

Development and Evaluation of an ESL Web Site on Learning-To-Learn English

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Abstract

The era of IT and globalization has seen the growth of the Internet as a potential tool for enhancing ESL teaching and learning. However, the success of this tool will depend on teachers' and learners' ability to examine and make sense of the information they access as well as to evaluate the merits of the information encountered. The purpose of this paper is twofold. Firstly, it describes the development of a Malaysian-based ESL web site on learning-to-learn English known as E-Learn developed by the first author. Secondly, the paper presents findings of a research study designed to examine classroom learners' and teachers' reaction on E-Learn in terms of its i) reliability, ii) user-friendliness, iii) interactivity, iv) attractiveness, v) usefulness, vi) suitability and vi) content. A total of 80 ESL learners and 15 ESL teachers from 2 schools in the state of Negeri Sembilan, Malaysia responded to a self-report questionnaire consisting of Likert items. A descriptive statistic using frequency count and mean score is used in the data analysis. The results show that, as a whole, both groups of respondents reacted positively towards the learning-to-learn English web site developed.

Introduction

Recent work on language learning strategy research suggests that successful ESL learners are those who employ a wide range of key language learning strategies (e.g. Green & Oxford, 1995; Embi, 1996, 2000a; Cohen 1998; Embi, Long, & Hamzah, 2001). One important implication of this finding is that less successful ESL learners can be helped to improve their language learning through learning-to-learn or learner training. Nevertheless, according to Embi (2000b), although several models of learning-to-learn have been reported in the literature (e.g. Ellis & Sinclair, 1898; Rubin, 1989; Oxford, 1990; Brown, 1991; Chamot & O'Malley, 1994; Rubin & Thompson, 1994; Weaver & Cohen, 1997; Chamot, 1998; Rausch, 1998) none is available on the web. This paper firstly describes a Malaysian-based ESL web site on learning-to-learn English known as E-Learn developed by the first author consisting of six main procedures that can be used to make ESL learners aware of the key strategies for successful ESL learning. The web site is developed based on an online strategy awareness training model known as SMART Net developed earlier by Embi (2000a, 2000b). The paper also presents findings of a study designed to find out classroom learners' and teachers' perception regarding the developed learning-to-learn English web site in terms of its i) reliability, ii) user-friendliness, iii) interactivity, iv) attractiveness, v) usefulness, vi) suitability, and vii) content.

Models of Learner Training

According to Chamot (1998), the intent of learner training or language learning strategies instruction is to help students become better language learners. Similarly, Wenden (1998) argues that the main purpose of learner training is to promote learner autonomy. Learner training activities are also expected to prepare learners for lifelong learning (Embi, 2000a). In short, it is generally agreed that learner training should help learners develop their expertise as learners, i.e. learning-to-learn.

A number of models of learner training are available in the literature. Based on empirical research, Brown (1989), for example, highlights strategies that students need to pay attention to while they are studying a foreign language including i) goal-setting, ii) developing self-confidence, iii) calculated risk-taking, iv) cooperative learning and v) resisting direct translation to L1. Brown (1991) also provides real-world examples to describe the language learning process in an informal way and to introduce language learning strategies.

Ellis and Sinclair (1989) published a book for classroom use to supplement existing course materials. In the book, learners have the opportunities to i) reflect on their current strategies, ii) develop new strategies, iii) assess short-term learning goals, iv) organize their learning, and v) self-evaluate the language learning process for each of the four skills (reading, writing, speaking and listening), as well as for grammar and vocabulary. The book also provides authentic examples of students' responses to the exercises.

Rubin (1989) developed an instructional tool known as the Language Learning Disc. Intended for use before beginning an introductory-level foreign language course, the tool is designed to help learners i) gain insights into their approach to learning, ii) learn to choose strategies appropriate to a task and learning purpose, iii) learn to use these strategies in a classroom, self-study, or job situation, iv) learn to use strategies specific to reading, listening, and conversation, v) be able to define strategies for improving memory for language learning, vi) learn how to effectively transfer knowledge about language and communication from one language to another, vii) learn to use resources wisely, and viii) be able to deal more effectively with errors. Rubin and Thompson's (1994) book entitled "How to be a more successful language learner" is also a popular book which provides several suggestions on how learners can become more independent, effective, and successful in their attempts to learn foreign languages. They provide step-by-step suggestions on how to improve vocabulary, grammar, reading, writing, listening, and speaking skills.

Oxford (1990) describes an eight-step model for learning-to-learn or strategy training which encompasses the following steps: i) determine the learners' needs and time available, ii) select related strategies, iii) consider the integration of strategy training, iv) consider motivational issues, v) prepare materials and activities, vi) conduct "completely informed training", vii) evaluate the strategy training, and viii) revise the strategy training.

Chamot and O'Malley's (1994) model known as CALLA (Cognitive Academic Language Learning Approach) embeds training in learning strategies within activities for developing both language skills and content area skills. The model teaches students to use relevant learning strategies to enhance their language skills and their skills in various content areas. CALLA has three main components; a) content component, b) English language development component, and c) learning strategies instruction component. The instructional model consists of five stages: i) presentation (eliciting students' prior

knowledge about and use of learning strategies), ii) presentation (introducing new strategies), iii) practice (active applications of new strategies to language learning tasks), iv) evaluation (student self-evaluation of the strategies practiced), and v) expansion (connecting strategies taught to new tasks and contexts). A related model to CALLA is the Problem-Solving Process Model (Chamot, Barnhardt, El-Dinary, Carbonaro, & Robbins, 1993; Chamot, Robbins, & El-Dinary, 1993) that has been developed specifically to teach learning strategies to American learners of foreign languages and has also been adapted for use in Japan (Robbins, 1994). The model classifies strategies used for production and comprehension with four basic thought processes that learners can access and use at various points in a language learning task: planning, monitoring, problem-solving, and evaluating.

Weaver and Cohen (1997) present a teacher-training manual designed to provide a broad range of activities and materials to demonstrate how strategies-based instruction can be used in the language classroom. The manual outlines a thirty-hour training course, ideas for three, six, and fifteen hours version of the course, as well as optional activities. The activities include lectures, discussions, and hands-on strategies-based exercises.

Last but not least, Rausch (1998) introduces a Menu Approach to language learning strategy instruction and use based on the language learning strategy classification developed by Oxford (1990). The approach has been developed around three themes; namely, i) simplification of the learning strategies model, ii) operationalization of learning strategies control continuum as a means of strategy instruction, and iii) introduction of strategy spiraling as a means of maximizing of the benefits of learning strategies.

According to Embi (2000a), despite the availability of these models of learning-to-learn reported in the literature, none has been integrated into the Internet. The following section of the paper presents a Malaysian-based ESL web site on learning-to-learn English known as E-Learn developed by the first author. E-Learn is designed based on a web-based strategy awareness training model known as SMART Net developed by Embi (2000a, 2000b).

Components of E-Learn

E-Learn (see Picture 1) is a Malaysian-based ESL web site on learning-to-learn English (<http://www.E-Learnertraining.net>). It consists of six main components that can be utilized to make ESL learners become aware of the key strategies for successful ESL learning.

Component 1 - Identifying One's Own English Language Learning Strategies

An instrument known as the E-Learn Questionnaire is integrated into E-Learn to enable ESL learners to identify their language learning strategies. The web-based questionnaire uses a 1-4 Likert Scale item to identify three broad areas of language learning strategy; namely, a) classroom language learning strategies, b) out-of-class language learning strategy, and c) examination language learning strategies. This questionnaire is adapted from the Strategy Questionnaire developed by Embi (1996).

Component 2 - Discovering Strategies for Successful English Language Learning

Based on data collected from secondary school students learning English in Malaysia (Embi, 2000a), a model of learning how to learn English known as SMART English Learning developed by Embi (2000b) is embedded into E-Learn (see Picture 2). 'SMART' is the acronym of the following main strategies shown to be related to successful Malaysian ESL learners:

S - Social Learning Strategies: strategies for learning English with others.

M - Metacognitive Learning Strategies: strategies for managing English language learning.

A - Affective Learning Strategies: strategies for lowering anxiety when learning English.

R - Remembering Strategies: strategies for memorizing English language materials.

T - Test Preparation Strategies: strategies for preparing for English language examination.

Component 3 - Discovering the Secrets of Successful English Language Learners

E-Learn also incorporates secrets of successful Malaysian ESL learners especially in terms of a) what successful Malaysian ESL learners do in the classroom, b) what they do out of the classroom, and c) how successful Malaysian ESL learners prepare for their language examination. Information on the secrets of successful ESL learners was gathered from studies on by Embi (1996; 2000a) and his colleagues (Embi et al, 2001) on 250 successful secondary school students learning English in Malaysia.

Component 4 - Discovering How to Become Successful English Language Learners

A page known as Method of SMART E-Learn is integrated into E-Learn to help ESL learners discover strategies for a) learning grammar, b) improving writing, c) improving speech, d) improving listening, and e) learning vocabulary. The information displayed in the hyperlinks of this page is derived from actual data gathered from 250 successful secondary school students learning English in Malaysia (Embi, 2000a; Embi et al 2001).

Component 5: Sharing English Language Learning Strategies that Work

An online e-group known as E-Learn Forum is integrated into the learning-to-learn ESL web site to allow users to exchange and share ideas about English language learning strategies. Another page known as E-Learn Inventory is also integrated into the web site. It presents an inventory of English language learning strategies that work, submitted by Malaysian ESL learners using an online form. Learners can also contact each other by joining the E-Learn Club.

Component 6 - Becoming Autonomous English Language Learners

To assist learners to be more autonomous ESL learners, a page with hyperlinks to ESL learning materials available in the World Wide Web (WWW) known as SMART E-Learn Strategy Links (see Figure 3) is integrated into the learning-to-learn English web site. It provides ESL learners with links categorized according to the major language skills and

areas as well as with more than a dozen ESL related information and activities available in the WWW.



Figure 1: E-Learn Homepage



Figure 2: SMART E-Learn Model



Figure 3: E-Learn Links

Besides the six main components, E-Learn also incorporates video clips of actual successful Malaysian ESL learners narrating their success stories on their language learning. New clips are presented each time the homepage is refreshed. In addition, the site presents different “motto” (e.g. ‘SMART language learners let context help them in comprehension’) and “strategy of the day” (e.g. ‘Watch English television programs on cable TV’) every time E-Learn is accessed and refreshed.

Evaluation of E-Learn

Trochim (1996) lists five methodologies that can be employed in web site evaluation; namely, i) concept mapping, ii) computerized evaluation, iii) survey, iv) achievement testing and measurement, and v) quasi or post-experiment. This study adopts the survey method. Concerning his evaluative model, Trochim (1996) adds that the survey methodology is possibly used during the implementation and evaluation stage to assess users' reactions to the content and examine the usability of a site. As E-Learn is an already published web site, it is felt that the method chosen is the best way to gauge ESL learners' and teachers' perception of the site.

In the last few years, a number of criteria have been considered for the evaluation of web information sources. According to Smith (1997), these criteria are generally based on the evaluation of print reference tools. While the traditional criteria apply, particular aspects in the web environment cause some new criteria to arise (Nelson, 1996). Nelson, (1996) adds that the quality of web design is another criteria that should be evaluated. Good design includes good use of language, layout, and graphics to help the reader be able to easily access, understand, and remember the content. Kelly (2000) presents some guidelines for the design of an ESL web site that could also be used for web evaluation; namely, i) usability by a wider audience, ii) loading and displaying time, iii) ease to use,

iv) usefulness, and v) integrity and professionalism. An aspect that gives integrity and professionalism to a site is the accuracy of its' facts and spelling. Grassian (1998) stresses that it is important to evaluate whether the content in a site is a result of research or just a claim. Some authors such as Alexander and Tate (1996) include the credibility of the sites' author as another evaluative criterion. This includes checking whether the author is in expert in the area, his experience, the institution that he is affiliated to, his position, and biographical information.

Katz (1992), suggests the following criteria for evaluating the information on the Internet:

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

In evaluating the content, some authors (e.g. Piontek & 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 on the Internet. Among the criteria relevant to this study are:

- Scope - What items are included in the web site?
- Content - Is the information fact or opinion? Does the site contain original information or simply links?
- Accuracy - Is the information on the web site accurate?
- Authority - Does the author have to stand in the field? Can the author be contacted for clarification?
- Currency - Is the resources updated or static?
- Uniqueness - What advantages does this particular site have?
- Links Made to Other Resources - Are the links kept up to date?
- Quality of Writing - Is the text well written?
- Graphic and Multimedia Design - Is the resource interesting to look at?
- Purpose and Audience - What is the purpose of the web site? Is it clearly stated?
- Workability - Is the resource convenient, and can it be used effectively?
- User Friendliness - Is the web site easy to use?
- Browsability and Organization - Is the resource logically to facilitate the location of information?
- Interactivity - Where features such as forms scripts are provided, do they work?

Methodology

Setting

The study was conducted in 2 secondary schools in the state of Negeri Sembilan, Malaysia. Both schools are among the 6 schools participating in the government's Smart School Pilot Project, one of the flagships in the Malaysian Super Corridor (MSC). This factor benefits the schools in terms of the availability of Information Technology (IT) equipment that includes Internet-accessible computers. The presence of such facilities has enabled the respondents to easily access and perform the task of evaluating E-Learn. Both schools are also chosen due to their status as fully residential ones. Consequently, this factor has also allowed the evaluation sessions for the students to be conducted outside the school hours.

Samples

The target population is ESL teachers and secondary (Form 4) school students studying in 6 Smart Schools in the state of Negeri Sembilan, Malaysia. Form 4 students are selected mainly because they are not involved in any important public examination and as such, they are not occupied with extra classes that are normally conducted in the afternoon after school sessions end.

To avoid bias, the students are selected randomly. Overall, 80 Form 4 students are involved in the web evaluation task. Though studying in residential schools, the English language command among the students ranges from good to weak. During English language lessons, they are placed in streamed classes according to their ESL proficiency. The streaming is done based on a proficiency test conducted at the beginning of an academic year. The random sampling of the students has pooled students with diverse ESL proficiency. Therefore, doubts that only students with good command of English are selected as samples in this study should not arise. The purposive sampling procedure is applied in selecting the teachers. All 15 ESL teachers in both schools took part in the study.

Instruments

Two sets of the questionnaire are used for data elicitation. Each set is used to collect data from the two groups of samples. The items in the questionnaire are divided into two parts. Part A contains items that guide the respondents to evaluate aspects of the web site; namely, i) reliability, ii) user-friendliness, iii) usefulness, iv) suitability v) interactivity, and vi) attractiveness. These criteria are adapted from literature related to web site evaluation by Alexander and Tate (1996), Everheart (1996), Harris (1997), Sharkey (1997), Fenton (1997), Nelson (1997) and Kelly (2000). Part B contains items the guide respondents to evaluate the content (main components) of E-Learn that include the E-Learn Model, E-Learn Secrets, E-Learn Method, E-Learn Inventory, E-Learn Questionnaire, E-Learn Forum, and E-Learn Club. Items in this section are adapted from the evaluation of SMART Net (Embi, Badushah, & Hamzah, 2002; Embi, Hamzah, & Badushah, 2002). The Cronbach Alpha Index is used to determine the reliability of the items in Part A and Part B. Results show the internal consistency of the items in Part A has a high reliability of 0.97; while, items in Part B also have high reliability of 0.89.

Procedures

Under the Smart School Pilot Project specification, a computer lab is equipped with 20 workstations. As the evaluation task follows the 1 student per 1 computer ratio, both computer labs at the sample schools can only accommodate 20 students per session. Therefore, there are two evaluation sessions conducted for the students in each school. Each evaluation session is carried out in a maximum of two hours. This duration of time comprises of two parts: i) familiarisation period, and ii) evaluation period. During the familiarisation period, the students are asked to browse E-Learn freely and familiarise themselves with the web site in 20 minutes. The remaining 1 hour and 40 minutes is the time they are required to evaluate the site using the questionnaire. Regarding Horton and Lynch's (1997) four major themes of web page information delivery, the time allocated is deemed sufficient to access a 'training' web site such as E-Learn. According to Horton and Lynch (1997), a training web site usually assumes a contact time of an hour or less. As such, the two hours allocation is enough to expose the ESL students and teachers who are assessing E-Learn for the first time. The evaluation of E-Learn by the ESL teachers is carried out in an almost identical manner. The only difference is that it is done in the morning.

Data Analysis

The data of E-Learn evaluation elicited from the questionnaire are analysed using the SPSS software. A descriptive statistic using frequency count and mean score is used in the data analysis. A set of indicators is derived from the 5 points Likert-scale response in the questionnaire (1=Strongly Agree; 2=Agree; 3=Neutral; 4=Disagree; 5=Strongly Disagree). A mean score between 1 - 2.50 is categorized as a positive response, a mean score between 2.51 – 3.50 is categorized as a neutral response, and a mean score between 3.51 - 5.00 is categorized as a negative response.

Findings

Results of the analysis as presented in Table 1 show that overall; the students give positive responses towards E-Learn, indicating that it has the characteristics of a credible web site. For one thing, the students agree that E-Learn is reliable. With a mean value of 1.82, the students feel that the reliability of the author is the strongest part of the web site that qualifies it to be good and makes it a highly reliable online source for ESL learning. The results also show that besides being reliable, E-Learn is also user-friendly (mean=2.00), useful (mean=2.00), suitable (mean=2.06), and attractive (mean=2.43). However, the students are uncertain about the interactivity of the web site (mean=2.56) (see Table 1).

Table 1.
Students' Perception on the Features of E-Learn

Features of E-Learn	n	Mean	S. D
Reliability	80	1.82	.77
User-Friendliness	79	2.00	.76
Usefulness	79	2.02	.88

Suitability	80	2.06	.86
Attractiveness	79	2.43	.84
Interactivity	79	2.56	.82

Similarly, the teachers also agree that E-Learn has the characteristics of a credible web site. The analysis shows that the teachers give a positive response to all the features of E-Learn (see Table 2).

Table 2.
Teachers' Perception of the Features of E-Learn

Features of E-Learn	n	Mean	S. D
Usefulness	15	1.85	.77
Reliability	15	2.10	.76
User-Friendliness	15	2.11	.88
Suitability	15	2.12	.86
Attractiveness	15	2.11	.84
Interactivity	15	2.34	.82

Unlike the students, however, the teachers feel that 'Usefulness' is the strongest feature of E-Learn that makes it a credible web site (mean=1.85). 'Reliability' meanwhile also gets a positive response from the teachers with a mean value of 2.10. The 'Interactivity' feature is also rated positively by the teachers (mean=2.34). A more detailed analysis of each feature of E-Learn is presented in the following sections.

Reliability

In this analysis, the mean value of each item under the 'Reliability' feature is calculated. The obtained mean scores are then arranged in ascending order. The findings of the analysis are presented in Table 3.

Table 3.
Students' Perception of the Reliability of E-Learn

Items	n	Mean	S. D
The information on the academic qualification of the author is clearly stated.	80	1.61	.90
The information on the author's contact address is clearly stated.	80	1.75	.97
The biodata of the author of the web site is clearly stated.	80	1.81	.87

The information on the author's expertise in his/her field is clearly stated.	80	1.86	1.0
The information on the author's written works is clearly stated.	80	1.90	.97
The source of information available on the web site is stated clearly.	79	2.02	.99

Based on figures presented in Table 3, the 'Clearly stated information on the academic qualification of the web author' (mean=1.61) is found to be the item that scored the highest mean value of all the reliability items of E-Learn. The clear information enables visitors to the web site to check on the author's academic qualifications. Other clearly stated information including the author's contact address (mean=1.75) that allows the site visitors to contact the author either via e-mail or telephone to get any further verifications or explanations. The biodata of the web author (mean=1.81) reveals the background of the author and let the visitors know him/her personally. An indication to the visitors that the content is written by someone truly relevant or authority in his/her area is provided by the information on the author's expertise in his/her field (mean=1.86). In addition, the author written works (mean=1.90) tells the visitors that the writer of the web site is experienced and established personality. Finally, the clearly stated source of information available on the web site (mean=2.02) allows the site visitors to do cross-checking of the content to ensure its validity and originality.

The teachers meanwhile rate the 'The information on the author's expertise in his/her field' as the item with the highest mean score (mean=1.80). While the students merely focus on the author's academic qualifications, the teachers go one step further by also paying attention to the author's expertise and his/her contributions and experience in his/her area (see Table 4). The teachers also positively rate other items. In other words, the teachers feel that the presence of these features has made E-Learn a reliable ESL web site.

Table 4.
Teachers' Perception of the Reliability of E-Learn

Items	n	Mean	S. D.
The information on the author's expertise in his/her field is clearly stated.	15	1.80	.90
The biodata of the author of the web site is clearly stated.	15	2.00	.97
The information on the author's written works is clearly stated.	15	2.06	.87
The source of information available in the web site is stated clearly.	15	2.21	1.0
The information on the academic qualification of the author is clearly stated.	15	2.26	.97
The information on the author's contact address is clearly stated.	15	2.33	.99

User-friendliness

The mean value of each item under the ‘User-Friendliness’ feature is calculated. Table 5 presents the mean scores arranged in ascending order.

Table 5.
Students' Perception of the User-Friendliness of E-Learn

Items	n	Mean	S. D.
The options (e.g. Menu) available help me to navigate the web site easily.	78	1.65	1.05
The neatly arranged content enables me to look for information easily.	79	1.74	.98
The main path to get information (e.g. ‘Click Here’ instruction) helps me to start navigating the web site easily.	79	1.84	1.11
The systematic classification of the links helps me to look for information easily.	79	1.89	1.04
The systematic classification of the content helps me to look for information easily.	79	1.93	1.04
The linkage to the main page on each supporting page helps me to navigate the web site easily.	79	1.94	1.10
The complete display of the web site enables me to view the content easily.	79	2.08	1.05
The short time to display the web site enables me to start using the content on the web site quickly.	79	2.40	1.18
The downloadable files (e.g. video clips) can be downloaded quickly.	79	2.55	1.27

Based on the analysis of the students' responses on the user-friendliness feature, the item that scores the highest mean is the availability of the web site menu (mean=1.65). The content menu gives them the option to go to the page or content that they want to visit easily. It is also interesting to note that the user-friendliness of E-Learn is enhanced with the appearance of the content menu on every page of the web site. Visitors, therefore, can directly go to any desired content from any page they are at, without always having to click the ‘Back’ button at the toolbar. Besides the menu, linkage to the main page on each supporting page for content that is presented in subtopics also scores a high mean value at 1.94. Nevertheless, while most of the items get a positive response from the students, the students give a neutral response to the downloading time of downloadable files on the web site (mean=2.55).

Data collected from the teachers shows that the available menu in the web site scores highly, obtaining a mean value at 1.73. Besides the menu, the neatly arranged content is another item that scores a similar mean value (mean= 1.73). The downloading time of the downloadable files and the short time to display content get a neutral response

from the teachers. The mean values for both items are 3.00 and 2.86 respectively (see Table 6).

Table 6.
Teachers' Perception of the User-Friendliness of E-Learn

Items	n	Mean	S. D.
The neatly arranged content enables me to look for information easily.	15	1.73	.83
The options (e.g. Menu) available help me to navigate the web site easily.	15	1.73	.96
The systematic classification of the content helps me to look for information easily.	15	1.80	.67
The systematic classification of the links helps me to look for information easily.	15	1.86	.83
The main path to get information (e.g. 'Click Here' instruction) helps me to start navigating the web site easily.	15	1.93	.83
The linkage to the main page on each supporting page helps me to navigate the web site easily.	15	2.00	.84
The complete display of the web site enables me to view the content easily.	15	2.13	1.12
The short time to display the web site enables me to start using the content on the web site quickly.	15	2.86	1.18
The downloadable files (e.g. video clips) can be downloaded quickly.	15	3.00	1.36

Usefulness

Analysis of the items under the 'Usefulness' feature shows that the information on language learning strategy by successful English language learners scores the highest mean value (mean=1.70) (see Table 7).

Table 7.
Students' Perception of the Usefulness of E-Learn

Items	n	Mean	S. D.
The information presented on the web site is useful for language learning.	79	1.70	1.06
The options available on the menu are useful for language learning.	79	1.88	1.03
Most of the links provided are useful for language learning.	79	1.88	1.02

The content in the web site is useful as a supplement to the language lessons that are taught in class.	79	1.98	1.06
The information presented on the web site is not available in other sources.	79	2.60	1.12

Besides the information, the students also feel that the available options at the menu and links provided are other items that enhance the usefulness of E-Learn. Both items obtain similar mean values of 1.88. Written feedback obtained from the students proves that the availability of the links is one of the strengths of the web site. The students also think that the supplementary role of the web site content to the language lessons taught in class contributes to the usefulness of E-Learn (mean=1.98). The students, however, are unsure whether the information in E-Learn is unavailable in other sources (mean=2.60).

As for the teachers, analysis shows all the items under this feature contributes to the usefulness of E-Learn. In comparison to the students, the teachers also give the highest score to the item on the information presented in E-Learn and consequently make it a useful web site for ESL learning (mean=1.46). The links provided are also useful for learning the language (mean=1.60). Written feedback received from the teachers shows that the available links help them to find other related ESL web sites easily. The teachers are also positive that the information in E-Learn is unique and unavailable in other sources (mean=2.46) (see Table 8).

Table 8.
Teachers' Perception of the Usefulness of E-Learn

Items	n	Mean	S. D.
The information presented on the web site is useful for language learning.	15	1.46	.51
Most of the links provided are useful for language learning.	15	1.60	.50
The options available on the menu are useful for language learning.	15	1.73	.45
The content in the web site is useful as a supplement to the language lessons that are taught in class.	15	2.00	.92
The information presented in the web site is not available in other sources.	15	2.46	.91

Suitability

Analysis of the data collected from the students is presented in Table 9.

Table 9.
Students' Perception of the Suitability of E-Learn

Items	n	Mean	S. D.
The words used are easy to understand.	80	1.80	.99
The instructions on the web site are easy to follow.	79	1.81	1.03
The information presented on the web site is easy to understand.	79	1.93	1.04
The graphics or photos used in the web site could cause controversy to any individual or group learner.	80	2.31	1.20
The information on the web site could be sensitive to any individual or group learner.	80	2.48	1.27

Based on the results presented in Table 9, it can be seen that all the stated items contribute to the suitability of E-Learn for ESL learning. The students rate the use of easy words as the item with the highest score (mean=1.80). The suitability is also enhanced by the use of simple and easy to follow instructions (mean=1.81) as well as the easy to understand the information presented (mean=1.93). Furthermore, the students also feel that the use of non-controversial graphics and photos (mean= 2.31) and the presentation of information that is not sensitive to any individual or group learner (Mean=2.48) also help in making E-Learn a suitable web site for ESL learning.

Table 10.
Teachers' Perception of the Suitability of E-Learn

Items	n	Mean	S. D.
The words used are easy to understand.	15	1.46	.51
The instructions on the web site are easy to follow.	15	1.60	.50
The information presented on the web site is easy to understand.	15	1.60	.50
The graphics or photos used in the web site could cause controversy to any individual or group learner.	15	2.26	1.16
The grammar on the web site is accurately used.	15	2.33	1.17
The information on the web site could be sensitive to any individual or group learner.	15	2.46	1.06
The spelling of words on the web site is accurately used.	15	3.13	1.12

The teachers also rated the use of easy to understand words as the item with the highest score (mean=1.46). In a similar pattern, the teachers also think that other items including the easy to understand instructions (mean=1.60), easy to understand information (mean=1.60), the non-use of controversial graphics and photos (mean=2.26) and the presentation of information that is not sensitive to any individual or group learner

(mean=2.46) have helped to make E-Learn a suitable web site. Besides those items, the accurate usage of grammar on the web site also contributes to the suitability of E-Learn (mean=2.33).

Attractiveness

Analysis of the items that make E-Learn an attractive web site to the students is presented in Table 11.

Table 11.
Students' Perception of the Attractiveness of E-Learn

Items	n	Mean	S. D.
The colors used to make the web site attractive.	77	2.12	1.10
The graphics used make the web site attractive.	79	2.22	1.06
The background used makes the web site attractive.	79	2.43	1.13
The font size used makes the web site attractive.	79	2.48	1.21
The animations used to make the web site attractive.	79	2.58	1.16
The consistent design/style used to make the web site attractive.	79	2.75	1.16

Based on the results tabulated in Table 11, the item on the colors used in E-Learn receives the highest score of the mean value (mean=2.12). Besides the colors, other items related to features such as graphics (mean=2.22), background (mean=2.43), and font size (mean=2.48) also contribute to the attractiveness of E-Learn. The students, however, give neutral responses to the animations used in the web site (mean= 2.58) and the consistent design/style used in E-Learn (mean= 2.75).

Table 12.
Teachers' Perception of the Attractiveness of E-Learn

Items	n	Mean	S. D.
The consistent design/style used to make the web site attractive.	15	1.80	.41
The animations used to make the web site attractive.	15	2.00	.84
The graphics used make the web site attractive.	15	2.06	.45
The background used makes the web site attractive.	15	2.13	.63
The colors used to make the web site attractive.	15	2.26	.79
The font size used to make the web site attractive.	15	2.66	1.39

Based on the figures presented in Table 12, the item on the consistent design/style of E-Learn scores highly (mean= 1.80) with the teacher respondents. In addition, the consistent design/style, animations (mean= 2.00), graphics (mean= 2.13), background

(mean=2.13) and colors (mean=2.26) are other items that get high mean value and consequently help to make E-Learn an attractive web site. The font size used in the site, however, receives a neutral response from the teachers (mean= 2.66).

Interactivity

Interactivity is the main feature that separates E-Learn from its' predecessor the SMART Net. There are several interactive elements introduced in E-Learn such as Forum, E-Learn Club and facility to contact the web author as well as good students via the e-mail. Table 13 shows the results of the analysis done on students' perception of the interactive elements in E-Learn.

For one thing, the students give the functioning facility to become a registered member of E-Learn the highest mean value and thus contributing to the interactivity of the web site (mean=1.85). Besides the membership facility, other items that represent interactive elements that function expectedly also receive high mean value. These include the appropriate display of other web sites that are linked to E-Learn (mean=2.29), the search engine (mean=2.36), and the downloadable files that refer to the video clips (mean=2.49).

Some of the elements, however, get a neutral response from the students. These include the display of the contents from the options available at the menu (mean=2.50), the facility to give feedback or comments to the author (mean= 2.62), the facility to share the experience with other language learners (mean= 2.72), the facility to contact other language learners (mean= 3.02) and the facility for online interaction via the forum (mean= 3.18) (see Table 13).

Table 13.
Students' Perception of the Interactivity of E-Learn

Items	n	Mean	S. D.
The facility to become a registered member of the web site functions expectedly.	78	1.85	1.11
When clicked, most of the available links to other web sites display the appropriate site expectedly.	79	2.29	1.05
The search engine in the web site (e.g. 'Google' or 'Yahoo') functions expectedly.	76	2.36	1.10
The downloadable files function expectedly.	77	2.49	1.22
When clicked, the options available at the menu display the expected contents.	79	2.50	1.37
The facility to give feedback/comments (e.g. via E-Mail) to the author functions expectedly.	79	2.62	1.12
The facility to share the experience with other language learners functions expectedly.	79	2.72	1.08

The facility to contact other language learners (e.g. via E-Mail) functions expectedly.	77	3.02	1.24
The facility for online interaction (e.g. Forum) functions expectedly.	79	3.18	1.31

Analysis of the data collected from the teachers is presented in Table 14. The item on the expected display of the other web sites linked to E-Learn gets the highest mean (mean= 1.93). Other interactive elements that receive a positive response are the facility to become registered members of the web site (mean= 2.06), the display of the expected contents when the available options at the menu are clicked (mean= 2.07), the successful functions of the downloadable files (mean= 2.20), the expected function of the search engine (mean= 2.23) and the facility to give comments/feedback to the author (mean= 2.33). The interactive element that receives a neutral response from the teachers is the facility to contact other language learners (mean= 2.60), the facility to share the experience with other language learners (mean= 2.66), and the facility for online interaction (mean= 3.00).

Table 14.
Teachers' Perception of the Interactivity of E-Learn

Items	n	Mean	S. D.
When clicked, most of the available links to other web sites display the appropriate site expectedly.	15	1.93	.70
The facility to become a registered member of the web site functions expectedly.	15	2.06	1.03
When clicked, the options available at the menu display the expected contents.	14	2.07	.82
The downloadable files function expectedly.	15	2.20	.56
The search engine in the web site (e.g. 'Google' or 'Yahoo') functions expectedly.	13	2.23	.83
The facility to give feedback/comments (e.g. via E-Mail) to the author functions expectedly.	15	2.33	1.04
The facility to contact other language learners (e.g. via E-Mail) functions expectedly.	15	2.60	.91
The facility to share the experience with other language learners functions expectedly.	15	2.66	1.04
The facility for online interaction (e.g. Forum) functions expectedly.	15	3.00	1.19

In this study, students' and teachers' perceptions of the content or main components of E-Learn are also sought. The web site is made up of components that include the E-Learn Model, E-Learn Secrets, E-Learn Method, E-Learn Inventory, E-Learn Links, E-Learn Questionnaire, E-Learn Forum, and E-Learn Club. Overall, the mean values

obtained from the analysis show that the students and teachers in this study reacted positively towards all the main components of E-Learn. Table 15 shows the mean scores obtained for all 15 items in this section. All mean values obtained ranged from 1.81 to 2.21 that belong to the positive response category.

Table 15.
Students' Perception of the Components of E-Learn

Items	Mean
E-Learn Model presented can be easily understood by language learners.	1.81
E-Learn Model provides new information to language learners.	1.97
E-Learn Secrets help learners discover what successful language learners do in the classroom.	1.85
E-Learn Secrets help learners discover what successful language learners do out of the classroom.	1.84
E-Learn Secrets help learners discover what successful language learners do to prepare for their language examinations.	1.83
E-Learn Method provides learners with useful information about learning grammar.	1.96
E-Learn Method provides learners with useful information about improving writing.	1.90
E-Learn Method provides learners with useful information about improving speaking.	2.03
E-Learn Method provides learners with useful information about learning vocabulary.	1.89
E-Learn Inventory provides useful information on the learning strategies of successful language learners.	1.93
E-Learn Links cover most of the language skills that language learners need to know.	2.13
E-Learn Links provides learners with useful materials for language learning.	2.01
E-Learn Questionnaire provides learners with a tool to evaluate their language learning strategies.	1.90
E-Learn Forum provides learners with a useful opportunity to discuss with other language learners.	2.06
E-Learn Club provides learners with useful opportunity to get to know other language learners.	1.85

Meanwhile, Table 16 shows the perception of the teachers on the components of E-Learn. The obtained mean values ranged from 1.40 to 2.20, indicating positive responses on all the components of E-Learn.

Table 16.
Teachers' Perception of the Components of E-Learn

Items	Mean
E-Learn Model presented can be easily understood by language learners.	1.40
E-Learn Model provides new information to language learners.	2.33
E-Learn Secrets help learners discover what successful language learners do in the classroom.	2.06
E-Learn Secrets help learners discover what successful language learners do out of the classroom.	1.86
E-Learn Secrets help learners discover what successful language learners do to prepare for their language examinations.	1.86
E-Learn Method provides learners with useful information about learning grammar.	1.96
E-Learn Method provides learners with useful information about improving writing.	1.93
E-Learn Method provides learners with useful information about improving speaking.	2.06
E-Learn Method provides learners with useful information about learning vocabulary.	1.93
E-Learn Inventory provides useful information on the learning strategies of successful language learners.	1.93
E-Learn Links cover most of the language skills that language learners need to know.	1.93
E-Learn Links provides learners with useful materials for language learning.	2.00
E-Learn Questionnaire provides learners with a tool to evaluate their language learning strategies.	1.66
E-Learn Forum provides learners with a useful opportunity to discuss with other language learners.	2.20
E-Learn Club provides learners with useful opportunity to get to know other language learners.	2.00

Summary and Discussion

Overall, the respondents feel that E-Learn is a reliable, user-friendly, useful, suitable, attractive, and interactive ESL web site. One of the reasons that make E-Learn reliable is the presence of several information such as the contact address and the information of academic qualifications and a list of publications of the web author. In relation to this, Abdullah (1997) agrees that web site authors or managers should provide contact

information to let users to make comments or ask questions. Moreover, Fenton (1997) postulates that such information allows visitors to do a traditional evaluation that is by checking his publications. Hence, the clear presence of this information on the web site has given the students and the teachers the confidence to use E-Learn as a reliable source for ESL learning.

Meanwhile, the detailed analysis of the 'User-friendliness' aspect of E-Learn shows that the presence of features such as the neat arrangement of content, availability of content menu, systematic classifications of content and links, linkage to the main page on supporting pages and quick downloading time of content and files make E-Learn a user-friendly ESL web site. The presence of these features indicates that the author of E-Learn applies the design guidance suggested in several literary works on web design. The user-friendly interface design of E-Learn, for example, reflects Harun's concern (1997) that such design helps visitors to control and manage their strategies in retrieving information from a web site. Another feature such as the link back to the main page on each supporting could avoid any of the pages in E-Learn from becoming an 'orphan' page (Kelly, 1997). However, the neutral response among the respondents over the downloading time of the content and video clips in E-Learn indicates the areas that require immediate attention and improvements to enhance the user-friendliness of the web site. Analysis of the written feedback provided by the students and teachers reveals that slow downloading of the content and the video clips are among the weaknesses of E-Learn. As highlighted by several literary works on web site evaluation (Kelly, 1997; Alexander and Tate, 1997; Everheart, 1997), any web site must display and download quickly. Kelly (1997) even warns that if the main page does not load quickly, there is a lower chance that visitors will visit the supporting pages. A suggested solution to overcome the visitors' high expectations of the video clips is to remind them of the slow downloading time of the video files. They also need to be reminded of the software needed to play the videos as well as the software version.

The usefulness of E-Learn is enhanced by the information presented, the options available, and the links to other web sites. Written feedback received from the ESL students on the strengths of E-Learn reveals positive statements related to the information in the site such as 'Good strategies for exams', 'Can help English learners to discover useful strategies for English language learning', 'Can help students to improve English', 'Helps students to excel in English', 'Help students to master English' and 'Motivates students to learn English'. Some of the teachers believe that the information is useful because it 'provides relevant tips for learning the language' and also 'discusses strategies on how to learn English'. Consequently, one teacher writes that with such qualities, teachers can also use E-Learn as an online language teaching reference. Another teacher admits that besides being one of the strengths of the web site, the useful links available in E-Learn has enabled her to access other web sites easily. The usefulness of E-Learn is also enhanced by the uniqueness of the information on the web site as admitted by some students in their written feedback. The uniqueness of the content perhaps answers Kelly's (1997) suggestion that a good website should fill a need, presenting a different content that is not similar to other existing sites.

One area that needs attention is the spelling mistakes found in some of the pages. Analysis of the written feedback gathered from the teachers shows the mistakes as among the weaknesses of E-Learn. Some of the respondents listed the words that have been spelt wrongly on the web site. Another related correction that needs to be done is the use of

some Malay words on the site. Immediate correction to all these mistakes needs to be taken because E-Learn is already published on the Internet.

In terms of attractiveness, the respondents generally feel that the use of features such as the consistent design or style, font size, graphics, background, colors, and animations have contributed to the attractiveness of E-Learn. Written feedback obtained from the students shows that the features used are listed as among the strengths of the web site. Such responses indicate the naivety or the inexperience of the students in web design. Several works of literature on web site design emphasize the importance of consistency in web design. Tittel and James (1995), for instance, highlights the consistency in page layouts and page elements and menus as this will not only help to make a web site attractive but also aid web visitors to find their way around the site and do not get lost in the cyberspace. Suggestions by the students in their written feedback to include more animations and graphics in making E-Learn be more attractive contradict guidelines by web design experts. The use of animations and graphics may not always be necessary and overuse of these elements may make the web pages uglier and affect their loading time (Flanders, 1996).

The interactivity of E-Learn is the aspect that needs refinement. The students give a neutral response to this aspect. Even though it gets a positive response from the teachers, detailed analysis shows that some of the interactivity elements also receive a similar response from both groups of respondents. These include the facility to contact other language learners, facility to share the experience with other language learners, a facility for online interaction, and the facility to give feedback or comment and the functionality of the menu buttons. Moreover, the analysis of the written feedback by the respondents reveals several weaknesses related to the interactivity of E-Learn. Some of the interactivity-related weaknesses commented by the respondents are non-functionality of the online forum, non-functionality of the e-mail facility, and links that are not leading to the expected web sites. Besides the weaknesses, some of the respondents also complained of having to make two different registrations for the forum and the club. Again, immediate rectification of these interactivity elements needs to be done mainly because the interactivity feature is the aspect that separates E-Learn from its' predecessor, SMART Net. Furthermore, the full functionality of the interactivity elements in E-Learn will enable its users to fully reap the benefit of using the internet that is by being able to interact and not merely passively sit around and consume information (Graus, 1999).

In general, the findings regarding the content of E-Learn show that the students and teachers reacted positively to all the 8 components of E-Learn. These findings resemble the results of a related study on E-Learn by Embi and Latiff (2002) that involve evaluation on the web site by a group of teacher trainees. Earlier studies on the main components of SMART Net also indicate positive reactions among the respondents (Embi, Badushah, & Hamzah, 2002; Embi, Hamzah, & Badushah, 2002).

In the current study, though some of the components do not function expectedly, the respondents realize the potential of E-Learn as an online aid for language learning. The important step to take is to repair any problem to any of the components so that the true potential of all of E-Learn components can be fully utilized and exploited by language learners. Taking such a corrective action follows Trochim's integrative web evaluation model that proposes four phases of web development (Trochim, 1996). After the fourth stage that involves evaluation by real web visitors, any correction to a site would mean a return to the earlier phases which include conceptualization, development

and implementation stages of the web. Practicing such procedures would surely make E-Learn a better online ESL resource.

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