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Development and Evaluation of a Web-based Speaking Resource for ESL Pupils: Teachers' Responses

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Abstract

This paper presents the English teachers' responses towards a web-based resource developed to improve ESL pupils' speaking skills. The purpose of the study is to analyse the English teachers' responses towards the web-based speaking skills resource named 'Hey Let's Speak'. This study included 10 English teachers from secondary schools in Malaysia who explored and utilised the web-based resource before it was implemented in schools. Their responses were used to determine whether the web-based resource is suitable and their suggestions were taken into consideration for further improvements. The instrument was divided into four components which included (1) design (2) interactivity (3) content and (4) usability, to measure the English teachers' perception towards the resource. The findings showed positive results in terms of design, interactivity, content and usability. The strengths of the web-based resource include attractive design, suitable content and user-friendliness. However there are improvements needed in terms of the quantity of the topics included and resource layout. The use of this web-based resource could motivate the ESL pupils to be interactive and work collaboratively to improve their English speaking skills.

Keywords: E-learning; web-based learning; Speaking skills; Internet.

1. Introduction

Speaking skills is considered to be an integral part of successful communication and sharing of information (Wang and Shwu-Ching Young, 2014). In this 21st century, excellent communication skill is one of the most important skills to determine the students' success in university application or job positions. However, recent study stated that Malaysian pupils and undergraduate students are facing difficulties to communicate fluently in professional settings thus adversely affected their possible study and job offers (Noor Azina, 2011). One of the main reasons contributing to the students' poor speaking skills is the lack of speaking practise, either during the class or outside of the English lesson (Wang and Shwu-Ching Young, 2014). Thus, pupils should be given the opportunity to practise their speaking skills outside of the classroom, and be able to use it depending on their own free time.

One of the measures is by developing an English speaking skills web-based resource. A 'web-based resource' in this context is defined as an online website that is accessible through computers or mobile device which allows the ESL pupils to learn ubiquitously (Adeyemo et al., 2013). Teaching and learning has become more efficient and enjoyable with the integration of web-based learning in English lessons. It allows the pupils and educator to communicate using English outside of the class hours hence improve the pupils' speaking proficiency (Wang and Young, 2012). This may also encourage learning to happen beyond the classroom boundaries. The pupils could use the web-based resource in the school or at home according to their own pace and time.

The researchers developed an English speaking skills web-based resource known as 'Hey Let's Speak', and later introduced it to Form Four students in Terengganu, Malaysia. In the process of developing 'Hey Let's Speak', there were English teachers who were involved in giving feedback and responses towards the resource. This study was conducted to gain insight on English teachers' responses towards the web-based resource. In particular, this study addresses two research questions: (1) What are the English teachers' responses to the web-based resource, Hey Let's Speak, in terms of design, interactivity, content and usability? (2) What are the English teachers' responses on the advantages and improvements needed in using 'Hey Let's Speak'?

2. Literature Review

2.1. Teaching and Learning of Speaking Skills

'Chalk-and-talk' and initiation-response-feedback (IRF) have been commonly practised in traditional classrooms practising rote-learning (Agbatogun, 2014; Hall, 2004). Educators are seen as the primary resource and ESL pupils are provided with models and patterns of interaction in English. However, these methods suffer from heavy dependence on rote learning, lack of two-way communication and insufficient feedback from the educator

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(Wang and Young, 2012). Hence there is a need to provide a platform for the ESL pupils to interact among themselves or with the educator, and practise their speaking skills effectively (Agbatogun, 2014). Through continuous practise, ESL pupils would be able to improve their speaking proficiency. Azahari *et al.* (2018) suggested the introduction of student-based learning whereby they are given the power to determine their own learning content and pace. The effort to improve ESL pupils' speaking skills correlates with the introduction of Malaysian Education Blueprint (2015-2015), which focuses on improving English speaking skills among the Malaysian pupils (Ministry of Education Malaysia, 2012). It is imminent to increase ESL pupils' speaking proficiency in order to ease their application into tertiary level education and job employability.

2.2. Web-Based Learning

Adeyemo *et al.* (2013) define web-based learning as the use of Internet in teaching and learning which covers online learning, e-learning syllabus and the use of computational devices. This method of learning provides the opportunity for the ESL pupils to experience ubiquitous learning. Ubiquitous learning enables the ESL pupils to learn beyond the restrictions of time and location (Liu, 2009).Rather than being dependent of the teacher and the English lessons in school, ESL pupils can access the web-based resource at any given time and place, and practise speaking skills online. This would enable interactive learning to happen as the ESL pupils would be given instant feedback by the educator or online instructor. Authentic learning would take place as the ESL pupils are no longer simply memorising the dialogues or speech patterns but now are allowed to respond according to real-live questions or situations posed online (Pachler, 2010). ESL pupils would benefit from developing their own understanding of the topic, collaborating and exchanging their ideas with their peers and educator, and receiving personalised feedback on their work. They no longer have to wait for their turn to speak in class and suffer from lack of opportunities to speak. This would also be beneficial for ESL pupils who are introverts and has shyness issue when speaking in class. This opportunity allows the ESL pupils to improve their performance and increase their learning satisfaction (Chai *et al.*, 2016; Miangah and Nezarat, 2012).

2.3. Web-Based Learning Resource for Speaking Skills

Web-based resource which reflects real-life communication is advantageous for the ESL pupils since it provides them with a platform to practise learned phrases based on real life situations, and at the same time develops their language proficiency through collaborative efforts with their peers and educator (Hedge, 2014; Wang and Young, 2012; Wang and Shwu-Ching Young, 2014). ESL pupils develop their speaking skills more efficiently when there is purposive language use – whereby the purpose of the conversation reflects the everyday usage of English (Agbatogun, 2014; Hedge, 2014). In their research involving the use of intelligent computer assisted speaking language (iCASL) system, (Wang and Young, 2012; Wang and Shwu-Ching Young, 2014) found that Taiwanese primary and tertiary level ESL students were able to improve their speaking skills using web-based resource. These findings are supported by similar positive results found in (Chiu *et al.,* 2007) study. The study suggest that ESL pupils are highly interested in the use of web-based learning and that they are able to develop the speaking skills more effectively when there are spoken, written and pictorial feedbacks included in the resource. The ESL pupils are more motivated to learn since the resource is more enjoyable and suited to their level (Melor Yunus *et al.,* 2012). Since there are numerous benefits of web-based resource in teaching and learning of speaking skills, it is important for the educators and experts in Malaysia to collaborate and develop a web-based resource that is suitable for our ESL pupils according to their needs, and at the same time fulfils the current English syllabus in schools.

2.4. Constructivist Theories

Constructivism is divided into cognitive constructivism and social constructivism. Cognitive constructivism states that ESL pupils would learn by building on new knowledge from previous schemata (Steiner, 2014). ESL pupils would learn new blocks of information in stages, from less difficulty to a higher level of complexity. This means, the web-based resource developed should reflect the ESL pupils' development stages and current level to allow them to continue building new understanding and schemata. Meanwhile Vygotsky defined social constructivism as building new knowledge through social interactions and collaborative efforts (Vygotsky, 1962). ESL pupils develop their understanding new knowledge through interactions with their peers, educators, resources and their surroundings. 'Zone of proximal development" (ZPD) is an important part of ESL pupils' collaborative effort in learning (Figure 1). ZPD is the zone in between the stage where ESL pupils can independently fulfil their task, and the stage where they require assistance in order to complete the task. Thus in order to build their understanding and grasping the new knowledge, ESL pupils would need to receive guidance and have interactions with their peers, resource or educators (Vygotsky, 1962).

Cognitive and social constructivism is reflected through this web-based resource, Hey Let's Speak. Cognitive constructivism is embedded through the structure of the website content which is divided into several stages depending on their difficulty. ESL pupils would need to finish the first stage which includes input such as the speech patterns, videos and recorded materials, before starting on the exercises. The exercises are also divided into guided and non-guided practise in order to allow the ESL pupils to gradually build their competency. By separating the content into stages, the ESL pupils would need to master the previous level before advancing to the next level. This would ensure good grasp and mastery of the speaking skills presented in the resource. Meanwhile social constructivism is reflected through the need to collaboratively work with their peers and educator in order to complete the task presented in the resource. Sultan *et al.* (2011) found social constructivism is highly accepted by the secondary and primary school pupils. In 'Hey Let's Speak', ESL pupils would practise the speaking skills through

paired recording with their peers, and receiving online feedback from the instructor. This reflects the ZPD which shows how ESL pupils would work collaboratively and learn from more fluent peers and instructors in order to develop their understanding of the speaking skills concept or topic. Through this collaborative effort, not only would the ESL pupils be able to grasp the knowledge, but they would also feel more motivated to practise speaking (Sultan et al., 2011)

Figure-1. Zone of Proximal Development

3. Method
3.1. Design and Development Research (DDR)

This study is a Design and Development Research (DDR) Type 1 following (Van Den Akker, 1999), and (Richey and Klein, 2005) previous research. In this study, the researchers adopted DDR research Type 1 which aims to develop and evaluate an English speaking skills web-based resource called 'Hey Let's Speak'. It is a website developed for intermediate and weak ESL pupils in Malaysia. This study is part of a larger study which aims to design, develop and evaluate the 'Hey Let's Speak' website when being implemented in schools. For this study, the researchers analysed the participants' responses gathered during the development process and the items that needs to be improved in the prototype before the implementation stage in schools.

3.2. Research Tools

The researchers disseminated a questionnaire on the English teachers' perception towards 'Hey Let's Speak' in terms of its design, interactivity, content and usability. The items were adapted from (Juhaida, 2015) study which focuses on the design, structure, user-friendliness and useful content that would help improve ESL pupils' speaking skills. The questionnaire was distributed in November to December 2017 to 10 Form 4 and 5 English teachers. There are overall 33 items in the questionnaire. There are nine items to evaluate design, nine items for interactivity, nine items for content and six items for usability. There were also open-ended questions in the questionnaire to gather information on the strengths and improvements to be made in the website. Before the questionnaire was disseminated, the content and face validity of the items were verified by two English lecturers who are experts in e-learning.

3.3. Participants

In conducting this study, the researchers collaborated with 10 ESL teachers who are teaching Form 4 and 5 in schools. These teachers were chosen using purposive sampling as they fulfilled the criteria needed for this study. These teachers are B.Ed Teaching English as a Second Language (TESL) graduates an one of them are Masters graduate in TESL, They have more than 8 years of experience teaching English and are experts in teaching speaking skills. They have also dealt with intermediate and weak pupils in their respective schools hence are able to give feedback towards this resource which needed to suit end-users from different levels of proficiency. They are also well-versed in using technology in education such as incorporating VLEFrog, and online learning in class. Hence they were chosen in order to give feedback towards the 'Hey Let's Speak' prototype.

3.4. Design and Structure of 'Hey Let's Speak'

This web-based resource called 'Hey Let's Speak' is divided into four sections; speaking skills notes, written and speech exercises, quiz and vocabulary. The speaking skills notes section has videos, recorded conversation and online notes. Meanwhile the exercise section has online written exercises and speech practice. The speech practice requires the ESL pupils to record their conversation in pairs, upload their recordings and listen back to their recordings. The instructor would then provide feedback on the grammar and vocabulary via recording or written feedback. The quiz section tests the ESL pupils' understanding of the topic while the vocabulary section includes recordings of the pronunciation for difficult or unfamiliar vocabulary. The final section is the games section which includes Kahoot game that can be played as a whole class during the English lesson.

3.5. Data Collection and Analysis

The researchers administered the questionnaire via online after obtaining a permission letter from Ministry of Education and the Terengganu State Education Department. The participants were informed and their consent was obtained before the questionnaires were administered. The English teachers were given a month from November to December 2017 to explore and use the 'Hey Let's Speak' before they completed the online questionnaire.

All completed questionnaires were returned and descriptive analysis was carried out by the researchers to determine the frequency and percentage of their response. Thematic analysis was also conducted for the open-ended questions included in the questionnaire.

4. Results

The results of the study are presented in two parts as to answer the two research questions. In answering Research Question 1 (What are the English teachers' responses to the web-based resource, Hey Let's Speak, in terms of design, interactivity, content and usability?), the responses to the four constructs are presented. The percentages of the data on the design, interactivity, content and usability are included.

4.1. Research Question 1

Analysis of the design of 'Hey Let's Speak' in Table 1 shows that the majority of the English teachers agree that the visual layout (60%), text (50%), graphic (70%), colour scheme (40%) and audio (40%) used are suitable for the website. The design would be able to attract the end-users in using the website. However, the text and graphic position could be improved in order to ease the end-users usage of the website, and the instruction and guidelines should be made clearer in order for the end-users to be able to perform the task smoothly. 10% of the end-users rated Neutral for these items.

Table-1. Web-based resource design analysis

No	Item	Strongly Disagree %	Disagree %	Neutral %	Agree %	Strongly Agree %
1	Visual layout of this website attracts attention.	-	-	-	60%	40%
2	Text is clear and easy to read.	-	-	-	50%	50%
3	Graphics and images are interesting and effective.	-	-	-	70%	30%
4	The colours used are vibrant, suitable and appropriate.	-	-	-	40%	60%
5	Audio is suitable and does not disrupt the concentration of users.	-	-	-	40%	60%
6	Time for response is appropriate.	-	-	-	40%	60%
7	Position of text, and graphics is consistent.	-	-	20%	20%	60%
8	The resource is complete with instructions and guidelines on how to use it.	-	-	10%	40%	50%
9	The colour scheme used is appropriate.	-	-	-	40%	60%

Interactivity aspect of the web-based resource is important in order to ease the end-users' utilisation of it. The analysis in Table 2 shows that English teachers rated 'Hey Let's Speak' as being able to provide sufficient and responsive feedback to the end-users (60% strongly agree). The speed delivery can be controlled (40% strongly agree), delivery of content is smooth (70% strongly agree), efficient access to the website (60% strongly agree), interactive chat wall and emails are provided (80% strongly agree), and the menu bar is provided to ease navigation (80% strongly agree). However, the different sections should be made clearer and the access to the information could still be made easier by improving the presentation and layout. 10% of the English teachers rated these items as Neutral.

Table-2. Web-based resource interactivity analysis

No	Item	Strongly Agree %	Disagree %	Neutral %	Agree %	Strongly Agree %
1	Users can control the speed of delivery in this resource.	-	-	-	60%	40%
2	Use of text, graphics and audio is provided so users can understand information displayed.	-	-	-	40%	60%
3	The resource branches out to related sections.	-	-	10%	50%	40%
4	Delivery of content is easy to follow.	-	-	-	30%	70%
5	Users can easily access information needed.	-	-	10%	20%	70%
6	Users can opt to logout anytime.	-	-	-	40%	60%
7	The resource uses chat wall and emails for communication.	-	-	-	20%	80%
8	Feedback is obtained in a number of ways (type out answers, and tap on choices).	-	-	-	40%	60%
9	The resource has a menu bar for selection of choices.	-	-	-	20%	80%

The findings in Table 3 show the English teacher's response towards the content aspect of the web-based resource The majority of the English teachers have agreed and strongly agreed that 'Hey Let's Speak' provided content that is suitable and informative for the ESL pupils. According to the participants, the information is easy to understand (50% strongly agree), information easy to follow (60% strongly agree), interesting information provided (70% strongly agree), content is fresh and engaging (60% strongly agree), functional hyperlinks is available (60% strongly agree) and there is possible future use (70% strongly agree). However some of the topic and exercises might not be suitable for all levels (10% rated as Neutral) and list of other resources can be improved (10% rated as Neutral).

Table-3. Web-based resource content analysis

No	Item	Strongly Agree %	Disagree %	Neutral %	Agree %	Strongly Agree %
1	The topics presented are suitable for the different levels of pupils.	-	-	10%	50%	40%
2	The information is easy to understand.	-	-	-	50%	50%
3	The information delivered is easy to follow.	-	-	-	40%	60%
4	The examples and exercises are suitable with the pupils' level.	-	-	10%	50%	40%
5	This website is interesting to be explored as a resource for learning English speaking skills.	-	-	-	30%	70%
6	The content on this website is fresh and engaging.	-	-	-	40%	60%
7	This website provides a list of resources that may be accessed to obtain additional information.	-	-	10%	40%	50%
8	Functional hyperlinks within and outside of this website stimulate further exploration of content.	-	-	-	40%	60%
9	I would use this website again	-	-	-	30%	70%

The analysis of the Hey Let's Speak usability in Table 4 show the English teacher's response towards the usability aspect of the web-based resource. Majority of the participants agreed and strongly agreed that the web-based resource has a high level of usability and beneficial for the ESL pupils in terms of helping them with their speaking skills. The website helps ESL pupils to masters speaking skills (50% strongly agree), introduces speaking skills in a meaningful way (50% strongly agree), opportunities for practice are provided (80% strongly agree),

opportunities for self-assessment are evident (60% strongly agree), extensions are provided in order to enhance the ESL pupils' mastery (50% strongly agree).

Table-4. Web-based resource usability analysis

No	Item	Strongly Agree %	Disagree %	Neutral %	Agree %	Strongly Agree %
1	The website helps learner to master speaking skills.	-	-	-	50%	50%
2	The website introduces speaking skills in a meaningful way.	-	-	-	50%	50%
3	The activities provide the pupils with opportunities for practice.	-	-	-	20%	80%
4	The website allows pupils to do self-assessment	-	-	-	40%	60%
5	The website suggests extensions or variations that will further enhance the mastery of speaking skills.	-	-	-	50%	50%
6	The website would help second language pupils to master speaking skills.	-	-	-	40%	60%

4.2. Research Question Two

The second Research Question is 'What are the English teachers' responses on the advantages and improvements needed in using 'Hey Let's Speak'?' Open-ended questions were analysed using thematic analysis and there are three main themes found for the strengths of the website.

4.2.1. Strengths of Hey Let's Speak
a. Attractive Design

The web-based resource has able to provide attractive designs for the end-users which motivated them to use the resource for learning. The colour, graphics and layout of the web-based resource are important in determining the end-users interest and engagement period in using the resource. The participants stated positive responses such as "*interesting and colourful resources*", "*I personally like the layout of this website.*" and "*able to attract student's attention to engage in the activities.*" All of these comments show that the participants found that the web-based resource has able to attract their interest in learning speaking skills and using the resource.

b. Content suited to the ESL pupils' needs

The thematic analysis also found that the web-based resource provided English speaking skills content that is suitable to the ESL pupils in the intermediate and weak level. This is seen in the responses given, "*the content/ the materials used. They are relevant to the targeted groups*", and "*suitable for weak pupils*". Another point brought up by the participants is the importance of providing content that is suitable to the ESL pupils' cultural context - "*Its contents are reasonably appropriate for the target audience's cultural context. It provides a good alternative and adequately challenging materials for the target audience.*" This shows the end-users are aware of the cultural values and nuances that are included in the content. Suitable content would help the end-users to understand the material better. The usage of video also helps the ESL pupils to stay engage while providing them with effective content. For example, "*The use of videos helps attract pupils with short attention span and provides good examples for pupils to imitate. The use of videos also provides contexts for the texts given*".

c. User-Friendly

The third strength found in the web-based resource is the high level of user-friendliness. The participants found that 'Hey Let' Speak' provides the autonomy to the end-users to use the resource according to their own pace. For example, "*you can complete the exercises at your own pace*", and "*user-friendly.*"

4.2.2. Suggestion for Improvement

The findings from the thematic analysis also show there are still some improvements needed for the web-based resource.

a. Additional Content is Needed

The participants found that the number of topics and exercises presented in the web-based resource are insufficient. They stated that the researchers should include more topics which relate to the ESL pupils' background. For example, "*provide more topics and exercise that are related to the pupils' background*", "*there should be more topics*", "*provide more activities and cover more topics*", and "*could add more exercises in the future*". This shows

the need to design and develop more content that is attractive, and at the same time suited to the needs of the ESL pupils.

b. Better Layout to Ease the End-Users

Some of the participants suggested that better layout in terms of font size and menu button are needed for the web-based resource. The suggested "b*igger font*" and *"the menu button brings visitors to empty pages. Perhaps the drop-down button (the one with '+' symbol) can be improved".* This shows that more thought should be put in the design of the web-based resource in order to ensure the end-users' satisfaction and benefit in using the web-based resource.

4. Discussion

Developing a web-based resource is an iterative process which requires careful consideration and collaborative efforts from the researchers, developers, teachers and the pupils. Throughout the process of developing this web-based resource for speaking skills, there are several important issues found that affects the participants' responses and feedback towards the resource.

Suitable content that is designed specifically to the needs of the ESL pupils is important in determining the degree of the resource's success. As presented in Table 2, Table 4 and the analysis of the open-ended questionnaire, the content presented must be able to suit the ESL pupils' level, needs and their cultural background in order to be useful for the pupils. This is also supported by previous studies by Maslawati *et al.* (2015), (Wang and Young, 2012; Wang and Shwu-Ching Young, 2014) that stated web-based resource are able to improve ESL pupils' English proficiency level and speaking skills provided that the content presented follows the expectations and needs of the ESL pupils (syllabus). There are different levels of exercises and speech practice available for the ESL pupils in 'Hey Let's Speak'. There is also vocabulary assistance provided for pupils who have trouble understanding some of the more difficult words. This shows that by identifying and acknowledging the different levels and needs of the ESL pupils, the resource would be more useful for the end-users. Furthermore, it is also crucial to consider the ESL pupils' cultural background when developing a resource. This is evident in terms of the materials and items mentioned and shown in the videos embedded in the website. By incorporating common and everyday items that the ESL pupils can relate to, they are able to digest and understand the topics presented better.

Another important consideration to be made when developing a web-based resource is the design and layout of the website. Attractive design would be able to engage the ESL pupils longer and they would be more motivated to use the resource for learning (Agbatogun, 2014). Based on the findings in Table 1 and the thematic analysis, the participants found that 'Hey Let's Speak' is able to provide interesting design that would be able to attract the end-users. The colourful font, graphics and layout would motivate the end-users to use the resource. This is also suggested by previous study by Melor Yunus *et al.* (2012) that states learners acceptance, performance and motivation are highly affected by the design and the presentation of the resource. Hence, this shows that the colourful fonts, graphics and user-friendly layout that are included in 'Hey Let's Speak' would be able to attract their attention and engagement when learning using the resource.

Interactivity and sufficient feedback is crucial when developing a web-based resource for speaking skills. Based on the analysis on Table 2, Table 4 and the open-ended questionnaire, it was found the web-based resource 'Hey Let's Speak' was able to provide sufficient opportunities for the participants to receive feedback when using the resource. They are able to receive written and recorded feedback from the instructor. Since the focus of the resource is to improve the ESL pupils' communication, there is a need to ensure the end-users are given sufficient feedback when using the web-based resource. This is evident in 'Hey Let's Speak' exercises and speech practice. ESL pupils would be able to record their dialogue, upload the recording, then receive a feedback from the instructor. This allows the ESL pupils to learn from their mistakes and improve their speaking skills. The opportunity for the ESL pupils to work together with their peers when recording and receiving feedback from the teacher also reflects the social constructivist theory (Vygotsky, 1962) which states that learners would learn through collaborative efforts in order to improve their skills and understanding. Besides that, Wang and Young (2012; 2014) studies support the notion that feedback is crucial as their own online learning resource provided their end-users which written graphic and sound feedback. Based on their results, the ESL pupils showed improvements in terms of their performance in English speaking skills through the feedback given. Hence, it can be argued that sufficient feedback in a web-based resource is crucial in ensuring a positive outcome.

5. Conclusion

The study shows that the web-based resource has suitable design, interactivity level, content and usability to support the development of ESL pupils' speaking skills according to the English teachers' perspective. It was also found that suitable content which caters to the ESL pupils' needs and level, attractive design and interactivity are important determiners in ensuring positive outcomes from using the web-based resource. However, more topics should be included in the 'Hey Let's Speak' resource and better layout is needed to ensure smooth navigation and higher end-user satisfaction. Hence ESL resource developers and educators should take into consideration of the content, design and feedback opportunities when developing a web-based resource for English speaking skills. As this study is limited to Form Four syllabus, future research should cover more diverse topics from different syllabus, and a higher number of participants in order to ascertain the quality of the website.

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