INVESTIGATING THE NEEDS OF DEVELOPING A DIGITAL VOCABULARY LEARNING MATERIAL FOR MALAYSIAN INDIGENOUS LEARNERS IN ESL CLASSROOM

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ABSTRACT

Background and Purpose: An intervention program becomes a necessity when a learning problem arises. To ensure the program effectiveness, pedagogical and assessment decisions rely heavily on the actual needs of learners. Hence, this study aimed to conduct a needs analysis survey to investigate the indigenous learners' needs in terms of their attitudes towards ESL learning, favorable language skills, topics of interest and preferable modes of learning. Unlike other groups of Malaysian learners, the indigenous experience extreme ESL learning disadvantage due to their struggle to assimilate themselves in a multi-ethnic school environment.

Methodology: This study employed design-based research (DBR) methodology with the utilization of mixed-method tools in the forms of document analysis and close-ended questionnaire. These data variations aim for the breadth and depth of understanding and corroboration. Past public examination results were used to highlight the indigenous learning problems in ESL learning followed by a survey questionnaire on forty-eight (48) 13-year-old indigenous learners.

Findings: The findings reveal that the indigenous possessed extremely poor vocabulary mastery and experienced high language anxiety. Nevertheless, they surprisingly exhibited high awareness towards

the potential usage of English language, and this level of awareness posits their needs and readiness to explore other means of learning which are not currently offered to them such as digital game-based learning.

Contributions: The study informs ESL practitioners on the importance of considering the needs of the targeted learners and teachers involved so that contextualized, practical, and effective instruction could be designed, developed, and successfully delivered.

Keywords: Design-based research, indigenous learners, instructional design, mixed-method tools, needs analysis.

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1.0 INTRODUCTION

Mastering English as a Second Language (ESL) has been a tremendous challenge for many Malaysian learners (Noori, Shamary, & Yuen, 2015). In the case of *Orang Asli* learners in Gua Musang, Kelantan, Malaysia, the situation is even worse as they experience extreme ESL learning difficulties due to their hard-to-engage and fusty attitudes (Abdullah, Wan Mamat, Amir Zal, & Mohamad Ibrahim, 2013). Majority of them enter secondary schooling years with ESL proficiency way below the expected level, thus, the students struggle to cope with the prescribed curriculum at the secondary level (Ministry of Education Malaysia, 2013). The proliferation of technological advancement in recent years, which has transformed humankind in many facets of life, does not give *Orang Asli* much impact in lending support as far as education is concerned. In spite of receiving myriad educational assistance from the government over the past half-century, be it in the form of infrastructures, school uniforms, transport, school fees, daily allowance and scholarships, their overall academic performance is still below satisfactory level (Ministry of Education Malaysia, 2013; Rabahi, Yusof, & Awang, 2017). When learners experience 'imperfect' learning syndrome, an instructional intervention is necessary to resolve it. This calls for the planning and development of a specific course, program, curriculum, or instruction to tackle the identified learning problem that has affected the targeted learners (Tzotzou, 2014). However, the development of such intervention for a specific group of marginalized learners should not be solely dependent on past experiences, preconceived notions, and what is available in the literature as the coverage is shallow and

scarce in contents and numbers. Hence, any intervention program for the indigenous should be preceded by a comprehensive needs analysis to collect necessary information that could serve as a basis to design and develop future instruction.

2.0 LITERATURE REVIEW

2.1 The Hard-to-Engage Indigenous Learners

Orang Asli learners in Malaysia find it difficult to adapt themselves to a new environment. The adaptation process is even more challenging when they are surrounded by unfamiliar faces—friends and teachers of other races. Custom differences and social stigma make the learners feel uncomfortable, oppressed, and discriminated when surrounded by the 'more superior and civilized' groups. Only 30% *Orang Asli* learners were able to complete their secondary school education (Ministry of Education Malaysia, 2013). Fifty percent *Orang Asli* learners dropped out of their studies after year six of primary school (Yahaya, 2008) and 39.1% of year six *Orang Asli* learners did not register for form one secondary school (Mior Shariffuddin et al., 2014)**.**

Based on the researcher's observation on this group of learners, poverty has been the main reason for the reluctance of *Orang Asli* children to go to school. Children, whom their parents have lower income, experience lack of guidance and dwindling motivation with regard to the true purpose of coming to school (Monica, Manda, & Pammu, 2019; Nicholas, 2006; Rabahi, Yusof, & Awang, 2016). Thus, they choose not to go to school and stay at home so that they could help their parents in farming or work at nearby vegetable farms to earn some pocket money. This way of life is regarded as a form of ingrained culture and is hard to be eradicated in which basic values and behaviors such as ignorant, lackadaisical, and inferior attitudes are likely to be absorbed (Abdullah et al., 2013). Based on the researcher's own experience teaching and living together with this group of learners for the past six years, the *Orang Asli* parents in Gua Musang believe that their children should be allowed to do whatever they think right. This 'blind' freedom includes the decision to attend school. If the children refuse to go to school, even without any substantial reason, the parents would simply approve such action; allowing them to stay at home. In contrast, the *Orang Asli* children, who are surrounded by successful siblings, are found to be always present at schools, have a clear vision of how education can change one's life, and consequently have shown better academic performance.

These findings were in tandem with the study done by Mior Shariffuddin et al. (2014) in which attitude, parental influence and family income of the indigenous were still at a low

level. Nevertheless, the study claims that with myriad forms of financial, infrastructure and moral support from the government channeled through Department of Orang Asli Welfare (JAKOA), more indigenous start to realize the impact of having good education when they have witnessed some indigenous managed to pursue their tertiary studies at teacher trainee colleges and universities. Hence, on the part of teachers and school administrators at school, an intervention program ought to be carried out to tackle the high learning anxiety experienced by this group of learners so that they have higher learning interest, longer attention rate and better learning absorption in learning ESL in particular, a subject deemed to be the toughest subject for the learners even to at least achieve the minimum passing grades in public examinations.

2.2 Use of Game-Based Learning Technology for Vulnerable Learners in ESL Classroom
Vulnerable learners deserve extra attention so that they would receive equal learning opportunities to learn at their level best just like their mainstream friends. In Malaysia, *Orang Asli* learners are acknowledged by many as a vulnerable group. In spite of the global advancement in this era, reflecting on the very remote location they usually live in, many *Orang Asli* still live in poverty. They rely on jungle or local produce as the main source of income and need government assistance more than the other ethnics or races in this country. They also struggle for healthy food and good medical care and their children face 'restricted' access for the best education due to socio-economic, cultural and attitudinal differences (Abdullah et al., 2013).

Many special programs or intervention plans are often carried out by teachers, school administrators and certain divisions at ministry level for underprivileged groups. However, the development of digital game-based learning applications meant for *Orang Asli* learners to learn English is indeed lacking. Thus far, extensive search online could only trace one digital material to learn English developed by Thanabalan, Siraj, and Alias (2015). The material developed was a digital story pedagogical module in the form of Microsoft Power Point application dedicated for teaching ESL reading to *Orang Asli* primary learners. Hence, the idea to develop another genre of digital learning resource, possibly focusing on digital game-based learning elements for another level of students (secondary), is deemed as timely to help this group of marginalized learners learn ESL in a more effective and engaging way.

Many researchers reported on the significant learning impacts when cultures, values and norms are closely related to lives of *Orang Asli* were taken into considerations in teaching and learning (Abd Wahab, Mustapha, & Ahmad, 2016; Renganathan, 2016; Thanabalan, Siraj,

& Alias, 2014). Such considerations guide the decision on the directions of future intervention program. Hence, a formal and systematic needs analysis has to be conducted to identify the specific needs of this group of learners so that realistic and effective program could be designed, developed, and implemented.

2.3 Planning and Refining Instruction via Needs Analysis (NA)

By definition, NA is "[the identification of] general and specific language needs [aiming to develop] goals, objectives, and content in a language program" (Richards & Rodgers, 1986, p. 156). The latest definition of NA does not change much when Nation and Macalister (2010) argue that NA "examines what the learners know already and what they need to know, [and] is directed mainly at the goals and content of a course" (p. 24). In a nutshell, NA aims to identify learners' present knowledge and skills with the intention to help teachers produce sound linguistic and pedagogical instruction and at the same time form a strong premise to refine instruction.

However, many teachers are criticized not to possess sufficient knowledge of the required design processes and methods, thus, failing to provide impactful learning experience to their learners (Garreta-Domingo, Sloep, & Hernández-Leo, 2018). Adequate knowledge on how to conduct a comprehensive NA, specifically for tackling a class-specific issue, enables teachers to make a reliable and accurate assessment on learners' present language competency, linguistic needs and wants, and cultural barriers that are the critical predictors for successful ESL learning (Asghar, Jamil, Iqbal, & Yasmin, 2018).

The findings of NA provide information on the learner factors in terms of present knowledge, learning perceptions, learning styles and interest when planning and developing any intervention material or program (Huang, 2019; Zhang, 2018). Needs analysis also allows course designer to identify language areas that learners need to work on appropriate to their current levels of proficiency (Tzotzou, 2014). Therefore, careful consideration of these factors helps learners immerse in their learning, leading to higher motivation and task engagement.

The purpose of the study is to develop, design, and administer a needs analysis survey to a sample of indigenous learners in order to investigate their needs and readiness to use digital games in ESL classroom. This study is the first phase of a large developmental project. Hence, the design and development phases of the intervention program to solve the highlighted learning problems are not within the scope of this article.

3.0 RESEARCH DESIGN

3.1 Choice of Research Method

The study employed a design-based research (DBR) methodology with the use of mixed-method tools and techniques to collect the required data (Anderson & Shattuck, 2012; Reeves & McKenney, 2013). A well-designed language program could motivate students to learn and fulfill learner's needs and expectations (Basri, Jannah, & Ampa, 2016). DBR calls for the development of instructional programs which is empirically grounded through systematic testing procedures (Reeves & McKenney, 2013). Reflecting on the DBR perspective employed in the study, the researchers are aware that the needs analysis phase only represents a part of the whole needs analysis process of the study (Curtis, 2018). It was begun at the time the researchers first observed a confounding ESL learning problem experienced by the targeted learners, followed by the prolonged engagement in establishing a solid case worth to be investigated via DBR approach.

3.2 Study Design

ADDIE instructional design model (Aldoobie, 2015; Soto, 2013) is used as a research framework that guides the overall development of the project. This paper reports on the first phase of the model, the needs analysis. It is divided into two parts to realize the following two-fold objectives: 1) to explore learners' ESL learning problems and 2) to investigate learners' needs and readiness to use digital games in ESL classroom.
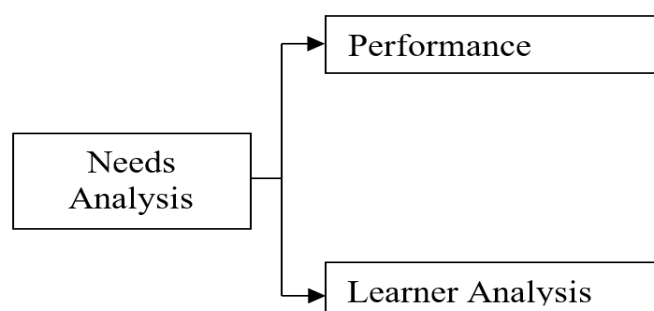

Figure 1: Needs analysis of the study

3.3 Participants

Accurate sampling technique is essential to ensure the collected data has high validity so that statistical inferences on the behavior patterns within a specific population could be made. Thirteen-year-old *Orang Asli* learners were selected from one national secondary school in Gua

Musang, Kelantan, Malaysia via random sampling procedure. It is a feeder school for a national primary school situated in Pos Brooke, Gua Musang, Kelantan, Malaysia that occupies children from nearby villages. Majority of the learners there are from Temiar tribe and very few learners are mixed ethnics e.g. Chinese-Temiar, Malay-Temiar, Semai-Temiar and Negrito-Temiar. The total population of the indigenous learners was 56 students at the time the study was conducted. Forty-eight learners from the population were randomly chosen to answer the survey questionnaire (Krejcie & Morgan, 1970). The sample size was considered adequate to be the representative of the specified population for generalized conclusion purposes, albeit limited only to the entire 13-year-old *Orang Asli* learners population in the school.

3.4 Instrumentations and Data Analysis Methods

Table 1: Summary of the multi-method instruments used

Phase	Instrumentation	Respondents/Material	Technique
Performance analysis	Archival document	Public exam results	Document analysis
Learner analysis	Close-ended questions	Learners	Descriptive analysis

Table 1 shows the instrumentations used in the study in line with their respective phases: archival document and close-ended questions. The former is past public exam results of a wide population of indigenous living in Kelantan and Terengganu states while the latter involves a specific population of the indigenous from a school in which the study took place.

The 2016 public exam results at primary level for English Language subject for comprehension and writing papers for this group of learners residing in Kelantan and Terengganu were retrieved from the headquarters of the Orang Asli Development Department (JAKOA) and later triangulated with the data taken from all seven education district offices. The exam statistics reported on the detailed performance of 429 indigenous candidates by district in terms of attendance and grades received for two English Language papers namely reading and writing. The researchers opted to use descriptive analysis in the forms of frequency and percentage to summarize the data and find patterns.

As for close-ended questions, there are five sections with 29 questions in total, namely perception towards English Language learning, favorite language skills, English vocabulary learning experience, perception towards the use of ICT/computer in English vocabulary learning, and preference over types of computer games to be used in ESL lesson. The instrument was adapted with permission from a survey instrument developed by Tzotzou

(2014). A statistical data analysis software known as IBM Statistical Package for Social Sciences (SPSS) Version 22 was used to manage and analyze the quantitative data. Descriptive statistical forms such as frequency, percentage, mean, and standard deviation were used to interpret the agreement patterns of the respondents towards the statements being asked in the survey.

The data collection tools aim to investigate the respondents' perspectives on the following research questions: 1) What are the ESL learning problems experienced by *Orang Asli* learners? and 2) What are *Orang Asli* learners' needs and readiness to use digital games in ESL classroom?

3.5 Validity

The close-ended survey was reviewed by three experts in psychology, instructional design, and ESL fields for face and content validity. Non-randomized purposive sampling technique was employed to select the experts. This technique allows rich and reliable information to be drawn from experts who possess in-depth knowledge and experience in distinctive areas related to the study (Creswell, 2012; Miles & Huberman, 1994). These experts evaluated the extent of coverage that the formulated instruments intend to measure in relation to the key elements in the set research questions. Apart from having the instruments face validated, the comments from the experts revolved around the identification of obscure, complex, and non-functioning items. These items were revised, reworded, and discarded respectively.

3.6 Reliability

The internal consistency and reliability of the close-ended questions were analyzed using SPSS. Cronbach's alpha coefficient was calculated for the pilot and actual studies. Many researchers indicate 0.70 above the Cronbach Alpha score as the indicator of having high reliability for a quantitative instrument (Abdelhalim, 2017; Ali Mohsen, 2016; Durdu, Ozden, & Delialioğlu, 2012; Ganapathy, Shuib, & Azizan, 2015).

Table 2: Internal consistency of the close-ended questionnaire in actual study

Cronbach's Alpha	N of items
.845	29

Cronbach's alpha reliability coefficient of the overall inventory shows an internal consistency of 0.845. Such value indicates that the items in the questionnaire instrument have high internal consistency to measure a single construct.

4.0 FINDINGS AND DISCUSSION

4.1 Phase 1: Performance Analysis

Performance analysis was conducted to establish whether there is a solid case for any developmental research inquiry to be initiated (Reeves & McKenney, 2013). An achievement test known as primary school achievement test was used as a case to address and identify the present learning problems experienced by the *Orang Asli* learners. Primary school achievement test or popularly known in Malaysia with the acronym UPSR (*Ujian Pencapaian Sekolah Rendah*) is a national examination taken by all students in Malaysia at the end of their sixth year in primary schools before they leave for secondary schools.

Table 3: Analysis of 2016 primary level public examination results of the indigenous for English Language subject (Comprehension)

DISTRICT	TOTAL CANDIDATES	ABSENT	%	PRESENT	%	A	B	C	% ABC	D	E	% DE
GUA MUSANG	393	67	17.0	326	83.0	1	0	10	2.8	25	290	80.2
JELI	12	8	66.6	4	33.4	0	0	0	0.0	0	4	33.3
KEMAMAN	7	1	14.3	6	85.7	0	0	5	71.4	1	0	14.3
HULU TERENGGANU	14	10	67.0	4	33.0	0	0	3	21.4	1	0	7.1
KUALA TERENGGANU	1	0	0.0	1	100	0	0	0	0.0	1	0	100
BESUT	1	0	0.0	1	100	0	0	0	0.0	1	0	100
KOTA BHARU	1	0	0.0	1	100	0	0	1	100	0	0	0.0
TOTAL	**429**	**86**	**20.0**	**343**	**80.0**	**1**	**0**	**19**	**4.7**	**29**	**294**	**75.3**

Source: Orang Asli Development Department (JAKOA) (2017)

Table 3 presents analysis of 2016 primary level public examination results of the indigenous for English Language subject (Comprehension). About three-quarters of the indigenous

candidates only managed to get D and E grades. Malaysia Examination Syndicate (MES) characterizes D and E grades for this exam level as not achieving the minimum mastery standard in which D grade is weak while E grade is very weak. Twenty percent of the candidates were absent, and only 4.7% passed the exam, with 19 students obtaining C grade, and one student with A grade. In sum, only 20 students out of 429 candidates achieved the above minimum mastery level as far as reading comprehension is concerned. However, for this paper, the students performed far better than writing paper. Their writing performance report illustrated in the following table has caused serious concern to many.

Table 4: Analysis of 2016 primary level public examination results of the indigenous for English Language subject (Writing)

DISTRICT	TOTAL CANDIDATES	ABSENT	%	PRESENT	%	GRADES RECEIVED						
						A	B	C	% ABC	D	E	% DE
GUA MUSANG	393	67	17.0	326	83.0	0	0	1	0.3	19	306	82.7
JELI	12	8	66.6	4	33.4	0	0	0	0.0	0	4	33.3
KEMAMAN	7	1	14.3	6	85.7	0	0	0	0.0	5	1	85.7
HULU TERENGGANU	14	10	71.5	4	33.0	0	0	0	0.0	0	4	28.5
KUALA TERENGGANU	1	0	0.0	1	100	0	0	0	0.0	1	0	100
BESUT	1	0	0.0	1	100	0	0	0	0.0	0	1	100
KOTA BHARU	1	0	0.0	1	100	0	0	0	0.0	1	0	100
TOTAL	**429**	**86**	**20.0**	**343**	**80.0**	**0**	**0**	**1**	**0.2**	**26**	**316**	**79.72**

Source: Orang Asli Development Department (JAKOA) (2017)

Based on Table 4, only one candidate (0.2%) passed the paper with C grade and as many as 342 candidates (79.72%) received D and E grades. 316 out of those 342 candidates enrolled for writing paper obtained E grade, which is the lowest bottom grade in the public exam grading system for the primary level.

Based on interviews with three primary school teachers teaching English Language subject to the candidates, the main reason why many of them obtained E grade because the *Orang Asli* candidates were not able to construct simple sentences in English, even with grammatical errors, to convey their ideas, as a result of having extreme deficiency in English

vocabulary. Many of them ended up submitting blank answer scripts at the end of the examination. The teacher informants added further that another main problem among the indigenous students had been caused by their inability in understanding the questions and their task requirements due to poor vocabulary mastery. Apart from that, the learners' extent of rapport and familiarity with their subject teachers also plays a vital role in their learning. New teachers always face problems with this group of learners specifically for class participation. It takes quite a long time for the teachers to gain the students' trust and make them 'cooperate' in the class (Personal communications, Nor Irwan Mohammad, Salis Zainuddin, and Nurul Fatin Abu Hanifah, 11 October 2017).

The high number of candidates being absent in the general examination is worrying in which 20% of them failed to turn up during the exam day. A JAKOA officer in charge of the welfare of the students claimed that, in spite of being offered with a range of financial and infrastructure supports, there were still many students who had failed to be present due to the following reasons: prolonged absenteeism leading to loss of interest in learning, early morning school session, following their parents who lead a nomadic life in the jungle and inconsistent 'follow-up' from the school and JAKOA administrations regarding school attendance. (Personal communication, Azaha Din, 25 November 2017). Moreover, English subject teachers in secondary schools are facing a huge challenge to accommodate to the present learning needs of the students as these students are now in their secondary schooling years.

4.2 Phase 2: Learner Analysis

As many as 48 indigenous learners from a single batch of one secondary school took part in this phase of study and responded to the questionnaire which aims to retrieve information related to the following constructs:

Table 5: Constructs of the questionnaire

Items range	Construct
1-10	Opinion towards the importance of learning English
11-14	Favorable language skills
15-19	Experience in learning English vocabulary
20-24	Opinion towards the use of ICT in English learning
25-29	Favorable types of digital games

Hence, the findings gained from the survey questionnaire from these constructs inform the researchers about the learners' perceived and present needs, personal interests, and attitudes concerning ESL learning.

4.2.1 Descriptive statistics for individual items in each construct

Items 1-10

Table 6: Descriptive statistics of learners' opinions towards the importance of learning English (ILE)

Item	Statement	SD	D	N	A	SA	N	Mean	Std. Deviation
6	Easy to understand on how to play computer games	3 (6.3%)	11 (22.9%)	2 (4.2%)	23 (47.9%)	9 (18.8%)	48	3.50	1.220
4	Easy to understand English movies	0	14 (29.2%)	2 (4.2%)	21 (43.8%)	11 (22.9%)	48	3.60	1.144
5	Easy to surf the Internet	1 (2.1%)	8 (16.7%)	5 (10.4%)	24 (50%)	10 (20.8%)	48	3.71	1.051
2	Can travel to overseas	0	10 (20.8%)	7 (14.6%)	14 (29.2%)	17 (35.4%)	48	3.79	1.148
7	My parents encourage me to learn English	0	8 (16.7%)	7 (14.6%)	19 (39.6%)	14 (29.2%)	48	3.81	1.045
8	Easy to understand English reading materials like newspapers	2 (4.2%)	7 (14.6%)	4 (8.3%)	13 (27.1%)	22 (45.8%)	48	3.96	1.237
3	Easy to understand English songs	1 (2.1%)	5 (10.4%)	2 (4.2%)	26 (54.2%)	14 (29.2%)	48	3.98	.978
10	Mastering English language is very important	3 (6.3%)	3 (6.3%)	1 (2.1%)	13 (27.1%)	28 (58.3%)	48	4.25	1.176
9	Can help friends at the village who are not good in English	2 (4.2%)	0	4 (8.3%)	19 (39.6%)	23 (47.9%)	48	4.27	.939
1	Easy to secure any job	0	2 (4.2%)	2 (4.2%)	20 (41.7%)	24 (50%)	48	4.38	.761

Table 6 shows the descriptive statistics of learners' opinions towards the importance of learning English (ILE) arranged ascendingly, from the lowest to the highest mean scores. The items in this section aim to unfold their perceptions regarding the significance of learning English Language which has been regarded as the fourth language in the context of *Orang Asli* environment in Gua Musang, Kelantan. When the mean scores of the items are arranged in

ascending order value, a pattern has emerged: the responses are highly correlated to the extent of learner familiarity with regards to the myriad purposes of learning English.

Reflecting on the frequency and percentage scores, most of the respondents agree to all the statements above, indicating a positive perception towards the importance of English learning. However, the mean scores across the items indicate that as many as seven items out of 10 are below 4.00. The first four items in the table, items 6, 4, 5, and 2, have mean scores between 3.50 to 3.79 implying learners' moderate perception towards the statements being asked. The *Orang Asli* learners moderately agree that English learning helps them understand better on how to use the computer (Mean=3.50, SD=1.220). Also, they moderately agree that English learning allows them to understand English movies (Mean=3.60, SD=1.144) and surf the Internet better (Mean=3.71, SD=1.051). They also have moderate agreement when asked about the importance of English mastery for traveling overseas (Mean=3.79, M=1.148).

These findings depict learners' relatively large distance from the contexts which require acceptable mastery of English usage. The learners, who rated three and below, affecting the mean scores of the items, seem to share the following ideas: operating a computer only involves knowing where and what to click as understanding English movies is also possible with the presence of Malay subtitles, surfing skill is only a matter of inserting the right keys in the search engine and traveling to overseas is regarded as something 'too luxurious' for *Orang Asli* to enjoy. Thus, having moderate perceptions towards these items illustrate learners' needs to master English in preparing for the situations that they rarely encounter or want to do as a result of interest, aspiration and growing up process.

For the three items in the middle table, items 7,8 and 3, the respondents manifest slight agreement to the statements. They almost agree to the fact that their parents encourage them to learn English (Mean=3.81, SD=1.045) and they express satisfactory agreement over the benefits of learning English in which it helps them understand reading materials in English (Mean=3.96, SD=1.237), and it makes them easier to understand English songs (Mean=3.98, SD=.978). These almost-agreed responses illustrate that moderate encouragement is given by their parents in English learning and learners' improved awareness towards the benefits of learning English for fun and academic reasons such as reading newspaper to search for information and understanding what a particular English song is all about.

Majority of the indigenous learners (n=41) agree that mastering English Language is very important (Mean=4.25, SD=1.176). Item 1 recorded the highest level of agreement in which the learners agree that good mastery in English allows them to easily secure any job (Mean=4.38, SD=0.761). It is followed by item 9, being the second highest, that if they are

good in English, they can help their less proficient friends at their respective kampongs (Mean=4.27, SD=.939). High magnitude of agreement among the respondents for items 1 and 9 underscores relative immediacy of English learning purposes in the lives of the indigenous learners which are for job security and to help friends from their tribes who are seen by many as struggling English language users.

Items 11-14

Table 7: Descriptive statistics of learners' favorable language skills (FLS)

Item	Statement	SD	D	N	A	SA	N	Mean	Std. Deviation
13	I like English speaking	4	12	5	11	16	48	3.48	1.399
		(8.3%)	(25%)	(10.4%)	(22.9%)	(33.3%)			
14	I like English writing	1	4	6	26	11	48	3.88	0.937
		(2.1%)	(8.3%)	(12.5%)	(54.2%)	(22.9%)			
12	I like English listening	2	4	1	22	19	48	4.08	1.069
		(4.2%)	(8.3%)	(2.1%)	(45.8%)	(39.6%)			
11	I like English reading	3	3	1	10	31	48	4.31	1.188
		(6.3%)	(6.3%)	(2.1%)	(20.8%)	(64.6%)			

Table 7 shows the mean scores for the items on learners' favorable language skills. The items aim to seek information about the *Orang Asli* learners' favorable language skills. The results show that majority of the Orang Asli learners like reading component (Mean=4.31, SD=1.188) over listening (Mean=4.08, SD=1.069), writing (Mean=3.88, SD=0.937) and speaking (Mean=3.48, SD=1.399). Hypothetically, a learning material embedded with learner's preferable skill can lower their ESL anxiety and thus promote active learning and vice versa – a learning material that starts with a language component that they least enjoy will demotivate and inhibit learning progression. Hence, the findings from these items have contributed to the learners' needs in terms of the learning curve that should be employed for the upcoming intervention program.

Items 15-19

Table 8: Descriptive statistics of learners' experience in learning English vocabulary (ELEV)

Item	Statement	SD	D	N	A	SA	N	Mean	Std. Deviation
17	Activities in ESL lessons are not interesting	3 (6.3%)	20 (41.7%)	9 (18.8%)	9 (18.8%)	7 (14.6%)	48	2.94	1.210
19	Difficult to find meaning of a particular word in dictionary	0	18 (37.5%)	8 (16.7%)	16 (33.3%)	6 (12.5%)	48	3.21	1.091
16	Teachers use textbook at all times	0	14 (29.2%)	9 (18.8%)	13 (27.1%)	12 (25%)	48	3.48	1.167
18	New English words learnt at school are always used in my daily life	0	11 (22.9%)	5 (10.4%)	21 (43.8%)	11 (22.9%)	48	3.67	1.078
15	Difficult to use again the learnt English words	1 (2.1%)	10 (20.8%)	5 (10.4%)	14 (29.2%)	18 (37.5%)	48	3.79	1.220

Table 8 shows the ascending mean scores for the items on learners' ESL vocabulary learning experience. The *Orang Asli* learners show moderate agreement on the statements in items 15, 18, 16 and 19. As many as 32 learners feel that it is difficult to memorize English words (Mean=3.79, SD=1.220). The same number of learners also agree that new words learned in ESL lessons are relevant and always used in their daily life routines (Mean=3.67, SD=1.078), while 25 learners agree that teachers always opt for the use of textbooks as the primary medium of teaching (Mean=3.48, SD=1.167). Less than half of the learners, 22 out of 48, experience difficulty to look up for the meaning of a particular word in dictionary (Mean=3.21, SD=1.091). The statement in item 17 has the lowest mean score in which almost half of the learners, 23 out of 48, disagree with the statement's claim that the activities implemented by their teachers in ESL classroom are not engaging (Mean=2.94, SD=1.210). This finding seems to be suggesting that the present teaching approaches employed by their ESL teachers are not in favor of their interest. The Communicative Language Teaching (CLT) methodology in ESL classroom as embraced in the school-based English Language curriculum (Aziz, Rasid, & Zainudin, 2018) might be workable for students to learn to speak in English from informal to formal context but for the indigenous learners in Kelantan, the English Language is regarded as the fourth language after their tribe language, Malay Language and Kelantanese dialect. Hence, the researchers believe that the embedment of notional functional approach suited for TEFL learners is a more practical learning approach for the indigenous learners in this context of the study.

Items 20-24

Table 9: Descriptive statistics of learners' opinions towards the use of ICT in English learning (UICT)

Item	Statement	SD	D	N	A	SA	N	Mean	Std. Deviation
20	Use computer in ESL classroom	8 (16.7%)	13 (27.1%)	4 (8.3%)	11 (22.9%)	12 (25%)	48	3.13	1.482
21	Learn English via games on computer	4	15	7 (14.6%)	14 (29.2%)	8 (16.7%)	48	3.15	1.271
22	Read English reading materials on computer	6 (12.5%)	6 (12.5%)	12 (25%)	15 (31.3%)	9 (18.8%)	48	3.31	1.274
24	Use computer to finish the homework given	3 (6.3%)	12 (25%)	8 (16.7%)	15 (31.3%)	10 (20.8%)	48	3.35	1.246
23	Surf the Internet to find materials required by teacher	0	12 (25%)	5 (10.4%)	20 (41.7%)	14 (29.2%)	48	3.81	1.065

Table 9 shows the ascending mean scores for the items on *Orang Asli* learners' opinions towards the use of ICT in English learning. The findings reflect their experience and understanding on what ICT or computer could offer in relation to English learning. The highest mean score was recorded on item 23 in which as many as 34 learners agree that computer can be used to surf the Internet in order to find related learning materials as requested by the teacher (Mean=3.81, SD=1.065). Apart from that, 25 out of 48 learners agree that computer can be used to complete the homework given (Mean=3.35, SD=1.246). Half of the learners, 24 out of 48, feel that computer is used as a reading platform for English materials (Mean=3.31, SD=1.274). Twenty-two learners view that English is learned via playing games on computer (Mean=3.15, SD=1.271). With regard to the employment of computer in ESL learning, it receives mixed reactions from the respondents whereby almost half of the learners, 23 out of 48, have positive view about it (Mean=3.13, SD=1.482). In conclusion, having mean values not more than 4.00 for all the items translates to an average of only almost more than half of the respondents agree and strongly agree with the statements in the items, addressing the learners' present level of ICT literacy which is still at the intermediate stage.

Items 25-29

Table 10: Descriptive statistics of learners' favorable types of digital games (FTDG)

Item	Statement	SD	D	N	A	SA	N	Mean	Std. Deviation
28	TV reality like games like Wheel of Fortune or Running Man	1 (2.1%)	12 (25%)	10 (20.8%)	9 (18.8%)	16 (33.3%)	48	3.56	1.253
26	Memorization games like arranging scrambled pictures	2 (4.2%)	13 (27.1%)	3 (6.3%)	13 (27.1%)	17 (35.4%)	48	3.63	1.331
27	Strategy games like Snake and Ladder and Monopoly	0	9 (18.8%)	7 (14.6%)	21 (43.8%)	11 (22.9%)	48	3.71	1.031
29	Adventure games like treasure hunt or rescue mission	1 (2.1%)	8 (16.7%)	1 (2.1%)	15 (31.3%)	23 (47.9%)	48	4.06	1.174
25	Mind games like crossword puzzle	2 (4.2%)	3 (6.3%)	5 (10.4%)	9 (18.8%)	29 (60.4%)	48	4.25	1.139

Table 10 shows the ascending mean scores for the items on *Orang Asli* learners' favorable types of digital games. The items aim to tap learners' past gaming knowledge and experiences, subtly exploring game genres of their interests and familiarity. The item with the highest level of agreement is item 25. Most learners agree that they like playing mind games like crossword puzzle (Mean=4.25, SD=1.139). Adventure games like treasure hunt or rescue mission gathered the second-highest agreement across the samples (M=4.06, SD=1.174). Moderate agreement was recorded among the samples for the remaining genres on the list: strategy (Mean=3.71, SD=1.031), memorization (Mean=3.63, SD=1.331), and finally, being the least favorite, TV-reality-like games (Mean=3.56, SD=1.253). Reflecting on the frequency for the scales 4 (agree) and 5 (strongly agree) across the items, at least more than half of the learners express their agreement on all the game genres listed: Items 28 (n=25), 26 (n=30), 27 (n=32), 29 (n=38), and 25 (n=38). This demonstrates satisfactory interests and familiarity of the *Orang Asli* learners towards digital games.

4.2.2 Analysis of the indigenous learners' perception about their perceived and present needs, personal interests and attitudes concerning ESL learning

Table 11: Mean scores of learners' extent of agreement across the constructs

Items range	Construct	Minimum	Maximum	Mean	Std. Deviation
1-10	ILE	2.30	4.40	3.54	.607
11-14	FLS	1.50	5.00	3.94	.867
15-19	ELEV	2.00	4.80	3.42	.665
20-24	UICT	1.40	4.60	3.35	.814
25-29	FTDG	2.40	5.00	3.84	.792
	Overall	1.92	4.76	3.62	.749

Table 11 exhibits the overall mean and standard deviation of *Orang Asli* learners' perception of their perceived and present needs, personal interests, and attitudes. The table also shows the mean for each construct. Results show that most of the learners slightly agree to the items related to favorable language skills (FLS) (mean=3.94, SD=.867) and favorable types of digital games (FTDG) (mean=3.84, SD=.792). The values illustrate a satisfactory of FLS and FTDG among the respondents. The learners were reported having a moderate perception on the remaining three constructs: Importance of Learning English (ILE) (mean=3.54, SD=.607), Experience in Learning English Vocabulary (ELEV) (mean=3.42, SD=.665) and Use of ICT in English Learning (UICT) (mean=3.35, SD=.792). Overall, the *Orang Asli* learners have a moderate perception of their perceived and present needs, personal interests and attitudes concerning ESL learning (mean=3.62, SD=.749).

5.0 CONCLUSION

This stage of needs analysis has revealed several significant findings related to the indigenous learning problems in ESL. First, they experience extreme learning challenges in English Language due to lack of vocabulary and loss of learning contact hours due to prolonged absenteeism. Second, together with very basic English foundation and illiteracy problems when they first entered secondary schooling year, they also experience high language ego and high learning anxiety, making them introvert in class and having the feeling that other races are more 'superior' and 'civilized' than them. The findings of this study have also provided evidence to the futility of CLT methodology to get the indigenous engaged with the ESL lessons, thus requiring the teachers to consider utilizing the non-functional approach into the

instruction. Lastly, the study has highlighted the extent of the indigenous learners' interest in digital games. It directly points to the possibility of adopting digital game-based learning in ESL classroom as this learning method suits well the learners' spatial and kinesthetics learning styles. In conclusion, the study has brought to light an important-yet-often neglected practice in instructional design which is the increasing demand for teachers to carry out comprehensive NA every time they design, plan and develop differentiated learning instruction so that the learners are given an ample and fair opportunity to maximize their learning potential.

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