

Students and Lecturers' Perceptions of What Constitutes Effective Teaching Behavior in a University

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This research explores the effectiveness of lectures taught in the English language by lecturers who had originally been teaching in the Malay language which is the medium of instruction in Malaysia. Specifically the research focuses on students and lecturers' perceptions of what good teaching behaviour constitutes. One hundred and forty one students completed questionnaires and three lecturers were observed in their respective classrooms. The questionnaires and observations focussed on the lecturers' organization, interaction and presentation styles to determine the effectiveness of their teaching behaviours. It was found that students did like some organization in the lectures while they had varying ideas on the level of interactivity required according to the presentation style of the lecturer. The study highlights the importance of lecturers as facilitators and enablers of knowledge in class while remaining non-threatening to students.

Key words: teaching behavior, student perceptions, tertiary education

INTRODUCTION

Lectures are an indispensable fixture of tertiary education and the most

widely used method of imparting knowledge in colleges and universities (deWinstanley & Bjork, 2002). Furthermore, a successful lecture is one which is capable of helping students process information provided. There are many facets to a successful lecture and these can vary from something as basic as being suitably attired to possessing appropriate linguistic and academic competence (Ali, Tariq, & Topping, 2009). Assuming that lecturers are well versed in what is acceptable attire the focus rests on linguistic and academic competence. These are visible in the way the lecture is organized (structure), how interactive it is and how it is presented in terms of clarity, visual support and non verbal behavior.

Harrison (2007) posits teaching behaviours determine how students learn because the overarching goal is to increase learning beyond what students would get by simply reading a textbook (deWinstanley & Bjork, 2002). A lecture can only be effective if there is student learning so an effective lecture can only be measured by how much a student has comprehended from it (Lowyck, 1994). Student behaviour can be taken as a measure of their comprehension of the lecture itself. For instance, if they are actively listening and participating in the lecture this could be seen as a sign of their processing of the lecture.

This paper seeks to explore what lecturing techniques are being employed in the Science classroom and how effective these are in helping to promote comprehension and learning. In particular this paper examines the effectiveness of lectures taught in the English language by lecturers who had originally been teaching in the national language, Bahasa Melayu by focusing on students and lecturers' perceptions of what good teaching behavior constitutes

University Teaching Behavior in Malaysia

Many universities in Malaysia offer programmes and courses in both the national language, Bahasa Melayu and the English language. Universiti Kebangsaan Malaysia is one such university which offers many

undergraduate programs like Medicine, Dentistry, Engineering and Law in both Bahasa Melayu and English. More recently when the medium of instruction for Mathematics and Science was changed from Bahasa Melayu to English and then back again for the school system, the effects of these policy reversals and re-reversals were also evident in the university. As Ibrahim, Gill, Nambiar, and Tan (2010) state, university lecturers were left to fend for themselves in what can best be described as a state of flux with the medium of instruction. Examining how lecturers are coping with the first change in medium of instruction by exploring the questioning techniques employed by science lecturers in UKM, they posit it is not the number or type of questions employed but a highly interactive style that will enable learners to participate in lectures.

Yusof, Tayib, and Mansor (2004) studied accounting lecturers to see if the change in medium of instruction had any effect on their teaching experiences. The researchers highlight the common problems lecturers faced and also explore students' perceptions towards the lecturers' ability to cope with the switch in medium of instruction. What was interesting about their findings was the marked difference in lecturers' perceptions and that of the students. Most of the students found the lecturers were not very effective where clarity of lecture content was concerned due to the lecturers' inability to lecture in English while the lecturers claimed they had no difficulty in lecturing in English.

“Although lecturers perceived that they do not encounter any major problem with shift in medium of instruction,more than 40 percent of the students perceived lecturers' ability to shift as less encouraging as some lecturers did not conduct lectures entirely in English, could not precisely provide instructions and information on the course orientation and structure, were unable to clearly explain or deliver the lecture content and did not interact in English outside formal lectures.”

(Yusof et. al., 2004 p. 531)

The question of how linguistically competent the content deliverer is

received much attention especially when many believe they are proficient and will not have any difficulty in lecturing in English (Klassen, 2001; Vinke, 1995; Yusof et. al., 2004). If we were to assume that proficiency is not a contention then we need to consider other variables that constitute effective lecturing behaviour.

Effective Lecturing Behavior

The effectiveness of a lecture can be evaluated by examining three main variables - structure or organization of lecture, interaction between lecturer and student and presentation of lecture according to Klassen (2001).

Organizational Style

The average lecture lasts anywhere from one hour to two hours and it is crucial that lecturers provide some structure to their lectures in the form of an outline of the key points (Kiewra et al., 1995) or simply provide the topic (Wiley & Rayner, 2000) and readings before the lecture. In this way the learners can stay interested throughout the lecture and help focus their attention during the learning. Hall and O'Donnell (1996) postulate that the use of knowledge maps helps students to stay focused on the lecture and learn better.

Klassen (2001) proposes the use of signposts to provide students with a preview of content, cues when making the transition from one topic to another and also linking new knowledge to prior knowledge. Organizing lectures by providing an introduction, summaries and a suitable conclusion can help learners also decide how they will engage with the knowledge provided. Hence using an appropriate structure to present lectures definitely helps learners stay engaged, focused, interested and motivated which in turn will mean better learning.

Interactional Style

Monologue lectures have given way to more interactive lectures as lecturers recognize that this is the fastest way to establish whether learners comprehend the material that is presented. When learners are given the opportunity to ask and respond to questions, they are actively engaging in the learning process and helping to create their understanding of the content (Shomoossi, 2004). Interaction in a lecture will help learners make stronger associations with long term memory and result in better learning (Kintsch, 1998).

If the learners are not comfortable interacting with each other and with the lecturer, then very little or no interaction takes place and the shared space of learning (Tsui, 2004) will be smaller. If the lecturer is not comfortable using the English language to deliver the lecture, then chances are the lecture will be more of a monologue, with little opportunity for interaction in the classroom (Vinke, 1995). Interactional style is visible in many forms in the classroom like repetition, comprehension checks, confirmation checks, clarification, verification, elaboration, and asking questions.

Presentational Style

The presentation of an effective lecture will revolve around clarity, visual support and non-verbal behavior (Klassen, 2001). An effective lecture has to have clarity in transmitting knowledge and this suggests using unambiguous language and appropriate vocabulary to enhance effective processing. Since scientific language is abstract and complex and therefore ambiguous the lecturer has to be careful to choose the appropriate vocabulary to communicate the subject matter in a way that is easy for the learners to understand. The focus should be on enabling learners to 'talk science' (Lemke, 1990) and this means learning the language used to describe scientific concepts and knowledge.

Providing other forms of support to help learners in the form of visuals,

handouts, writing on the board – what Airey and Linder (2006) refer to as multi-representational support does lead to a positive learning environment. Having said this, it is important to remember that learners find it difficult to listen, take notes and process a visual all at the same time and process time is needed.

Successful presentation is equally dependent on non-verbal behaviour like body language and facial gestures. A confident lecturer who maintains eye contact with learners indicates knowledge of content or subject matter and a willingness to communicate with learners (Wagner & Lee, 1999). A lecturer who moves around the lecture hall stopping to interact with students and answer questions and clarifies doubts also suggests an open attitude and a keen desire to want to support student learning. This is in direct contrast to a lecturer who only stands in one place and delivers the lecture with no attempt to check student understanding or comprehension (Patterson & Ritts, 1997). Research indicates that when students who encounter lecturers who are friendly and more understanding have better attitudes towards learning (Kim, Fisher, & Fraser, 2000). Hence presentational style should be explored from the perspective of clarity of language used, multi dimensional support, and non verbal cues.

METHODOLOGY

Sampling

Data for the study were derived from 3 lectures, conducted in English by 3 professors, who were native speakers of Bahasa Melayu to multilingual Malaysian students. The three professors were invited to participate in the study because they were willing to allow the researchers to attend their lectures, observe them and use their students as respondents for the questionnaire.

The lecturers will be identified as P1 for the Physics Lecturer and C1 and

C2 for the Chemistry lecturers. All the 3 lecturers are about the same age group (50 – 55 years), educated overseas and had more than 15 years experience teaching. In addition they were bilingual and equally fluent in both Bahasa Melayu and English.

Instruments

Data were collected by means of a questionnaire and lecture observations. The questionnaire, adapted from Klassen (2001) consisted of 33 items dealing with structure, clarity, interaction and general questions on the lecture. The Cronbach's alpha on the questionnaire stood at 0.83. Modifications were made to the questionnaire to suit local needs. There were 42 items that dealt with organization, interaction, presentation and general questions on lecture with another section language which had questions on choice of language whether Bahasa Melayu or English to deal with various aspects of lecture.

The individual lectures that lasted for an hour each, were video recorded and transcribed for evidence of effective lecturing behaviors by the researchers using an observation schedule which also had statements on organization, interaction, presentation and general questions on lecture and questions on choice of language.

Data Analysis

The questionnaire was distributed to 141 first year science students immediately after each lecture so the return rate for the questionnaire was high with some items being completed by all students. Items dealing with organization, interaction and presentation were analyzed using descriptive statistics for each lecturer before being compared and general questions regarding the lecture itself were also analyzed to identify learners' perceptions.

The lectures were observed and video recorded by two researchers who analyzed the lecture transcripts by picking out relevant statements. Each

researcher completed the observation schedule to identify statements depicting various aspects of the lecture and then the two schedules were compared for similarities and differences. Overall it was found that there was almost total agreement (95%) between the two researchers and this helped to ensure inter-rater reliability.

RESULTS

Descriptive Analysis

The students' responses to the various sections in the questionnaire were grouped into two - agree and disagree - by combining strongly agree with agree and strongly disagree with disagree for each individual lecturer. Then the responses were loaded together to illustrate students' perceptions of effective organizational style (Fig 1), interactional style (Fig 2) and presentational style (Fig 3) for all three lecturers. The discussion will present the results of the statistical analyses together with the qualitative analysis of the lecture transcripts.

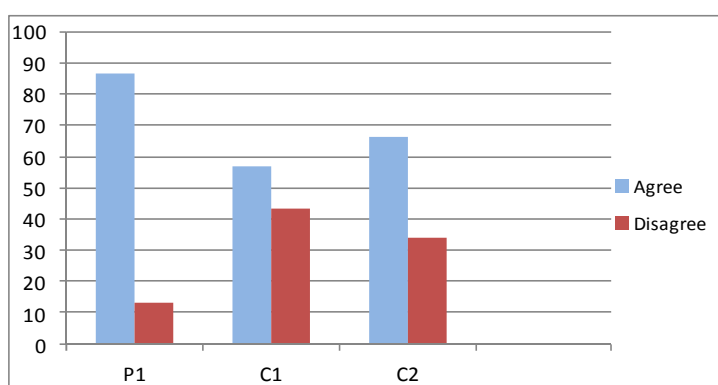


FIGURE 1
Organizational Styles of P1, C1 & C2

Most of the students (86.7 %) perceive P1 as having a clear organizational style and the transcripts reveal that P1 begins the lecture by over viewing the topic studied. She reminds the students they had discussed vectors earlier and encourages them to recall what was done in an earlier lecture as illustrated.

L: Ok, last week, I was talking about problem-solving skills. What kind of thinking skills that I hope you can learn today? Several among other things, can you use physics to reason?

Students are reminded to apply their background knowledge derived from school to help them realize that what they had learned in school was relevant and applicable in the university also. Before discussing forces and motion in detail she gets them to explain Newton's Laws first.

L: What laws did you learn in the past?

This sort of structure helps learners prepare for the listening comprehension during the lecture. When they draw on existing knowledge they are using their cognitive skills and this means they are focusing on what is being taught.

Slightly more than half the students (56.7%) are of the opinion that C1 has a fairly good presentational style. C1 also introduces the topic and reminds the students this is a continuation of the earlier class on carbonate groups. C1 is getting students to make associations with what was taught earlier and to situate new knowledge within the context of the current discussion.

L: Today's topic will be on about carboxylic acid and ester. So, this is the continuation of the chemistry that we had ... where we have C double bond oxygen ya. So, this is another functional group belonging to carbonate group ya.

C1 provides a preview of the lecture at the beginning.

L: I will be discussing all thee nomenclatures, properties, sources, reactions and carboxylic acid derivatives.

About 66.1% of the students perceived C2's lecture to be well structured

as indicated by Figure 1 above. C2 begins by introducing the topic and reminds them of last week's lecture on redolts titration. C2 provides an overview of the lecture and explains that the students will learn about the process of precipitation titration and how the reaction occurs. C2 employs clear signposts to help the students keep track of what they are listening to as is evidenced below.

L: So, we have three condition that any precipitation titration should comply, before it can be used in a, any titration, precipitation titration. The first 1 the reaction should be rapid, which is instantaneous, the formation of precipitation should be instantaneous. Emm, if the reaction is slow, we still can be used, but not in the (Tara) method..... The second condition must be a quantitative and stoichiometric. This is the basic requirement for any titration reaction. And the third one, the last one there should be a mean of detecting end-point.

C2 uses many such signals throughout the lecture mainly to indicate listing. It would appear that the students find this sort of signals a useful guide in helping them listen more effectively and focus on what is important.

L: 2 problems. The first one, the (chloride) is so strong... Second problem is...

L: Put down 3 equations...the firstSo the last two...

L: 3 ways to do it...one of the approaches....the second approach.....the last approach...

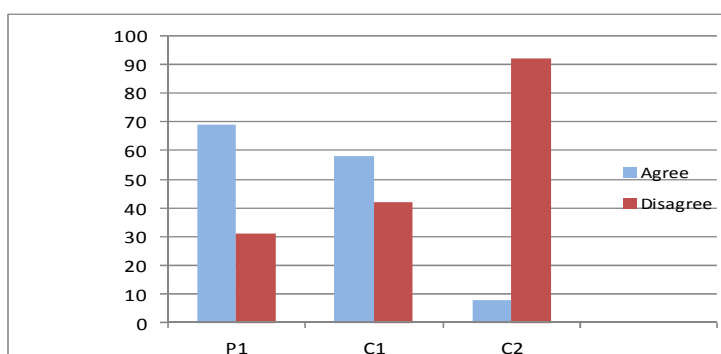


FIGURE 2.
Interactional Styles of P1, C1 and C2

P1 constantly elicits responses from the students by asking questions throughout the lecture thereby ensuring they were paying attention and getting them involved in the lecture. The data below illustrate how she gets the students involved by constantly getting them to respond to questions, seeking clarification and asking them to elaborate on their answers.

- L: What are the topics of physics ... that you are going to learn, when you are going to talk about forces?
S1: ... motion [echoing]
L: Motion. Motion. Forces and motion. What laws did you learn in the past?
S2: Newton's law.
L: Newton's law of ... ?
S3: ... motion
L: How many of them?

P1 insists all students verbalize their responses and will not accept responses from students who claim their answers are similar to earlier expressed answers.

- L: What is force for you?
S4: ah, ah, ah, something that relate with mass and acceleration.
L: something that relates with mass and acceleration. What is force for you?
S5: same with her
L: what do you mean by same as ... can you just say it out?
S6: ... something related with mass and acceleration

68.7% of the students perceive P1 as having an interactional style. While this figure is relatively encouraging, the figure also reveals that 31.3% of the students were uncomfortable with the interactional style of the lecturer. This is largely due to the fact that Malaysian learners are used to non threatening monologue style lectures wherein they are merely recipients and do not have to participate in the lecture. Being made to provide answers could have been viewed as putting them in the spotlight and naturally they were afraid of making mistakes.

C1 does not really engage the students in questions and does not check to

see if they comprehend the lecture. While questions are posed at some points in the lecture, there is insufficient time given for the students to respond and instead the lecturer provides the answers.

L: What is dodeca?

S7: no response

L: Dodeca means

L: Do you know how you can get formic acid in nature?

S8: Yes

L: Yes, it is actually a poison, a stink...

In the examples above when the students did not respond to the question the lecturer did not probe further. What appeared to be missing in this classroom was the opportunity for any form of interaction and student involvement.

However C1 does provide a lot of elaboration to the students throughout the lecture in an attempt to make it easier for them to comprehend.

L: :Formic acid ah, acetic acid, butyric acid, capric acid, cauric acid, and steric acid. So... I think all of us have taken as,consume these acids at home ah. Not formic acid, but acetic acid, especially, may be Kelantanese or Thai, they like to put vinegar in a lot of their cooking ah. The kerabu and all these things they have always put vinegar. So, that's acetic acid.

This lecturer is interested in getting students to understand how chemical formulas are written so she goes to great lengths to explain how formulae are derived and points out to them important points to note when working with formulae.

L: In the carboxylic acid you'll have OH and some general formula of RCOZ ya. So, carboxylic acids have other derivatives, other derivatives and here we indicate them with the letter Z [she points out to the slide]. And Z can be a lot of things.

The figure above indicates that students find C1's lecture less interactive at 58.2%. However the students were able to listen and comprehend fairly

effectively and did find the lecturer’s explanations and elaborations on how to produce formulas for carbonates interesting.

C2 does pose questions in the lecture but she does not get the students to provide answers.

L: ... you will face with excess amount of silver. (.5) So, how to avoid this problem? Very simple, just adding in some solid..

L: What happen in the present of precipitate of silver chloride? You have silver (/) now, you have silver chloride, precipitate plus excess silver, they both titrate with dioxinide

C2 does ask if students have any questions but does not give too much time for students to answer. C2 seems to be more intent on delivering the content and does not make any attempt to check students’ understanding as there is no opportunity to ask questions, clarify doubts or seek elaboration. He appears quite detached from the students and while he has the knowledge, the delivery of the content is dry and quite dense. In short it comes across like a traditional monologue lecture.

More than 91% of the students perceive the lecture to be very non-interactive as shown in Figure 2 above and such lectures are not very popular with students.

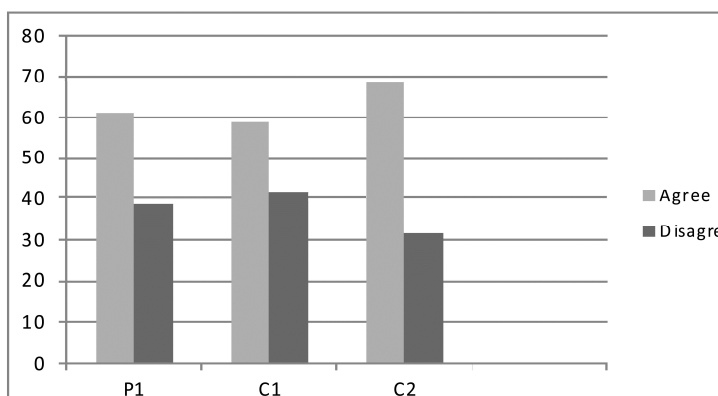


FIGURE 3
Presentational Styles of P1, C1 and C2

P1 is concerned that the students are unable to represent processes of physical phenomena diagrammatically, graphically and mathematically and feels they should develop these abilities. As a result, she is focused on teaching them to express themselves accurately and scientifically when discussing physics concepts.

L: what is the meaning of mass is inversely proportional to acceleration?

L: the bigger the mass..?

S9: the slower...

L: Ok, so you don't talk about slow and fast in mathematics do you? Huh?

Do you talk about slow and fast in mathematics? Ok, you don't talk about slow or fast in mathematics. You can talk about small or big and so and so forth, only when we talk about physical situation, only when you talk about motion that you begin to talk about fast and slowness. So, again that is something for you to consider, and...

P1 is constantly moving around the room and uses a lot of hand gestures to illustrate what she means. She uses everyday examples to explain concepts like calibration, relative motion, and resistance. For instance, to explain relative motion she talks about the escalator and going on planes to explain it. The lecturer also employs visualization techniques in trying to explain mass as the property of an object that specifies how much resistance an object exhibits to changes in its velocity using the image of an elephant and a rabbit. She uses this image to help them understand the bigger the mass the smaller the acceleration.

L: Imagine an elephant, imagine a rabbit. It's a contrast isn't it. Now you can see which one is able to change faster in terms of running or walking. Can the elephant change its speed of walking...faster?

Generally this lecturer had a very pleasant demeanor and it was obvious from her facial expressions that she was genuinely interested in getting the students to comprehend the topic for the day. Figure 2 shows almost 61.4% of the students were comfortable with her presentation style.

Basically C1 explains the formula and how to construct the formula for a compound and its reactions. She uses the appropriate terminology when describing the formula and makes the construction of these formulae very clear to the students. From the students' responses during the lecture it can be deduced the terms were not problematic to the students as they all appeared to be familiar with what was being explained. C1 does not move around the lecture and chooses to stand in front of the lecture hall while explaining the materials. About 58.9% of the students were comfortable with this and were content to simply sit and listen to the lecture.

C2 explains in detail the conditions under which the process of precipitation titration occurs and the outcome if the conditions were absent. C2 explains everything step by step to the students and also teaches them how to write the equation for both methods. C2 uses very clear vocabulary and explains the process using simple words making it easy for the students to understand.

- L: than the method is also known as Argentometry. Argentometry, it means the use of silver as a reaction
- L: What is meant by adsorption indicator is that it is an organic compound which adsorbs on or desorbs from the surface of precipitator. That's what you call adsorption indicator

C2 uses power point slides to deliver the lecture and to highlight an important idea he usually underlines the words he stresses using the mouse. In this way he is providing some form of multi representational support for the students. However, C2 remains standing at the same point in front of the lecture hall for the entire length of the lecture. This is not a problem for the students as almost 68.5% expressed they preferred this sort of presentation style.

Overall Perceptions of the Lecture

To examine students overall perceptions of the lecture they were asked to

respond to items dealing with how interesting, useful and motivating they found the lecture. Figures 4, 5 and 6 illustrate the learners' responses to these questions.

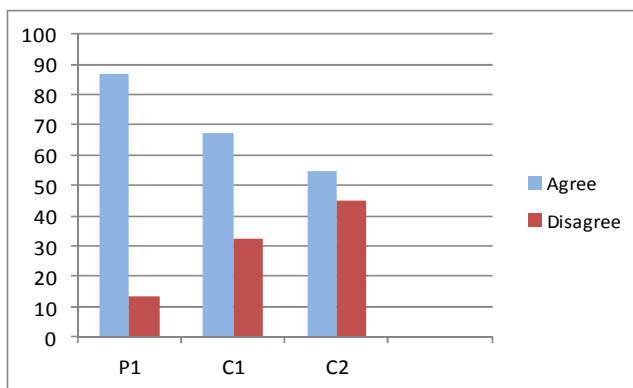


FIGURE 4
Interesting Lecture

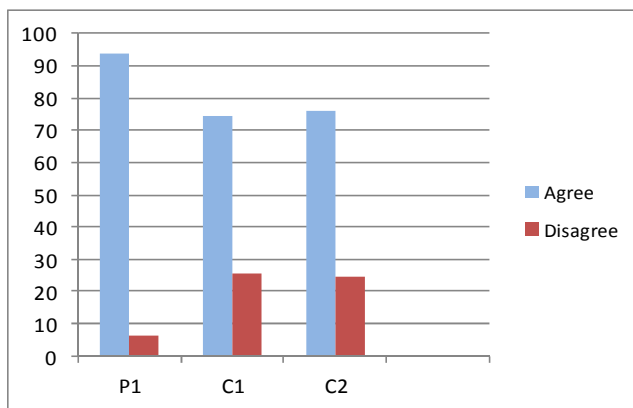


FIGURE 5
Useful Lecture

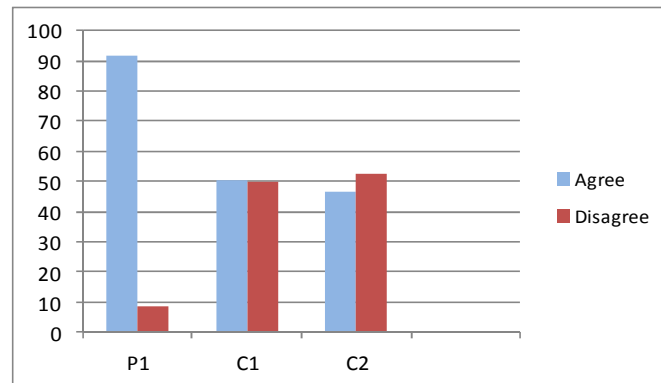


FIGURE 6
Motivating Lecturer

86.7% of the students found P1's lecture interesting (Figure 4) and 94% found the lecture useful (Figure 5). However, to understand this better it is important to look at whether the students were motivated to remain interested in the lecture and 91.5% of them indicated they were motivated sufficiently (Figure 6).

A look at the levels of interest indicated by students for C1 and C2 (Figure 4) show while 67.4% and 54.8% did find C1 and C2's lectures interesting a fairly high percentage (32.6% and 45.2% for C1 and C2 respectively) also indicated they were not very interested in the lecture. Interestingly enough 74.5% of the students found C1's lecture useful while 75.8% found C2's lecture useful (Figure 5). What this indicates is that although the students were cognizant of the fact that both lectures were useful they found the lecture less interesting. This is also represented in their responses to whether the lecturer motivates them to remain interested in the lecture (Figure 6). Almost half the students - 49.7% and 52.4% - indicated they had difficulty in remaining interested in C1 and C2's lectures respectively.

DISCUSSION

It is interesting to see how different the lecturers are in their lecturing styles and while all lecturers would like to believe they have done their job of giving a lecture when needed, it is important to recognize the lecture is only valuable if the students find the lecture useful. For students to say so they should have understood the lecture and been motivated to keep listening to the lecturer.

Where the organization or structure of the lecture is concerned the data suggest there is a need to have a clear structure which should be divided into sections easy for the students to follow. It is equally necessary for the lecturer to follow this structure so as to enable the learner to keep track of the different sections of the lecture. It is important for lecturers to provide brief summaries or recapitulations of what they have been discussing within the one hour lecture so as to help the learners stay focused. When students' prior knowledge is activated and they can make connections between new and existing knowledge they will remember better (Klassen, 2001).

Together with this clear structure, learners should have access to the notes prior to the lecture as this will help them prepare for the lecture (Kiewra et al., 1995). It is not enough to make the notes available only after the lecture, as is the common practice of many lecturers. C1 does remark she will put the notes on the SPIN – the university's learning management system after the lecture. She opines that giving the notes earlier means learners will not pay attention, or even worse, not come at all. However, learners who are interested in learning will benefit more if notes were made available before the lecture and this far outweighs any disadvantage. Miller (2009) also posits notes are an important form of support for learners and will help in their listening comprehension.

Interaction is a crucial factor in any lecture and simply standing at the middle of the lecture theatre and speaking for one hour as that of C1 and C2 is no longer fashionable as learners want to be involved in the learning process. It is important for lecturers to ask questions, get students to

volunteer information and constantly get the students to express their understanding of the content. “When lecturers deviate from straight chalk and talk style of presentation and attempt more interaction or present the lecture in a different way, the student interest level is raised and students tends to focus more on the talk (Miller, 2009:22). But it is equally important for the lecturer to not appear threatening and keep asking questions demanding answers from the students. Such a non-threatening environment in the classroom will help students focus better and this will help improve their listening comprehension abilities also (Kintsch, 1998).

While the students did indicate they did like their lecturers to be more interactive they also expressed concern with too much interaction. For instance, while P1’s lecture was considered the most structured and interactive the students’ responses to the questions on presentation (Figure 2) show that they were not so comfortable with the highly interactive style of the lecture. It could be that they found themselves very vulnerable when she moved round the lecture hall with a microphone and got them to respond to her questions individually. Many Asian learners are by nature reticent and do not appreciate being put in a situation where they could suffer from ‘loss of face’ if they are unable to answer or provide wrong answers. Fang (2011) identifies the fear of losing face as one of the reasons why Taiwanese learners of English are passive in classrooms. Phillip and Koo (2006) and Pillay, Purdie & Boulton-Lewis (2000) posit Malaysian learners prefer to remain silent rather than participate in class for fear of losing face and sounding unintelligent.

The learners in this study were also not in favour of monologues as only 8.1% of them found C2’s lecture to be interactive. Many of them 68.5% actually preferred the presentation style of C2 because he remained in front of the class, did not ask questions and was content with rhetorical questions to which he provided the answers. At the same time they also indicated they were not really motivated to stay interested in the lecture. So while these learners don’t like monologue lectures they also don’t like too interactive lectures especially the kind that involve questions targeted at individuals in

the class. When learners do not interact with each other and with the lecturer the possibilities for learning will diminish and as Tsui (2004) states the shared space of learning becomes smaller when learners are reluctant to participate in the classroom.

Humour is one way of interacting in the classroom as it makes students stay focused and keeps the concentration level high. Both P1 and C2 did employ humour and this was an attempt to keep the atmosphere in the lecture light. What is important really is that learners are given the opportunity to participate in the lecture and not be subject to an hour long monologue. Studies have noted that humour helps promote students' interaction and reduces any possible tension in class while helping students to participate in classroom activities (Ketabi & Simin, 2009; Norrick, 2010). Medgyes (2002) highlights the important role of humour in helping to motivate students in EFL classrooms.

When lecturers vary their presentation styles which could take the form of monologues, dialogues, focused questions, demonstration they are heightening the learners' interest and ultimately stay focused for the lecture. While using multi representational support in the form of handouts, visuals, notes etc. is very useful for learners they have to be given sufficient time to deal with each so as to find them beneficial.

All three lecturers did vary their presentation styles in different ways. P1 for instance delivered her lecture using monologues, dialogues, questions, and even got the learners to attempt a diagrammatic representation of forces acting on a sliding block in class. C1 was a little less adventurous and was content with a monologue, visuals and equations. C2, however stood in one place and delivered the entire lecture, and only asked if the learners had any questions at the end. He did employ visuals to show the process he was teaching and variations to the process.

The more involved the lecturer is in the delivery of the lecture the more movement there is also. A lecturer who stands in one spot – usually behind the lectern in the lecture hall and delivers the lecture from there without much movement will not help the learners stay interested in the lecture. Most of the

time the learners are seen to be doing other things instead of paying attention to the monologue from the lecture. Like the students in Miller's (2009) and Patterson and Ritts (1997) work these undergraduates also saw the lecturer as boring. Miller points out that when students are presented with an interactive session they are more likely to remain interested and focused while Patterson and Ritts claim students don't like lecturers to stand in one place and present their lecture.

But a lecturer who is very animated and moves around the hall and uses gestures to highlight a point or illustrate a concept is the one who captivates the learners' interest (Airey & Linder, 2006, Kim, Fisher & Fraser, 2000). P1 for instance, was constantly moving around with the mike in her hand and this kept the students awake and ready to provide answers to questions she asked. She is very concerned with their ability to express their understanding of what they learn as she asserts:

I would like you, to develop your thinking skills.Among other things, can you use physics to reason? Students need to be able to explain things, need to be able to describe things. can solve mathematical equations or problems that are quantitative in nature but have problems trying to describe.

CONCLUSION

It is interesting to note that these Science lecturers, while equally proficient and knowledgeable in their content areas, conducted their classrooms in different ways. Being cognizant of the fact that Malaysian tertiary learners are quite content to rely on knowledge gained during lectures the importance of lectures cannot be overemphasized.

This study on the Science lectures reveals that lecturers need to function as facilitators and enablers of knowledge in classrooms. They cannot simply transmit knowledge as experts in the field but they must get students actively involved in the lecture and this can be done by asking good and the right questions (Ibrahim et al., 2010). The emphasis then has to be on the learners,

not the lecturer because only when learners are developing and evaluating their understanding can there be learning and understanding.

When students take ownership of their learning they will remember better what they learn and can apply this knowledge in new situations. When knowledge is transferred it is reconstructed and this strengthens the construction of knowledge. The role of the lecturer here is seen as Von Glasersfeld (1995) posits a midwife in the birth of understanding - a role that involves creating knowledge by providing students with opportunities to reflect and build on new knowledge.

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