

A Comparison on Behavioral Patterns of Engagement Between Two Different Classroom Settings: With and Without Student Response Systems (SRS)

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Abstract

This study investigated the impact of student response system (SRS) on students' engagement in English language proficiency classrooms. It compared patterns of engagement exhibited by students' physical behaviours during language classroom activities in two different settings – with and without the use of SRS. This qualitative study gathered data through classroom observations using field notes and observational checklist. All the data were analysed qualitatively using thematic analysis approach. Altogether, three lessons utilizing SRS and three lesson without the utilization of SRS were observed and analysed. The findings showed that students' behaviours during lessons with SRS indicated positive engagement in the classrooms unlike their behaviours during lessons without SRS. The results of this study implied that SRS could be a preferred choice of interactive, educational tools that could help educators to engage their students during the process of language teaching and learning.

Keywords: Student Response System, Students' Engagement, English Language, Language Teaching And Learning

INTRODUCTION

Malaysian students studying in higher education institutions are ideally competent English language users who can communicate and use the language with ease. Prior to their tertiary education, the students have undergone 11 years of formal English language learning which should have resulted in them achieving at least a 'B2' level of Common European Framework of Reference (CEFR). The B2 level suggests that they should be able to understand the main ideas of complex text on both concrete and abstract topics, interact with a degree of fluency and spontaneity and even able to produce clear, detailed text on a wide range of subjects and explain viewpoints (North, 2015). However, a report by The National Graduate Employability Blueprint 2012-2017 commissioned by the Malaysian Ministry of Higher Education highlighted that more than half (54%) of undergraduate students from six Malaysian universities displayed a limited command of English language.

Similarly, a study by Mardziah et al. (2015) found that more than half of the graduates produced annually by Malaysian public universities demonstrated a low level of English language competency - not befitting students who were supposedly at a B2 level when they started their tertiary education. In a more recent study by Salary Surveys 2016 by MEF, it was discovered that over 90% of respondents showed the requirement for improvement on their English capability in order to be employable (Star,

2017). As such issues keep on occurring, the former Education Minister suggested recently that Malaysia should aspire to strengthen its education system by emphasising a more humanistic and values-driven education (Star, 2019). The focus of an educator should shift from exam-oriented system to a values-based education in which values like love, happiness and mutual respect are at the core of our education system and a more holistic evaluation of students' achievements beyond content knowledge.

Findings have shown that when social and emotional learning is promoted as part of the daily classroom life, it fosters positive working relationships, increases student engagement, and models constructive behaviours, all pertinent elements for students to thrive in the 4th Industrial Revolution (Star, 2019). The education minister at the time emphasised that all educators should create a fun, safe and positive learning environment where the social and emotional wellbeing of our children are prioritised. Implementing fun teaching and creating positive learning environment could prove to be an effective method in solving student disengagement in the classroom, especially in the tertiary level education.

Previous studies also supported the notion that lack of English language proficiency among students is a result of disengaged learning environment. According to Pappamihel (2002), lack of English mastery among learners can be linked to lack of engagement in the classroom. Classroom investigations by Kazmi (2010) showed that students at higher education institutions were showing more signs of disengagement which affected their performance. During an observations of the Malaysian undergraduates classrooms, Mustapha and Nik Abdul Rahman (2011) discovered "negatively passive participation" as students were 'quiet', 'not concerned about class activities', 'not interested in the lessons' and 'remain in their dream world'. Bundick et al. (2014) posit that instructors need to play an active role to promote engagement during classroom interaction. This active role may include changing approaches, techniques as well as materials for teaching and learning.

In line with this view, this study intends to investigate the impact of Student Response System (SRS) tools on students' engagement in English language classrooms at a higher learning institution in Malaysia. The study was carried out by comparing the behavioral patterns related to student engagement between two classroom settings. Studies on SRS impact on students' engagement are not scarce (Plump & LaRosa, 2017; Lin et al., 2018; Woldemichael, 2018). Most of these studies collected data through surveys or questionnaires resulting in quantitative data describing perspectives and preferences. The current study method of data collection, however, involved classroom observations resulting in qualitative data comparing students' engagement in two different classroom settings – with and without the utilization of SRS tools.

LITERATURE REVIEW

Concepts of student engagement had been widely adopted by many research studies (Gressick & Langston, 2017; Plump & LaRosa, 2017; Shin et al., 2017; Woldemichael, 2018; Wang & Tahir, 2020). Most of the research categorizes engagement under academic, cognitive, intellectual, institutional, affective, behavioural, social, and psychological traits (Taylor & Parsons, 2011). For the purpose of this research, only two aspects of engagement were emphasized - behavioural and affective. Behavioural traits of engagement focus on students' observable physical display while affective traits embody the core element of engagement like interest and feelings (Taylor & Parsons, 2011). Wang and Holcombe (2010) have described behavioural engagement as students' participation in activities and emotional engagement as students' affective reaction in the classroom. Similarly, Fredricks et al. (2004) define engagement as a meta-construct, encompassing behavioural, emotional and cognitive aspects. Behavioural engagement characterises students' participation, on-task attention, effort, persistence and positive conduct. Emotional engagement relates to students' interest, belonging, value, and positive emotions (Fredricks & McColskey, 2012). As this study focused on the observable patterns, only behavioural and affective engagement could be interpreted into observable indicators of student engagement as compared to the other aspects. Those indicators were adapted from a reliable instrument of Behavioural Engagement Related to Instruction (BERI), which is a classroom observation protocol developed to quantitatively measure student engagement (Lane & Harris, 2015). The summarised descriptions of engaged and disengaged student in-class behaviours found in BERI had provided the

base guideline for the development of detailed descriptors of engagement specific to this study, in the form of an observation checklist.

In this study, students' behavioural aspects of engagements were compared during two different classroom settings – with and without the utilisation of SRS. A student response system (SRS) is a set of software platform or tool used to facilitate teaching activities by 'gamifying' common educational activities and interactions (Wang, 2015; Wang et al., 2016; Gressick & Langston, 2017). SRS is an interactive remote answering system that offers instructors a way to gain some simple real-time feedback from the students (Egelandsdal & Krumsvik, 2017). It is a technological platform that is used by both educators and students with the aid of the internet and personal gadgets such as smartphones, tablets and laptops. Although there are many types of SRS available, most of them function in a similar manner in a classroom. A teacher poses a question or task to his or her students via an overhead or computer projector. Students, on the other hand, provide an appropriate response for the task given using a handheld transmitter or a 'clicker' (Thomas et al., 2015). Technology-backed learning environment like this will trigger an interactive classroom, motivating students to participate and interact with others in the learning process (Fui-Theng & Mai, 2014). When classroom activities are 'gamified' using tools such as SRSs, students are more likely to become immersed in the experience; an act of engagement; and are more likely to remember information and develop an enduring understanding of concepts (Gee, 2003). This relates to the sociocultural theory which suggests that learning cannot be detached from its corresponding interactions that occur in its social environment (Vygotsky, 1978). Therefore, it is possible to assume that there could not be a better environment for students to learn other than a 'mediated' classroom activity using game-based tools such as SRS, which may promote student engagement. The concept of mediation plays a pivotal role in the cognitive development of learners in educational settings (Behroozizad et al., 2012). For this research, it is theorised that the outcome; engaged learning; can be achieved with the use of SRS (physical tool) as a core mediator in teaching and learning of English language (symbolic tool).

METHODOLOGY

This study employs a qualitative research design, focusing on observing and comparing students' patterns of behaviour during classroom lessons with and without the utilisation of SRS. Even though a comparison between two classroom settings may resemble a feature of a quasi-experimental study, the utilisation of SRS is not categorised as a treatment. There is no control and treatment group required as this study was executed with the same set of participants.

Participants

The participants of this study were 40 students from a local university in Malaysia undertaking a compulsory English proficiency course. Using a non-probability sampling technique, the participants were chosen from the population conveniently available to the researchers. These samples were selected because they were easy to recruit, and the researchers did not emphasise on a sampling procedure that seeks to represent the entire population. Choosing this sampling method is justified as it will resolve the issues regarding participants' availability, accessibility and cost-efficiency (Adi Bhat, 2019).

Data Collection Procedures

In total, six English lessons were observed and video recorded. The first three lessons did not utilise SRS during the implementation of the classroom activities. Instead, materials like books and modules were used in addition to oral question and answer sessions. The next three lessons utilised SRSs, namely Kahoot, Quizlet and Quizizz, as mediated tools for classroom activities. During the observations in both classroom settings, a checklist adapted from Behavioural Engagement Related to Instruction (BERI) by Lane & Harris (2015) was used to document participants' engagement. The following Table 1 describes the adapted checklist includes the behavioural or physical attributes that can be observed by the researcher in a classroom setting. All the items were corresponding to the behavioural dimensions of

engagement. For the purpose of the study, the observational checklist was designed to suit the classroom observation method, based on the BERI protocol.

Table 1. Observational Checklist items

Engagement	Patterns/Descriptors of Engagement
Engaged	Ask question (<i>to the instructor / other students</i>)
	Answer / give comment (<i>individual</i>)
	Answer / give comment (<i>in a small group / entire class</i>)
	Answer / give comment (<i>babbles / murmurs</i>)
	Cheering / clapping hands (<i>in a group / individual</i>)
	Laughing (<i>teacher's joke / instruction / activity</i>)
	Sighing (<i>win / lose / surprised / made mistake in task</i>)
	Head help up / Eyes looking at screen or activity
Disengaged	Stay quiet or silent
	Does not respond / reply when asked question
	Sleeping / Body slouched on table
	No response for teacher's clarification checks
	Ask to repeat instructions / explanation

The checklist enabled the researchers to conduct a frequency count of the occurrence of each pattern or descriptor during all six lessons. In addition, field notes were also taken during each observation focusing on the researchers' thoughts and feelings linked to the participants' engagement. Since the observation checklist focused on behavioural attributes that can be physically observed and noticed, the emphasis of the field notes was on the overall ambience of the classroom and the participants' affective attributes during the classroom activities.

In comparing the two classroom settings – with and without the utilisation of SRS – the following facets of each lesson were made constant and vastly similar:

1. An equal number of lessons were observed for both type of activities
 - Total of six lessons: three without SRS and three with SRS
 - One hour lesson each, with an approximate of 30-minutes activity
2. The language content taught or the input part of the lessons were derived from the same language component/skill
 - Grammar lessons focusing only on Parts of Speech
 - Each lesson only emphasized on one Parts of Speech – (*nouns, verbs, adjectives*)
3. Tasks during both settings had the same set of learning strategies
 - Each task applied different strategies for each lesson (*individual work, pair work and group work*)

Data Analysis

The data from the observational checklist, was analysed using basic descriptive statistics (frequency counts) to determine the presence and absence of engagement patterns stipulated. On the other hand, thematic coding was used for the data from the field notes. The emerging themes from the field notes taken during the observations became the thematic codes that were analysed to gather relevant findings for this study.

FINDINGS

Findings for this study were derived from the qualitative method of data collection, the classroom observations. Two qualitative measures were used for the classroom observation method. The first

measure was the classroom observations' field notes, which acts as the primary data collection instrument for this study. The second measure was an adapted observational checklist that was designed to take the frequency count of noticeable student behaviours and actions during the activity stage of each lesson. This observation checklist was another research instrument that was used to gather secondary data that could help to strengthen the findings from the field notes.

For field notes, the means of thematic analysis was used to find the most prominent and reoccurring keywords that were found in all the field notes. Any emerging themes from the field notes taken during the observations became the thematic codes that were analysed to gather relevant findings for this study. For the observation checklist, acting as the secondary data, basic descriptive analysis such as frequency counts is used for every one of its items. These numerical data obtained from the frequency count of each item was then collectively taken to calculate the average number of occurrences for a particular behaviour or action. These data were then used qualitatively to relate and further strengthen the findings from the primary data, the field notes.

Based on the thematic analysis of the field notes, three thematic codes were developed, which are:

1. Overall classroom ambience,
2. On task behaviours, and
3. Students' response.

The overall classroom ambience emphasised on the classroom atmosphere in general when the lessons were conducted. As for on-task behaviours, the researcher mainly took note on the behaviours that reflect the students' continuous focus and attention, especially during the activity stage. On student responses, the two recurring themes that were noted were concerning the language classroom dynamics and the question-answer sessions (Q&A) that occurred during those observed lessons.

Table 2 shows the key observations noted in the field notes for both the lessons without SRS and with SRS, based on the thematic codes listed above. The frequency count of noticeable student behaviours.

Lessons without SRS

The data from the lessons without the utilisation of SRS showed that the overall classroom ambience was rather dull and passive. The three lessons were formal-oriented with minimal teacher-student and student-student interactions. Although there were indicators that students were responsive in the class, the observations showed that enthusiasm was lacking as they appeared to be passive and quiet throughout the lessons. The field notes revealed that classroom activities conducted did not change the ambience except for a slight increase in the students' interaction with the teacher and with each other. The excerpt from one of the field notes that described the situation is as follows:

“A lot of murmuring/ chattering sounds heard in the classroom... Chatterings occur during group separation for activity... Class is filled with silent murmurs (during discussions) but not in a jovial environment...”

The students remained quiet while doing the activities related to the tasks given. The frequency count of the item 'stay quiet or silent' from the checklist indicated the following data:

Lesson 1 - 4 instances ; Lesson 2 - 7 instances ; Lesson 3 : 5 instances

All of the students were observed to remain quiet, even when the teacher was asking for clarification on the completion of the activity or when questions were asked in general to the whole class. According to Lane and Harris (2015), this type of behaviour is an indicator of students being disengaged with their lessons.

From the aspect of student' focus and attention, they seemed to be able to maintain their attention on the lessons throughout. They held their heads up and kept focusing on the screen in front of the class or the teacher. Such findings were substantiated by one of the field notes which described

the following scenario during one of the lessons:

“Students seem to be on task, based on the body gestures and actions... Some are seen to jot down notes during a lecture while most focus on-screen/teacher... Eyes focused on-screen or teacher...”

Table 2. Lessons without and with SRS

Thematic Codes	Descriptions	
	Lessons without SRS	Lessons with SRS
Overall Classroom Ambience	Field notes: -Very formal classroom environment -Passive / unenergetic looking students – slight improvement observed while doing activities. -Responsive (but sounded dull) -Quiet or silent chattering	Fieldnotes: -Classroom environment/students’ behaviour were lively -Energetic lively students’ interactions -More number of active students compared to the passive ones. -Signs of excitement noticed during SRS-based activity. <i>(laughs/cheers/claps/sighs)</i>
	Checklist: Stayed quiet or silent in class - <i>average of 5 instances during 3 lessons</i>	Checklist: Stayed quiet or silent in class – <i>none - average of 0-1 instance during 3 lessons</i>
On Task Behaviours Students’ Focus and Attention	Field notes: -Focus is still maintained and diverted to activity/task -Some were distracted or not bothered in doing the task -Slow-paced response in doing/completing the task given	Field notes: -High-level focus and great attention were given for activities conducted -Eyes fixed on the screen or their phone the entire time -Fully invested in doing the tasks and completing them -None were distracted during SRS infused activities <i>(all three types)</i>
	Checklist: Head held up / Eyes focused - <i>average of 10 instances during 3 lessons</i> Sleepy / Body slouched - <i>average of 4 instances during 3 lessons</i> Repeated instructions - <i>average of 2 instances during 3 lessons.</i>	Checklist: Head held up / Eyes focused - <i>average of 12 instances during 3 lessons</i> Sleepy / Body slouched – <i>none - average of 0-1 instance during 3 lessons</i> Repeated instructions – <i>none - average of 0-1 instance during 3 lessons.</i>
Students’ Responses <ul style="list-style-type: none"> • Classroom Dynamics • Questioning and Answering (Q&A) 	Field notes: -Constant murmurs/babbling among students <i>(discussing /chatting due to activities conducted)</i> -Clarification checks on activity progress were rarely responded -Occasional chuckling sounds heard <i>(irrelevant to the task)</i> -Very little excitement or eagerness in completing the task -Most Q&A resulted from discussions on the answers for the tasks given by the teacher	Field notes: -Visible changes in students’ interaction during activities -Clear signs of excitement shown <i>(laughs/cheers/claps/sighs)</i> -Show interest, competitiveness during activity <i>(group game)</i> -Focused and stay silent <i>(individual game – 6th lesson)</i> -Questions asked without prompt -Most Q&A resulted from asking for clarification or commenting about SRS activity or gameplay
	Checklist: Asked questions - <i>average of 3 instances during 3 lessons</i> Answered/gave comments - <i>average of 12 instances during 3 lessons</i>	Checklist: Asked questions - <i>average of 7 instances during 3 lessons</i> Answered/gave comments - <i>average of 13 instances during 3 lessons</i>

	Didn't respond or reply - <i>average of 8 instances</i> during 3 lessons Cheered / Laughed – none observed	Didn't respond or reply – none - <i>average of 0-1 instance</i> during 3 lessons Cheered / Laughed – average of 18 instances during 3 lessons.
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Their continuous response to the teacher and activities substantiated the notion that their focus on the lessons was mostly uninterrupted. However, the viewing of the recorded videos of the three lessons without SRS revealed that even though some students paid their attention to the lessons, a number of them were not. Some students were seen to be distracted that they did not even make an attempt to complete the tasks given. The frequency count on the item ‘sleeping / body slouched on table’ indicated the following results:

Lesson 1 - 3 instances ; Lesson 2 - 4 instances ; Lesson 3 - 4 instances.

Such body language signified the presence of disengagement (Lane & Harris, 2015) which might affect their overall performance (Wang & Tahir, 2020).

The classroom dynamics of the three lessons without SRS showed a very formal classroom environment. The interactions between the teacher and students were minimal. The students only responded when the teacher prompted them with questions repetitively. Teacher – student interactions were observed only during the implementation of the activities. The following excerpt from one of the field notes stated the following thought:

“No questions asked except for task clarification... Sometimes stay silent even when questions asked by teacher... Students seem to be a bit more responsive only during answer discussion...”

There was also no indication of excitement or eagerness in the language exchange that occurred. The classroom dynamic of the lessons lacked affective features of a classroom interaction such as laughter, jovialness, competitiveness and excitement. There was no sign of enthusiasm from the students, except for a few chuckling sounds irrelevant to the ongoing lessons. The following field note summarised the 3 lessons without the use of SRS:

“... still able to do the activity but lack enthusiasm/energy... No sense of competition noticeable... Interest and jovial mood not detected... Investment on activity seems minimal... No laughs/smiles/cheers observed at the end of the activity ...”

This finding was further solidified by the data from the observation checklist. In all the three lessons without SRS, none of the students showed any signs of excitement like laughter, cheering or even sighing. The observational checklist collected the following data from the physical attributes such as ‘laughing, cheering or sighing’:

Lesson 1-1 instance (for laughing); Lesson 2 - 1 instance (for laughing); Lesson 3: 0

Students’ laughter was only detected twice, when the instructor made some jokes during the completion of one activity. which was not triggered by any discussion related to the activity or the lessons. The findings revealed that the three lessons without the utilisation of SRS had no significant, positive, affective impact that corresponds to students’ engagement in learning.

Lessons with SRS

The three lessons which utilised SRS displayed a livelier ambience compared to the lessons without SRS. The change in the classroom mood was due to the students’ responses during the activity, which was encouraged by the use of SRS. The students who were observed to be passive during the lessons without SRS played more active roles in the classroom. The following excerpt from one of the field notes summarises the overall change:

“Apparent changes in classroom ambience can be seen. Students seem more engaged now in activity and lesson due to game factor (SRS). Seem so joyful and excited...”

The lively environment of the three lessons was contributed by the students' active participations during all activities. They were observed to be laughing, cheering and at some instances even sighing, when they were competing in groups. Throughout the activities, the students appeared to be chatting with excitement with each other. This liveliness was due to the elements of competitiveness and ranking system which were embedded in SRS. This is in tandem with the results of the study by Plump and LaRosa (2017) that eLearning tools like Kahoot! can add vitality and student engagement in the classroom.

The result from the observational checklist revealed a similar pattern of liveliness. The frequency count of the item ‘stay quiet or silent’ from the checklist showed the following data:

Lesson 1 – 0 instance; Lesson 2 - 0 instance; Lesson 3 - 3 instances (entire class was silent)

There was only one instance where the students were silent during an SRS-based activity (Lesson 3). However, the silence that followed the activity was not a result of passiveness or disengagement. Instead, it was the result of the students being engrossed in completing the SRS activity. Unlike the other two SRS activities that required students to work in pairs and in groups, the last SRS game required students to work individually, thus requiring no discussion or interaction between them. The students’ behaviour during this particular instance was described as such in one of the field notes:

“Students are highly invested in the individual SRS game where none were distracted or talking with each other...”

The students’ focus and attention were maintained during the three lessons and intensified by the implementation of the SRS-based activities. None of the students appeared to be distracted as evident by the frequency count of the observational checklist which indicated an average of 12 instances where students were keeping their ‘eyes and head held up’ to the screen or their mobile phones. The students’ level of engagement was proven further as the item ‘sleeping/body slouched’ on the observation checklist showed zero instance. The field note related to this particular situation stated:

“Body posture suggest eagerness, students standing to see screen...”

The classroom dynamic during all three lessons with SRS indicated students’ excitement and interest towards the activities conducted. Students were observed to be laughing when they stroke the correct answers, sighing loudly or saying ‘oh no!’ for getting the wrong answers or clapping joyously for becoming the champions. By calculating the frequency of such occurrences in the observational checklists, signs of excitement were observed 18 times on average for each of the SRS-based activity.

High number of occurrences of such behaviours not only proves students’ engagement in their learning but also indicates that SRS brings a positive dynamic to the classroom interaction. This might be the reason why the question-and-answer sessions were frequent during the activities. Only during SRS-based activity that students were observed to be asking questions without being prompted by the teacher. According to Woldemichael (2018), web clicker encourages students to participate in the learning activity and motivates them to study harder.

Comparison between Lessons without and with SRS

By comparing the observed patterns between the lessons without SRS and with SRS (**Table 3**), several similarities and differences that prove to be vital in accomplishing the purpose of the study were able to be highlighted.

The overall classroom ambience showed a detectable difference based on the researcher’s observations between the two different sets of lessons. The set of activities without SRS showed that the classroom ambience continued to be passive and dull most of the time. The study also proved that

contrasting behaviours were detected among students when the activities utilised SRS. The ambience changes to a livelier environment with active participation by the students. The classroom mood was also seen to be joyous as students sometimes interact with laughter and cheers. The emergence of these patterns in the lessons with SRS indicated the presence of student engagement, as compared to activities without the use of SRS which had consistently shown minimal impact in inducing engaging environment in those classrooms.

Based on the observational field notes and review of the video-recording of those lessons, the researcher concludes that all the students have a continuous focus and attention towards their lessons, regardless of the types of activity being conducted (with or without SRS). However, the study revealed that the level of focus is intensified during SRS-based activities because of the increased investment students put in completing those activities. The only aspect that differentiated the students' level of focus between those lessons were the frequency of misbehaviours related to inattention that was detected during the classroom observations. According to the observational checklist, a lower number of distractions occurred when lessons with SRS was conducted. The contrasting result was detected for lessons without SRS, with a higher number of misbehaviours.

Table 3. Comparison between lessons without and with SRS

Comparison between Lessons without and with SRS (corresponding to students' behavioural patterns of engagement)	
SIMILARITIES	
Students, on average, were observed to be paying attention and maintain their focus throughout their lessons, without or without SRS	
DIFFERENCES	
The type of activities conducted after input stage elicited varying student responses and impacted their behaviours differently.	
Activities without SRS	Activities with SRS
<ul style="list-style-type: none"> • Classroom ambience continued to be passive and dull, mainly due to the continuous silence in class. • Focus is good and maintained with minimal distractions, and a few misbehaved students. • Traditional classroom dynamic that only has formal-like interactions and filled with unaffectionate mood/surrounding • No Q&A sessions initiated by students with the teacher. 	<ul style="list-style-type: none"> • Classroom ambience changes to a livelier environment, with active participation and exciting interactions. • Focus is also good, but likely to be more enhanced with zero distraction and no visible student misbehaviour. • Slightly more vibrant classroom dynamic with increased interactions between students and filled with a positive and affective environment. • More Q&A sessions with the teacher without any prompt was seen.

The classroom dynamics from the lessons without SRS showed a very formal-like classroom dynamic. The interaction between the teacher and students were observed to be minimal and mainly one-way. The students only respond when the teacher prompt them with questions repetitively or allowing them to complete the statement being explained. A change in the dynamics was noticed for lessons with SRS because the students were portraying a clear sign of excitement and interest. Some of the signs include instances when students laugh at their victory or failure, sighing loudly for getting the wrong answers or even when they clapped joyously

On the aspect of questioning and answering for lessons without SRS (Q&A), the comparison showed that most students only engaged in such interactions if prompted or if the activity stage is ended with a discussion of answers by the teacher. At those instances, the researcher commonly observes only a few exchanges of short responses between teacher and student. In contrast, the observations during SRS-based activities revealed that the number of Q&A sessions rose during the activity stage and often initiated by the students. It was specifically noted that the increased number of Q&A resulted from students asking for clarification or commenting about the SRS activities.

DISCUSSION

The classroom environment is one of the most important factors affecting student learning. Simply put, students learn better when they view the learning environment as positive and supportive (Dorman et al., 2006). In the context of this study, a classroom ambience was revealed through the encompassing mood and vibe that was expressed by the overall occupants of the classroom during a lesson or activity. Such mood was commonly described through the use of adjectival terms such as active, passive, relaxed, dull, lively, silent, energetic, responsive, formal and quiet. Creating and maintaining a positive environment is vital because it leads students to feel a sense of belonging, trust others, feeling encouraged to tackle challenges, take risks and ask questions in class (Bucholz & Sheffler, 2009).

Based on the analysis of the findings, the overall classroom ambience during the three lessons without SRS was rather dull and passive with minimal teacher-student and student-student interactions. Such environment may affect students' engagement and in turn affect their overall performance (Menon, 2017). In contrast, the classroom ambience during the three lessons with SRS was noticeably more active and livelier. The emergence of these patterns indicated the presence of students' engagement which supports the claim that SRS is an effective tool in helping students to be more engaged during their lessons (Egelandsdal & Krumsvik, 2017; Gressick & Langston, 2017).

According to Sun and Shek (2012), one of the main criteria that many teachers tend to perceive as important is students' attention and focus during lessons. The findings discussed earlier highlighted that students appeared to be more focused and attentive during lessons with SRS as compared to lessons without SRS. Due to the integration of game elements (Gressick & Langston, 2017) like rankings, scores and awards, student engagement intertwines with the use of such a tool in any educational settings. SRS is blooming as one of the most applied educational tools of the 21st century simply because of its ability to facilitate teaching activities by 'gamifying' educational activities and interactions (Wang et al., 2016). This situation naturally promotes a more conducive environment for learning to occur among learners.

When teachers utilize tools such as SRS, students are more likely to become immersed in the experience; an act of engagement; and are more likely to remember information and develop an enduring understanding of concepts (Gee, 2003). This relates back to the theoretical background of this study, SCT, which suggests that learning cannot be detached from its corresponding interactions that occur in its social environment. Therefore, it is possible to assume that there could not be a better environment for students to learn other than a 'mediated' classroom activity using tools such as SRS, which will promote students' engagement.

CONCLUSION

This study was conducted to investigate the impact of Student Response System (SRS) tools on students' engagement in English language classrooms at a higher learning institution in Malaysia. The core objective of this study was to propose a possible solution to the problems stated. The core problems stated was based on the fact that a vast majority of Malaysian students are still unable to gain a good mastery of the language and currently having the minimal ability to interact, even in their academic setting. The English competency of most tertiary level students is not up to par compared to what is expected of them when they enter universities. Previous studies found out that one of the reasons was because higher education institution students are facing more signs of disengagement or lack of commitment rather than engagement and also commonly exhibit a "negatively passive participation" attitude.

Based on the results, it could be deduced that SRS tools positively impacted students' engagement in the classrooms. The researcher further substantiated that the lessons with SRS had proven to encourage students' engagement in English language classrooms when compared to other lessons that did not integrate the SRS tools. Based on the observable changes in students' behaviours, the researcher clearly identified that the use of SRS in the language lessons had positive impacts on students' engagement on the aspects of classroom ambiances, on-task behaviours and their responses in the classroom. However, this study focused only on one dimension of engagement – behavioural –

which was described and adapted to specific features and observed using classroom observation methods. It is recommended that future studies to also focus on the affective or cognitive dimension of engagement. It is important to show that the use of SRS tools has impact on students' cognitive development as well so that more educators would consider utilising SRS tools in their lessons.

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