Lecture Language in Malaysian Engineering Lecture Corpus

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Abstract

A lecture should contain various forms of lecture language or expressions that could help students understand the flow of the lecture. But what is lecture language? From the English Language Teaching (ELT) point of view as stated by Frazier and Leeming (2007), lecture language consists of expressions that mark the topic and plan of the lecture, and/or expressions that signal a new or transition of ideas. Universiti Teknologi Malaysia (UTM) is currently developing a spoken academic corpus of Malaysian engineering lectures which would be referred to as the MASE corpus. It is part of a joint research project with Coventry University funded by the British Council. The focus of the project is to study lecturing styles in Malaysia and the UK. Efforts are being made in UTM to analyse various pragmatic features of the MASE corpus. This paper therefore aims to present an analysis of the frequency and use of lecture language found in the MASE corpus. Findings of the analysis may shed some lights to enhance the delivery of engineering lectures.

Keywords: lecture language, language expressions, engineering lecture, corpus

1. Introduction

A lecture is a talk composed, shaped and structured by a lecturer who reacted with their discourse with transactional and interactive purposes in mind (Coulthard and Montgomery, 1981) despite it being a relatively unplanned extended monologue (Ochs, 1979). The purpose of giving a lecture is to transfer information and impart a text to an audience that is supposed to learn from the benefit of listening to a speaker with some intellectual authority (Aguilar, 2008).

However, understanding lectures could sometimes be frustrating for some. Why is that so? This could probably be due to the fact that some lecturers are poor communicators. There are lecturers who sometimes (unintentionally) do not signpost or label their speech, thus leaving the task of interpreting and making sense of the lecture to their listeners (Aguilar, 2008). Others, on the other hand, may overuse 'intruding' expressions, bury content and give the impression that they are unable to develop a topic with clarity. Yet other reasons could be the accent or pronunciation of the lecturers and the use of incorrect or unsuitable vocabulary.

This barrier of communication could be rectified if lecturers are made aware of their lecturing style, in particular the use of various forms of lecture language and expressions that could help students understand the flow of a lecture. But what is lecture language? From the English Language Teaching (ELT) point of view, lecture language consists of expressions that mark the topic and plan of a lecture, and/or expressions that signal a new idea or a transition of ideas (Frazier and Leeming, 2007).

In relation to this, a group of researchers in Universiti Teknologi Malaysia (UTM) is currently developing a corpus of academic lectures delivered in English in the field of engineering, referred to as the MASE corpus. It is part of a joint research project with Coventry University, United Kingdom and funded by the British Council under the Prime Minister Initiative II research grant. The focus of the project is to study lecturing styles in Malaysia and the UK.

This paper attempts to present an analysis of the use of lecture language found in the Malaysian Academic Spoken Engineering (MASE) corpus. Findings of the analysis may shed some light into the delivery of lectures by Malaysian engineering lecturers.

2. Research Question

This paper aims to present answers to the following research question:

How do Malaysian engineering lecturers manage their lectures?

a) What are the language expressions used to start and end a lecture?
b) What lexical phrases/bundles do they use to mark a shift from one idea to the next?
c) What are other language expressions used to signpost a lecture?

3. Methodology

3.1. Data Collection Context

The context in which data for this study were collected was set in the engineering lecture halls of Universiti Teknologi Malaysia, Johor Bahru. Each lecture was delivered in English to undergraduates from two faculties namely the Civil Engineering and the Mechanical Engineering Faculty. Written consent was sought from individual lecturers prior to observing their lectures.

3.2. Participants

A total of seven participants were involved in this study. They were five male and two female experienced lecturers – four from the Civil Engineering Faculty and three from the Mechanical Engineering Faculty. Their lectures were videotaped and transcribed using Transana. Since the focus of this study was on the delivery of the lectures, interaction between students and lecturer (if any) was not recorded and/or transcribed.

For the purpose of this study, a total of 11 lectures were analyzed – four from the Civil Engineering and seven from the Mechanical Engineering discipline. Each lecture lasted between 47 and 90 minutes. Table 1 and Table 2 below contain details of the lectures analyzed in this study.

Table 1. Participants from the Faculty of Civil Engineering

Transcript Number	Lecturer's Code	Topic/ Title	Gender
MCiv_001	nm1001	Equili-brium of Particles	Male
MCiv_002	nm1002	Design of Restrained Beam	Male
MCiv_003	nm1003	Aggregatewater and admixture	Male
MCiv_004	nf1004	Space Truss	Female

Table 2. Participants from the Faculty of Mechanical Engineering

Transcript Number	Lecturer's Code	Topic/ Title	Gender
MMec_001	nm1005	Occupa-tional Safety and Health Act 1994 1	Male
MMec_002	nm1005	Occupa-tional Safety and Health Act 1994 2	Male
MMec_003	nm1006	Com-bined Load-ings 1	Male
MMec_004	nm1006	Com-bined Load-ings 2	Male
MMec_006	nf1008	The Second Law of Ther-mody-namics 1	Female
MMec_008	nf1008	The Second Law of Ther-mody-namics 2	Female
MMec_010	nf1008	The Second Law of Ther-mody-namics 3	Female

3.3. Tokens and Types

Each of the recorded lectures was transcribed and based on the transcription the number of tokens and types were determined. Both the Civil Engineering and Mechanical Engineering sub-corpus contain almost the same number of tokens. However, the Mechanical Engineering sub-corpus has almost double the number of types to that of the Civil Engineering sub-corpus (see Table 3 and Table 4 below).

Table 3. Civil Engineering sub-corpus

Transcript Number	Tokens	Types
MCiv_001	4 909	494
MCiv_002	10 193	758
MCiv_003	10 811	992
MCiv_004	7 261	511
Total	**33 174**	**2 755**

Table 4. Mechanical Engineering sub-corpus

Transcript Number	Tokens	Types
MMec_001	5 794	1 118
MMec_002	5 205	922
MMec_003	3 627	632
MMec_004	2 502	469
MMec_006	7 067	874
MMec_008	5 552	700
MMec_010	3749	582
Total	**33 496**	**5 297**

4. Findings

In order to answer the research question we need to look at how lecturers divide their lectures as evident from the data. Table 5 (adapting Frazier and Leeming's 2007 categories) summarizes the different lecture sections and their functions.

In subsequent part of this paper some of the sections of the lecture will be described. Examples of expressions used by the lecturers, taken from the corpus, will be presented as support.

4.1. Starting a Lecture

To answer the Research Question:

How do Malaysian engineering lecturers manage their lectures?
(a) What are the language expressions used to start and end a lecture?

we first need to look at how lecturers start off their lectures. From the data it was found that there were six different ways in which lecturers started off their lectures (see Table 6).

Table 5. Lecture sections and functions

FORMS OF OPENING
1. Greetings and Review
2. Greetings and Housekeeping
3. Prayer and Greetings
4. Housekeeping
5. Grabs Attention and Housekeeping
6. Grabs Attention and Review

Table 6. Different ways of starting a lecture

The first form of opening is *Greetings and Review*. This is when a lecturer greets his/her students and soon after talks about what took place in earlier lectures. Examples of *Greetings and Review* are as follows:

- **<GREETINGS>** <u>assalamualaikum</u> <peace be upon you> **and good afternoon <REVIEW>** <u>okay last week</u> er okay er okay <u>we have done this</u> okay <u>last week we have discussed</u> equilibrium of a particle for two-

SECTIONS OF A LECTURE	FUNCTIONS
Opening	• Signals the beginning of the lecture • Grabs the students' attention • Greets the students • Recites prayer • Performs housekeeping • Reviews previous lecture
Topic	• Tells what the topic is going to be about
Lecture Plan	• Gives the lecture plan • Gives a general overview or map of the lecture • Explains how the lecturer plans to present the lecture
Transition	• Signals when the lecturer is introducing or changing topics or ideas
Repetition	• Repeats points using different words (often used to clarify or emphasize a point)
Cause – Effect	• Explains things in term of causes and effects.
Comparison	• Compares and contrasts different people, things and ideas
Definition	• Defines a word for the first time and may start to use it regularly or not define it again
Closing	• Introduces a closing section

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*D problems ... when the particle is in equilibrium **alright we have seen this** ... **but you know** what free body diagram is ... (MCiv001)*

- *<GREETINGS> **assamualaikum very good morning** yah er we have a guest today ... <REVIEW> **we have covered so far up to** hydration of cement ... (MCiv003)*

The second form of opening in which a lecturer starts a lecture is *Greeting and Housekeeping*. After the usual greetings a lecturer talks about test papers, exam dates, class cancellation, etc. before continuing with the lecture. There could be interaction with students at this juncture. Two examples are shown below.

- *<GREETINGS> **okay, samualaikum da se- selamat sejahtera** <HOUSEKEEPING> **kertas ujian saya belum bagi** <I have not given you the test paper> ... (MMec004)*

- *<GREETINGS> **assalamua'alaikum very good morning** so today is our last lecture but <HOUSEKEEPING> **we have a tutorial at twelve** yaa ... (MMec010)*

Another version of the first two forms is *Prayer and Greetings*. This could be an idiosyncrasy as it is done by only one lecturer in her lectures.

- *<PRAYER> **somebody please read the prayer** <PAUSE> <A STUDENT RECITES PRAYER> amin <GREETINGS> **asalaamalaikum** ... (MCiv004)*

A lecturer may also start his lecture by doing *Housekeeping*. More often than not this is done so that a lecturer does not forget to inform his students about an important announcement or deadline. The following is an example:

- *<HOUSEKEEPING> **erm okay sebelum saya terlupa** <**before I forget**> actually uh **saya nak ingatkan** yang minggu depan <**I would like to remind** that next week>... (MCiv002)*

A slightly different version of *Housekeeping* is *Grabs Attention and Housekeeping*. A lecturer makes sure his students are ready before making any announcements as suggested by the example below.

- *<GRABS ATTENTION> **okay ready fine** <HOUSEKEEPING> **so there'll okay so there will be no class** this Thursday and Friday because has been replaced here today ... (MMec001)*

The last form of opening a lecture is *Grabs Attention and Review*. Once the students are ready a lecturer would review what has been done in earlier lectures. As an example:

- *<GRABS ATTENTION> **alright er okay since there is no L -C -D** so i have to teach using the white board < REVIEW> **right so far we have cover in general** er the background of safety and health again as i s- mentioned to you before safety and health are two different thing in fact there are three four things ... (MMec002)*

From the examples given above we observe that Malaysian engineering lecturers normally use the markers 'okay' and 'alright' to begin a lecture (Shamsudin, Md Yusof and Abdul Raof, 2010). This is regardless of the use of any of the six forms of opening.

4.2. Closing a Lecture

Analysis of data reveals that Malaysian engineering lecturers who participated in this study ended their lecture abruptly. And most of the time the conversational marker 'okay' was a part of the expression used. The following examples illustrate this point.

- *... to determine the pre link design **okay wait wait stop until here** uh because this one is uhh a little bit long to explain (MCiv002)*

- *... you add admixture to it **okay that's all** water and admixture is concerned ... (MCiv003)*

- *... A Z minus four equals zero . . . **okay that's it so that's it that is all** (MCiv004)*

- *... **okay** those who uh have problem ... anti-clockwise that is positive **okay right okay** (MCiv001)*

4.3. Marking a Transition

To answer the Research Question:

How do Malaysian engineering lecturers manage their lectures?

(b) What lexical phrases/bundles do they use to mark a shift from one idea to the next?

we need to look at instances when a lecturer introduces topic or changes a topic or idea. Some examples of these are stated below.

- *… **alright now let us look at** examples how to apply this equation in three-D problems right first of all you must know how to visualize ... (MCiv001)*

- *... turbine **next let's do this** all together I like to hear your voice boiler <STUDENTS REPEAT THE WORD VOICE BOILER> okay okay **now we move to** E- B okay we begin at E we want end up at B **okay now what i'm going to do is** i'm going to ... (MCiv004)*

As can be seen in the examples, there are very few lexical phrases used to mark a transition and even when it was used the function was not as a transitional marker (e.g. 'move').

4.4. Signposting a Lecture

The third part of the Research Question:

How do Malaysian engineering lecturers manage their lectures?

(c) What are other language expressions used to signpost a lecture?

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involves looking into other sections of the engineering lecture as listed in Table 5 above. In this paper we will present examples of expressions used from *Introducing a Topic*, *Stating a Lecture Plan*, and *Making a Comparison*.

4.5. Introducing a Topic

In informing students of the topic of a lecture, lecturers usually go straight to giving the topic or chapter number as illustrated in the following examples:

- … ***now we going to see or we going to discuss*** *equilibrium of particle for a free body problem uh three-D problem ... (MCiv001)*
- … ***I think you better start continue with*** *our our uhh chapter two actually what we call it i think uhh we finish it until here ... (MCiv002)*
- *...* ***okay just to continue to what we have left last time the next topic is on*** *OSHA nineteen ninety-four occupational safety and health act ... (MMec001)*
- *...* ***today we will look at*** *another statement of the second law ... (MMec008)*

4.6. Stating a Lecture Plan

Another important aspect of delivering a lecture is stating a plan of the lecture. From the data gathered there were four ways in which engineering lectures did this. These are summarized in Table 7 below.

The first way of stating a lecture plan is after introducing the topic of the lecture and making some housekeeping announcements. The example below illustrates this.

> *...* ***<LECTURE TOPIC> I think you better start continue with*** *our our uhh chapter two actually what we call it i think uhh we finish it until here* ***<HOUSEKEEPING> okay if you want the book actually we got the book in S-T-C okay you can buy the book over there S-T-C steel technology center C zero nine okay block C zero nine <LECTURE PLAN> okay we go to*** *uhh section two point seven uh effective modular* ***and*** *effective area ... (MCiv002)*

Table 7 Different ways of stating a lecture plan

LECTURE PLAN
1. *LECTURE TOPIC* ➔ *HOUSEKEEPING* ➔ *LECTURE PLAN*
2. *LECTURE TOPIC* ➔ *REVIEW* ➔ *LECTURE PLAN*
3. *LECTURE PLAN DISPERSED IN LONGER CHUNK OF DISCOURSE*
4. *LECTURE PLAN NOT CLEARLY STATED*

The second way is similar to the first except that instead of doing housekeeping a lecturer reviews what was covered in an earlier lecture i.e. *LECTURE TOPIC -> REVIEW -> LECTURE PLAN* (see example below).

- *...* ***<LECTURE TOPIC> today we are going to start on a new chapter in fact <REVIEW> i've given you a brief introduction in the last class erm if you recall what we did in the first chapter*** *we were looking at basic concepts definition terms that we use in thermodynamics yah and then we started to analyze processes er we er apply the first law to a process yah either a close system or an open system so we were looking at processes er if you look-you've-you've look at some of these processes those expansion processes those compression processes polytrophic processes you're able to apply the first law and you're able to determine how much heat is required to produce how much work you did all that yah in the last four chapters so* ***<LECTURE PLAN> What we're going to do in this chapter is we are going to*** *combine* ***and*** *we're going to make use of the knowledge that we had acquire during the first four chapter ... (MMec006)*

Another way of stating a lecture plan is different from that of the first two in which the plan is dispersed in a longer chunk of discourse, as in the following example.

- *...* ***<LECTURE TOPIC> today we start with*** *the new chapter combined loadings the second last chapter in our syllabus it is going to take three hours only three hours so you have to follow it closely because* ***<LECTURE PLAN> we will only cover*** *three things here or rather two things* ***<PLAN> first is*** *thin walled pressure vessels I am not going to ...* ***<LECTURE PLAN> first we look at*** *thin walled cylinder so the learning outcome is for you to be able to analyse thin walled pressure vessels which involved thin walled cylinders and thin walled spheres* ***< LECTURE PLAN> then we hope you will be able to*** *determine effect of various loadings that we have covered from chapter one until chapter five okay direct loading shear stress and strain chapter one* ***< LECTURE PLAN> then we*** *have tortured* ***< LECTURE PLAN> then we have*** *bending and* ***< LECTURE PLAN> finally we have*** *transferred shears ...* ***<LECTURE PLAN> finally you must be***

able to produce a stress element (*MMec003*)

Finally, there was another way a lecture plan was (not) stated. This is clearly seen in the following example.

- *...< LECTURE TOPIC> now we going to see or we going to discuss equilibrium of particle for a free body problem uh three-D problem we have X-Y-Z component so <WALKS TO THE SCREEN AND TAKE THE POINTER AND POINT TO THE BOARD> < LECTURE PLAN??> is just the extension of what we have done okay previously you have at X zero at Y zero now you have another axis that is Z axis then then you apply that equation that is those are the three forces okay this force is on in this and then that is all their free forces the difference planes okay is not two-D anymore right <WALKS TO THE BOARD AND DRAW ON THE BOARD> you can draw rectangle in your notes there is rectangle here ... (MCiv001)*

4.7. Making a Comparison

In a number of lectures analyzed there was a need by lecturers to make comparison, to show cause-effect relationship or to define certain concepts. However, in this section we will only look at how lecturers deliver comparison-contrast topics. Like any other talk to show comparison and contrast, the engineering lecturers also used expressions such as '*similarly*', '*is the same as*', '*the difference is*', etc. The examples below show how these expressions are used in the context of the engineering lectures.

- *… <COMPARISON> similarly add this for one is that negative positive the equation is straight F-X-f times D that all ... (MCiv001)*
- *… now let's look at the heat pump the heat pump <COMPARISON> is the same as the refrigerator the only thing is yeah <CONTRAST> the only difference is the cop of a refrigerator the desired output is the cooling effect but for the heat pump what do you desire for the heat pump it is warm the heating effect ... (MMec008)*

5. Conclusion

The following points formed a summary of the findings of this study:
1. Malaysian engineering lecturers employ various ways and different types of expressions to begin a lecture. They normally use conversional markers such as '*okay*' and '*alright*' to begin a lecture.
2. Malaysian engineering lecturers are found to end their lectures abruptly, again with the marker '*okay*' forming part of the expression used.
3. There were very few use of transitional lecture language and even when it was used the function was not as a transitional marker.
4. There was a variety of language expressions found in other sections of the engineering lectures including Introducing a Topic, Stating a Lecture Plan, and Making a Comparison. Some of these are common ones as used by other lecturers but a few are specific to engineering lecturers such as those used in Stating a Lecture Plan.

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