMART Net is innovative	3.21
6. SMART Net is interactive	3.18
7. SMART Net is user-friendly	3.07
8. SMART Net is authentic	2.93
9. Multimedia integration of SMART Net is effective	3.06
10. Use of graphic in SMART Net is effective	3.01
11. Use of animation in SMART Net is effective	3.03
12. Use of background information in SMART Net is effective	2.81

#### Indicators

- 0 – 1.25 Very Negative
- 1.26 – 2.50 Negative
- 2.51 – 3.25 Positive
- 3.26 – 4.00 Very Positive

evaluating the following characteristics of SMART Net: 1) innovativeness, 2) interactivity, 3) user-friendliness, 4) authenticity, 5) multimedia integration, 6) use of graphic, 7) use of animation, and 8) use of background music.

Table 4 demonstrated that the mean score for items testing the 1) usability of SMART Net for teaching (3.21), 2) usability of SMART Net for learning (3.12), 3) suitability of SMART Net as a tool for teaching (3.18), and 4) suitability of SMART Net as a tool for learning (3.12) as well as items evaluating the characteristics of SMART Net including 1) innovativeness (3.21), 2) interactivity (3.18), 3) user-friendliness (3.07), 4) authenticity (2.93), 5) multimedia integration (3.06), 6) use of graphic (3.01), 7) use of animation (3.03), and 8) use of background music (2.81) scored positively (2.50 – 3.25). No items were scored very positive, negative or very negative. In short, the respondents felt quite positive about the usability and suitability of the Internet-based tool. However, trainees specialising in Islamic Education did not feel as positively about SMART Net in comparison to their counterparts, especially those specialising in TESL.

## EVALUATION OF INDIVIDUAL RELATED WEB PAGES

Table 5 shows the mean score of 33 items investigating the perception of 108 trainees specialising in TESL toward the SMART English Learning web page

TABLE 5. Perception of respondents specialising in TESL toward the SMART English Learning web page (n=108)

	Mean Scores
1. SMART English Learning web page is an interesting site for ESL teachers	3.86
2. SMART English Learning web page is an easy site to be used by ESL teachers	3.59
3. SMART English Learning web page is an enjoyable site to be followed by ESL teachers	3.42
4. SMART English Learning for Teachers' page provides useful information for ESL teachers	3.52
5. SMART English Learning for Teachers' page provides useful links for ESL teachers	3.51
6. SMART English Learning model is easily understood by ESL teachers	3.36
7. SMART English Learning model is easily understood by ESL learners	3.35
8. SMART English Learning model provides new information to ESL teachers	3.36
9. SMART English Learning model provides new information to ESL learners	3.39
10. The page on How to Become SMART English Learners provides ESL teachers with useful information on learning grammar	3.38
11. The page on How to Become SMART English Learners provides ESL learners with useful information on learning grammar	3.43
12. The page on How to Become SMART English Learners provides ESL teachers with useful information on learning vocabulary	3.33
13. The page on How to Become SMART English Learners provides ESL learners with useful information on learning vocabulary	3.39
14. The page on How to Become SMART English Learners provides ESL teachers with useful information on improving writing	3.31
15. The page on How to Become SMART English Learners provides ESL learners with useful information on improving writing	3.41
16. The page on How to Become SMART English Learners provides ESL teachers with useful information on improving speech	3.26
17. The page on How to Become SMART English Learners provides ESL learners with useful information on improving speech	3.33
18. The page on the Secrets of SMART English Learners help ESL teachers discover what successful learners do in the classroom	3.43
19. The page on the Secrets of SMART English Learners help ESL learners discover what successful learners do in the classroom	3.44
20. The page on the Secrets of SMART English Learners help ESL teachers discover what successful learners do out of the classroom	3.42

*cont.*

TABLE 5. *continuetion*

	Mean Scores
21. The page on the Secrets of SMART English Learners help ESL learners discover what successful learners do out of the classroom	3.38
22. The page on the Secrets of SMART English Learners help ESL teachers discover how successful learners prepare for examinations	3.44
23. The page on the Secrets of SMART English Learners help ESL learners discover how successful learners prepare for examinations	3.51
24. The page on Multimedia Links for SMART English Teachers provides ESL teachers with useful materials for ESL teaching	3.55
25. The page on Multimedia Links for SAMRT English Learners provides ESL learners with useful materials for ESL learning	3.51
26. The page on SMART-Resource Links for English Teachers provides useful ESL teaching materials	3.43
27. The page on SMART-Resource Links for English Learners provides useful ESL learning materials	3.45
28. The links provided help ESL teachers locate ESL materials in the WWW	3.44
29. The links provided help ESL learners locate ESL materials in the WWW	3.42
30. SMART English Learning web page is user-friendly	3.47
31. SMART English Learning web page is interactive	3.37
32. SMART English Learning web page is fun	3.56
33. SMART English Learning web page is innovative	3.37
Indicators	
0 – 1.25	Very Negative
1.26 – 2.50	Negative
2.51 – 3.25	Positive
3.26 – 4.00	Very Positive

developed in SMART Net. The evaluation mainly focuses on the following components of the SMART English Learning web page: 1) SMART English Learning for Teachers, 2) SMART English Learning for Learners, 3) SMART English Learning Model, 4) How to Become SMART English Learners, 5) Secrets of SMART English Learners, 6) Links for SMART English Learners, 7) Links for SMART English Teachers, 8) SMART-Resource Links for English Teachers, and 9) SMART-Resource Links for English Learners. In addition, several items are included to evaluate teachers' perception on the following characteristics of the SMART English Learning web page; namely, 1) interesting, 2) easy to use, 3) enjoyable, 4) user-friendly, 5) interactive, 6) fun, 7) innovative and 8) has useful links.

The figures tabulated in Table 5 that all the 33 items fared very positively (with mean score ranging between 3.26–4.00) indicating that all the 108 trainees specialising in TESL perceive the SMART English Learning web page as a potentially very useful and suitable Internet-based tool for English language teaching and learning. No items scored positively (2.51–3.25), negatively (1.26–2.50) or very negatively (0–1.25). The findings are also consistent with the findings tabulated in Table 2 earlier regarding the TESL trainees' overall perception toward the suitability and usability of SMART Net as a tool for teaching and learning.

TABLE 6. Perception of respondents specialising in Malay Literature Education toward the SMART Malay Learning web page (n=26)

	Mean Scores
1. SMART Malay Learning web page is an interesting site for teachers of B. Melayu	3.19
2. SMART Malay Learning web page is an easy site to be used by teachers of B. Melayu	3.19
3. SMART Malay Learning web page is an enjoyable site to be followed by teachers of B. Melayu	2.92
4. SMART Malay Learning for Teachers' page provides useful information for teachers of B. Melayu	3.26
5. SMART Malay Learning for Teachers' page provides useful links for teachers of B. Melayu	3.23
6. SMART Malay Learning model is easily understood by teachers of B. Melayu	2.69
7. SMART Malay Learning model is easily understood by learners of B. Melayu	3.19
8. SMART Malay Learning model provides new information to teachers of B. Melayu	2.92
9. SMART Malay Learning model provides new information to learners of B. Melayu	3.07
10. The page on How to Become SMART Malay Learners provides teachers of B. Melayu with useful information on learning grammar	3.01
11. The page on How to Become SMART Malay Learners provides learners of B. Melayu with useful information on learning grammar	3.31
12. The page on How to Become SMART Malay Learners provides teachers of B. Melayu with useful information on learning vocabulary	2.88
13. The page on How to Become SMART Malay Learners provides learners of B. Melayu with useful information on learning vocabulary	3.03
14. The page on How to Become SMART Malay Learners provides teachers of B. Melayu with useful information on improving writing	3.15
15. The page on How to Become SMART Malay Learners provides learners of B. Melayu with useful information on improving writing	3.26
16. The page on How to Become SMART Malay Learners provides teachers of B. Melayu with useful information on improving speech	2.88

*cont.*

TABLE 6. *continuation*

	Mean Scores
17. The page on How to Become SMART Malay Learners provides learners of B. Melayu with useful information on improving speech	3.19
18. The page on the Secrets of SMART Malay Learners helps teachers of B. Melayu discover what successful learners do in the classroom	3.01
19. The page on the Secrets of SMART Malay Learners helps learners of B. Melayu discover what successful learners do in the classroom	3.03
20. The page on the Secrets of SMART Malay Learners helps teachers of B. Melayu discover what successful learners do out of the classroom	2.88
21. The page on the Secrets of SMART Malay Learners helps learners of B. Melayu discover what successful learners do out of the classroom	3.01
22. The page on the Secrets of SMART Malay Learners helps teachers of B. Melayu discover how successful learners prepare for examinations	2.96
23. The page on the Secrets of SMART Malay Learners helps learners of B. Melayu discover how successful learners prepare for examinations	3.11
24. The page on Multimedia Links for SMART Malay Teachers provides teachers of B. Melayu with useful materials for teaching of B. Melayu	3.19
25. The page on Multimedia Links for SMART Malay Learners provides learners of B. Melayu with useful materials for learning of B. Melayu	3.34
26. The page on SMART-Resource Links for Malay Teachers provides useful B. Melayu teaching materials	3.11
27. The page on SMART-Resource Links for Malay Learners provides useful B. Melayu learning materials	3.23
28. The links provided help teachers of B. Melayu locate B. Melayu materials in the WWW	3.31
29. The links provided help learners of B. Melayu locate B. Melayu materials in the WWW	3.11
30. SMART Malay Learning web page is user-friendly	2.96
31. SMART Malay Learning web page is interactive	3.15
32. SMART Malay Learning web page is fun	3.31
33. SMART Malay Learning web page is innovative	3.23

## Indicators

0 – 1.25 Very Negative

1.26 – 2.50 Negative

2.51 – 3.25 Positive

3.26 – 4.00 Very Positive

Table 6 show the mean score of 33 items investigating the perception of 26 trainees specialising in Malay Literature Education toward the SMART Malay Learning web page developed in SMART Net. The evaluation mainly focuses on the following components of the SMART Malay Learning web pages: 1) SMART Malay Learning for Teachers, 2) SMART Malay Learning for Learners, 3) SMART Malay Learning Model, 4) How to Become SMART Malay Learners, 5) Secrets of SMART Malay Learners, 6) Multimedia Links for SMART Learners, 7) Multimedia Links for SMART Teachers, 8) SMART-Resource Links for Teachers, and 9) SMART-Resource Links for Learners. In addition, several items are included to evaluate teachers' perception on the following characteristics of the SMART English Learning web page; namely, 1) interesting, 2) easy to use, 3) enjoyable, 4) user-friendly, 5) interactive, 6) fun, 7) innovative and 8) useful links.

The figures in Table 6 illustrates that only 6 items (item 4, item 11, item 15, item 25, item 28 and item 32) are fared very positively by the 26 respondents majoring in Malay Literature Education. The other 27 items scored positively, that is with a mean score ranging between 2.51 – 3.25. Nonetheless, no items scored negatively or very negatively. The figures suggest that trainees specialising in Malay Literature Education generally feel quite positively about the usefulness and suitability of the SMART Malay Learning web page as an Internet-based tool for teaching and learning of Bahasa Melayu.

Table 7 shows the mean score of 33 items investigating the perception of 33 trainees specialising in Islamic Education toward the SMART Arabic Learning web page developed in SMART Net. The evaluation mainly focuses on the following components of the SMART Arabic Learning web page described in the last chapter: 1) SMART Arabic Learning for Teachers, 2) SMART Arabic Learning for Learners, 3) SMART Arabic Learning Model, 4) How to Become SMART Arabic Learners, 5) Secrets of SMART Arabic Learners, 6) Multimedia Links for SMART Arabic Learners, 7) Multimedia Links for SMART Arabic Teachers, 8) SMART-Resource Links for Arabic Teachers, and 9) SMART-Resource Links for Arabic Learners. In addition, several items are included to evaluate teachers' perception on the following characteristics of the SMART Arabic Learning web page; namely, 1) interesting, 2) easy to use, 3) enjoyable, 4) user-friendly, 5) interactive, 6) fun, 7) innovative and 8) has useful links. The figures tabulated in Table 7 below reveal that all the 33 items fared positively (with a mean score ranging between 2.51 – 3.25) indicating that trainees specialising in Islamic Education generally see the SMART Arabic Learning web page as a useful and suitable IT-based tool for teaching and learning of Arabic.

## CONCLUSION

In summary, the following points can be said about the perception of 167 trainees toward SMART Net and its main web pages which include the SMART English

TABLE 7. Perception of respondents specialising in Islamic Education toward the SMART Arabic Learning web page (n=33)

	Mean Scores
1. SMART Arabic Learning web page is an interesting site for teachers of Arabic	3.09
2. SMART Arabic Learning web page is an easy site to be used by teachers of Arabic	2.87
3. SMART Arabic Learning web page is an enjoyable site to be followed by teachers of Arabic	3.01
4. SMART Arabic Learning for Teachers' page provides useful information for teachers of Arabic	3.18
5. SMART Arabic Learning for Teachers' page provides useful links for teachers of Arabic	3.15
6. SMART Arabic Learning model is easily understood by teachers of Arabic	3.01
7. SMART Arabic Learning model is easily understood by learners of Arabic	2.84
8. SMART Arabic Learning model provides new information to teachers of Arabic	3.13
9. SMART Arabic Learning model provides new information to learners of Arabic	3.13
10. The page on How to Become SMART Arabic Learners provides teachers of Arabic with useful information learning grammar	3.06
11. The page on How to Become SMART Arabic Learners provides learners of Arabic with useful information on learning grammar	3.12
12. The page on How to Become SMART Arabic Learners provides teachers of Arabic with useful information on learning vocabulary	2.96
13. The page on How to Become SMART Arabic Learners provides learners of Arabic with useful information on learning vocabulary	3.12
14. The page on How to Become SMART Arabic Learners provides teachers of Arabic with useful information on improving writing	2.93
15. The page on How to Become SMART Arabic Learners provides learners of Arabic with useful information on improving writing	3.01
16. The page on How to Become SMART Arabic Learners provides teachers of Arabic with useful information on improving speech	3.01
17. The page on How to Become SMART Arabic Learners provides learners of Arabic with useful information on improving speech	3.03
18. The page on the Secrets of SMART Arabic Learners helps teachers of Arabic discover what successful learners do in the classroom	3.03
19. The page on the Secrets of SMART Arabic Learners helps learners of Arabic discover what successful learners do in the classroom	3.06

*cont.*

TABLE 7. *continuation*

	Mean Scores
20. The page on the Secrets of SMART Arabic Learners helps teachers of Arabic discover what successful learners do out of the classroom	3.01
21. The page on the Secrets of SMART Arabic Learners helps learners of Arabic discover what successful learners do out of the classroom	2.96
22. The page on the Secrets of SMART Arabic Learners helps teachers of Arabic discover how successful learners prepare for examinations	3.12
23. The page on the Secrets of SMART Arabic Learners helps learners of Arabic discover how successful learners prepare for examinations	3.12
24. The page on Multimedia Links for SMART Arabic Teachers provides teachers of Arabic with useful materials for teaching of Arabic	3.15
25. The page on Multimedia Links for SMART Arabic Learners provides learners of Arabic with useful materials for learning of Arabic	3.16
26. The page on SMART-Resource Links for Arabic Teachers provides useful Arabic teaching materials	3.03
27. The page on SMART-Resource Links for Arabic Learners provides useful Arabic learning materials	3.09
28. The links provided help teachers of Arabic locate Arabic materials in the WWW	3.15
29. The links provided help learners of Arabic locate Arabic materials in the WWW	3.18
30. SMART Arabic Learning web page is user-friendly	3.01
31. SMART Arabic Learning web page is interactive	3.15
32. SMART Arabic Learning web page is fun	3.21
33. SMART Arabic Learning web page is innovative	3.24

Indicators

- 0 – 1.25 Very Negative
- 1.26 – 2.50 Negative
- 2.51 – 3.25 Positive
- 3.26 – 4.00 Very Positive

Learning page, the SMART Malay Learning page and the SMART Arabic Learning page:

1. SMART Net is a potentially useful tool for language teaching and learning.
2. SMART Net is a suitable tool for language teaching and learning.

3. SMART Net is an innovative, interactive, authentic and user-friendly web site.
4. The use of graphic, animation, background music and multimedia integration of SMART Net is effective.
5. The SMART English/Malay/Arabic Learning web page respectively is an interesting, enjoyable and easy web site to be used by language teachers.
6. The SMART English/Malay/Arabic Learning for Teachers web pages respectively provide useful information and links for language teachers.
7. The SMART English/Malay/Arabic Learning Models respectively is easily understood by language learners and teachers.
8. The SMART English/Malay/Arabic Learning Models respectively provides new information to language learners and teachers.
9. The page on How to Become SMART English/Malay/Arabic Learners respectively provides language teachers and learners with useful information on learning grammar and vocabulary as well as on improving speech and writing.
10. The page on Secrets of SMART English/Malay/Arabic Learners respectively helps language teachers and learners to discover what and how successful language learners do in and out of the classroom and prepare for their language examinations.
11. The page on Multimedia Links for SMART Learners/Teachers respectively provides useful language materials for language teachers and learners.
12. The page on SMART-Resource Links for Teachers/Learners provides useful language materials for language teachers and learners.
13. The links provided help language teachers and learners locate language-based materials in the World Wide Web.
14. The SMART English/Malay/Arabic Learning web pages are user-friendly, interactive, innovate and fun.

The findings of this study show that Internet-based tools such as SMART Net can be potentially useful for language teaching and learning. Nonetheless, the positive reaction toward SMART Net and its main components is provided from trainee teachers' point of view. Hence, it is essential that future studies investigate the usability and suitability of SMART Net as a tool for language teaching and learning from classroom teachers and learners' point of view. In addition, other criteria suggested in the literature (e.g. Maddux *et al.* 1997) for evaluating information in the Internet can also be added as items in the self-report questionnaire. Besides, other methods of evaluating the usefulness of a web page such as directly observing patterns of navigational behaviours of teachers and learners browsing the web site can also be used.

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