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Analysis of the moves of engineering lecture introductions

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Abstract

According to DeCarrico and Nattinger (1988, p. 91), comprehension of academic lectures by non-native speakers has long been a neglected problem and has only recently been seriously addressed. To explore this phenomenon, a spoken academic corpus of Malaysian engineering lectures is being developed and analysed by a group of researchers in Universiti Teknologi Malaysia. One of the aims of this endeavour is to offer engineering students with strategies in listening to and learning from lectures effectively. To this end, the moves of engineering lecture introductions and the steps used in each of the moves are identified and presented in this paper.

Keywords: engineering lectures; spoken academic corpus; lecture introductions; moves; comprehension

1. Introduction

According to Graddol (2006), higher education is becoming globalised targeting the same destination of the economy, and English has been the magic ingredient of this globalisation not only because of the English-speaking world universities’ domination of the global universities but also due to the popularity of the language for internationalisation of both the students’ community and teaching staff. He further states that the globalisation of higher education has been one of the most influential factors of global English. Traditionally, universities have been local institutions competing at the national level but now, universities compete with others globally, and the changes in higher education both in role and nature put pressure on the whole educational system.

In spite of the fact that academic teachers have abundance of instructional materials and means available “lectures are still one of the most important teaching methods in higher education institutions”

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Lectures fulfill at least three roles in academic spoken discourse namely, neutral passing on of information or informing role (Barr, 1990, p. 6), lecturer’s evaluation of the subject matter or evaluating role (Dudley-Evans & Johns, 1981, p. 32) and the organisation of the lecture or organisation role (Thompson, 1994, p. 172). The final role is the role that we are going to deal with here.

Although lectures have been used for ages throughout the world, students, especially non-native speakers, still have problems when listening to lecture monologues to take notes of the main points considered as one of the classroom genres in spoken academic discourse. Swales (1990, p. 58) defined genre as “a class of communicative events, the members of which share some set of communicative purposes” in which exemplars of a particular genre share similarities in “structure, styles, content and intended audience”. Swales’s (1990) mentioning of the lack of researches in considering lectures as a genre led to studies on the structure of lectures which can roughly be divided into two groups. Some are about the effect of discourse markers or discourse signaling on the structure of the lecture and others are about overall structure of the lecture. We will consider the later group as they are in line with the concern of this research. We could name works done by Decarrico and Nattinger (1988), Olsen and Hukin (1990), Tauroza and Alison (1994), Thompson (1994, 2003), Young (1994), Dudley-Evans (1994), Lee (2009) and Deroey and Taverniers (2011).

Young (1994) provided a model for the whole lecture dividing the lecture into two phases; metadiscoursal and non-metadiscoursal. The first macro-structure she mentioned in metadiscoursal phase was that of discourse structuring which later on became one of the important and salient features in the literature of academic lecture researches. It refers to the way lecturers organise their discourse as it unfolds. Global analysis of discourse structuring revealed different organisational formats; namely point-driven structure, problem-solution patterning, and interweaving functional phases. Among the above mentioned organisational formats, Olsen and Hukin (1990, p. 33) found that “although the lecture was clearly structured around several main points, most of the students failed to grasp these points. The successful students used point-driven strategy while the unsuccessful ones used an information-driven strategy”. The students in their corpus were studying mechanical engineering.

Thompson (1994) has done a comprehensive work considering only the introduction section of the lecture. She used a genre-based approach to investigate the lecture introductions identifying two moves while exploring her corpus and found that lecture introductions could be helpful to the listeners through two complementary functions, one is Set up the lecture framework and the other, Put the topic in context. The earlier includes four sub-functions including Announcing the topic, Indicating the scope, Outlining the structure and Presenting the aims while the later includes the three sub-functions of Showing importance/relevance of topic, Relating “new” to “given”, and Referring to earlier lectures. Although all of them have separate roles with clear borders, they also have complementary roles to each other. Thompson (1994) gave a very clear model for the lecture introduction but it did not include many of the introduction part as well as functions because its primary concern was aiding the development of listening to lectures. These shortcomings convinced Lee (2009) to use the same model and top it up with another move.

Lee (2009, pp. 42–57) proposed a new model based on Thompson’s (1994) in which he proposed three moves. He believes that the lecturer has three emerging moves at his disposal to communicate his/her intended messages of university lecture introductions. These three moves are Warming up, Setting up the lecture framework and Putting the topic in context. As we can see, a move is added to the two moves (functions) provided by Thompson (1994). He also subdivided the moves not into sub-functions but into steps: Move 1: Warming up includes the steps, Making a digression, Housekeeping and Looking ahead; move 2: Setting up the lecture framework, and move 3: Putting the topic in context include the same functions (steps) of Thompson’s (1994) model referred to earlier.
Thompson (1994) identified two moves in lecture introductions using genre analysis but the samples were not engineering disciplines. Young (1994) dealt with lecture corpus to identify the phases of the whole lecture without going further into details. Lee (2009) studied the lectures to see the impact of class size on the comprehension of lecture. Our study is neither of the above but deals with the moves and steps which are available in a corpus of academic engineering lectures and also intends to give a more specific model for the introduction section of the corpus mentioned based on genre analysis.

2. Research Question

This paper aims to address the following questions:
How do Malaysian lecturers manage their lectures introductions in engineering disciplines?

   a. What are the moves used in academic engineering lecture introductions?
   b. What are the steps used in each move in academic engineering lecture introductions?
   c. What kind of order is observed in academic engineering lecture introductions?

3. Methodology

The participants of this study are six engineering lecturers which include four male and two female Universiti Teknologi Malaysia (UTM) lecturers. The lecturers were from different engineering faculties, three from the Faculty of Electrical Engineering (MElec), one from the Faculty of Civil Engineering (MCiv), one from the Faculty of Biomedical and Health Science Engineering (MBmhe), and one from the Faculty of Mechanical Engineering (MMec). Their lectures were recorded, transcribed and compiled as a Malaysian Engineering Spoken English Corpus (MESEC) for further analysis. The introduction part of each lecture was identified from the moment the lecturer begins the lecture up to the point in which the lecturer signals that he or she is about to present new information using words or phrases that indicate new content of the lecture is about to be presented or a long pause.

<table>
<thead>
<tr>
<th>Transcript Number</th>
<th>Lecturer’s Code</th>
<th>Topic/Title</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>MElec_001</td>
<td>nf1010</td>
<td>Noise</td>
<td>Female</td>
</tr>
<tr>
<td>MElec_002</td>
<td>nm1011</td>
<td>Basic Functions</td>
<td>Male</td>
</tr>
<tr>
<td>MElec_003</td>
<td>nm1013</td>
<td>Signal and System</td>
<td>Male</td>
</tr>
<tr>
<td>MCiv_005</td>
<td>nm1026</td>
<td>Prestressed Concrete Structures</td>
<td>Male</td>
</tr>
<tr>
<td>MBmhe_001</td>
<td>nm1027</td>
<td>Macrophages</td>
<td>Male</td>
</tr>
<tr>
<td>MMec_011</td>
<td>nf1028</td>
<td>Design and Control System</td>
<td>Female</td>
</tr>
</tbody>
</table>

4. Data Analysis

Analysis of the moves of the engineering lecture introductions were conducted using Lee’s (2009) model which is an extension of Thompson’s (1994) model.
5. Findings

This section presents the findings of this research to see how Malaysian academic lecturers in the engineering discipline present their lecture introductions. With reference to Lee’s (2009) model, findings of our analysis of MESEC reveal additional steps to Lee’s (2009) model (see Table 2).

Two steps of Greeting and Reciting prayer have been added to move 1 and Looking ahead has been shifted to move 2. In move 2, we added another step, namely, Announcing the start of the lecture. At move 3, we added Reviewing earlier lecture(s). This being the case, we have the same three moves as Lee (2009) but there are four steps in move 1, six in move 2 and another four in move 3, with a total of fourteen steps.

Following our corpus analysis, some new steps or sub-functions have emerged and the definition for both the newly emerged ones as well as the originals will be presented in this paper. We will also provide a few instances from the corpus for the purpose of clarity. In move 1, the lecturer tries to prepare the students and grab their attention to the lecture he is going to present by greeting them and reciting the prayer together, offering some general course information, course-related asides or digressions, telling a story or conducting housekeeping. When the lecturer enters move 2, which has the most number of steps, he tries to indicate both the topic and the limits to which he will elaborate on, provide the structure and the aims of his lecture, looks ahead and announce the start of the lecture. In the last move, he elaborates on the importance of the topic, refers and reviews the earlier lecture(s) and tries to relate the new information to the earlier.

With reference to Table 2, move 1, Warming up has the highest frequency (n=31). The steps of this move make 51 percent of the whole steps used in our corpus which means that lecturers in MESEC give much importance to buffering the forthcoming lecture. They buffer the lecture by allocating a substantial amount of time both to the students and themselves to acclimatise to the class. This process is done through Greeting, Reciting prayer, Making a digression and Housekeeping. Using these steps also lead to a more relaxed and rather sincere climate in the class which is more typical and preferred in Eastern countries.

Table 2. The moves and steps of MESEC lecture introductions and their frequency

<table>
<thead>
<tr>
<th>Moves</th>
<th>Frequency</th>
<th>Steps (Lee, 2009)</th>
<th>Steps (Shamsudin &amp; Ebrahimi, 2012)</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Setting up the lecture framework</td>
<td>18 (29%)</td>
<td>1. Announcing the topic 2. Indicating the scope 3. Outlining the structure 4. Presenting the aims</td>
<td>1. Announcing the topic 2. Indicating the scope 3. Outlining the structure 4. Presenting the aims 5. Announcing the start of the lecture 6. Looking ahead</td>
<td>5 2 2 0 6 3</td>
</tr>
<tr>
<td>3. Putting the topic in context</td>
<td>12 (20%)</td>
<td>1. Showing the importance of the topic 2. Relating &quot;new&quot; to &quot;given&quot; 3. Referring to earlier lecture(s)</td>
<td>1. Showing the importance of the topic 2. Relating &quot;new&quot; to &quot;given&quot; 3. Referring to earlier lecture(s) 4. Reviewing earlier lecture(s)</td>
<td>0 2 5 5</td>
</tr>
</tbody>
</table>
We also found that **Housekeeping** has the most occurrences (n=17) and **Making a digression** coming next (n=7). The high occurrence of **Housekeeping** which is present in five of the six lectures indicates its importance which was mostly manifested by calling students’ names from a list to check for attendance and reminding them of issues that are related to their course. **Making a digression** comes next but it is found in three out of the six lectures which shows its fair importance. **Greeting** occurred in four of the lectures and **Reciting prayer** in three is quite understandable as the lecturers are Muslims and Muslim lecturers in Malaysia normally start their lectures with an Islamic greeting and prayer. Greeting is also usually the start of any social communication in Malaysia. The following will provide explanation of the steps identified in move 1 and examples from the lecture transcripts.

**Greeting**: The lecturer greets the students using greeting words such *Assalamualaikum* or *Assalamualaikum wa rahmatullahi wa barakatuh*. Normally, this happens at the very beginning of the lecture. Sometimes it is followed by their English equivalents such as “Good Morning” or “Good afternoon” or in the local language as shown in the following examples:

```xml
<GREETING> assalamualaikum <peace be upon you> and a very good morning </GREETINGS>
```

(MElec_003)

```xml
<GREETING> assalamualaikum wa rahmatullahi wa barakatuh < peace be upon you and so may the mercy of Allah and His blessings> </GREETING>
```

(MElec_002)

**Reciting Prayer**: This step normally follows the **Greeting** step. At this step, the lecturer along with the students recites a few verses of the Holy Qur’an (for example, the first chapter of the Qur’an Suratul-Fatihah) softly. Shown below is an example from our corpus:

```xml
<RECITING PRAYER> so as usual let’s start our lecture today with ummul kitab al fatihah <Students recite prayer softly> </RECITING PRAYER>
```

(MElec_003)

**Making a digression**: Asides or digression serves as a way for lecturers to create a relaxed environment and maintain a positive lecture-audience relationship (Camiciottioli, 2005).

```xml
<MAKING A DIGRESSION> came here by flight because I have a meeting at nine <Expressions of disappointment> story of my life nothing much that i can do </MAKING A DIGRESSION>
```

(MBmhe_001)

```xml
<MAKING A DIGRESSION> excellent these names are students that never miss my class yeah congratulation that’s all </MAKING A DIGRESSION>
```

(MBmhe_001)

**Housekeeping**: Experienced university lecturers may find it necessary or even feel obliged to remind the students of some of the course-related issues and concerns such as change of specific section time or place (Lee, 2009) or call their names to check for attendance. An example is shown below:

```xml
<HOUSEKEEPING> okay where is the others are they coming or not <pause> ramai tak de lagi ni <many are not here yet> the boys okay i think the girls are a lot missing the boys are okay i think most of you are here</HOUSEKEEPING>
```

(MCiv_005)

The second move, **Setting up the lecture framework**, receives a rather good attention from the lecturers with about 29 percent of occurrence (n=18) in our corpus that is slightly more than the steps of move 3 (20 percent). The two steps of **Announcing the topic** (n=5) and **Announcing the start of the lecture(s)** (n=6) have the highest frequency among other steps in move 2 which shows that the lecturers being investigated pay more attention to the official announcement of the start as well as the topic of the lecture. There was a little more usage of **Announcing the start of the lecture** step in comparison with **Announcing the topic** probably because the audience could see the topic on the screen. In spite of this, the lecturers in our study did not **Present the aims** of their lecture. One could justify that as these lectures are part of a series of lectures of the students’ respective course, they are generally aware of the aims of each lecture.

**Furthermore, the lecturers’ attention** to other steps was not that much. This little attention to **Indicating the scope** (n=2), **Outlining the structure** (n=2) and **Looking ahead** (n=3) could be because the lecturers are using Microsoft Office PowerPoint slides in the classroom which show the sequence of the
information and their relationship to each other as well as to other points in the lecture to the students. Explanation of the steps in move 2 and samples found in the lecture transcripts will be provided next.

**Announcing the topic:** The lecturer introduces the topic or title of the lecture at this step (Thompson, 1994). This is shown in the following example:

<ANNOUNCING THE TOPIC> okay today we are going to cover the topic on design of the control system design of the control system using locus </ANNOUNCING THE TOPIC> (MMec_011)

<ANNOUNCING THE TOPIC> the big eaters </ANNOUNCING THE TOPIC> (MBmhe_001)

**Indicating the scope:** This is the step where the lecturer introduces the importance of different parts of the lecture as well as indicates the depth of coverage for each part (Thompson, 1994). An example is indicated below:

<INDICATING THE SCOPE> so so i go to the my plan for today is we go to the introductory part that we skip </INDICATING THE SCOPE> (MMec_011)

**Outlining the structure:** Here, the lecturer presents his layout or the sequence of the lecture (Thompson, 1994). See an example below:

<OUTLINING THE STRUCTURE>okay so today we will go a bit on er your supposedly this is going to be your last class lah betul <right> right you want to do class next week or not or not we we just cancel the class because this will finish by today lah your syllabus okay so never mind we discuss this after after when i finish this one eh so today’s class we will be doing a bit of revision lah okay we do bit on revision okay the whole for the whole subject lah okay and then we have a look on your okay er if you need to discuss on your test test one and test two </OUTLINING THE STRUCTURE> (MCiv_005)

**Presenting the aims:** At this step the lecturer presents the purpose of the lecture (Thompson, 1994). We did not come across this step in our corpus.

**Announcing the start of the lecture:** This is one of the steps that the researchers added to the model following its occurrence in the corpus. At this step, the lecturer clearly signals the official start of the lecture as in the following example:

<ANNOUNCING START OF LECTURE> okay kita mulakan<we start> our lecture with the surah Al-Fatihah</ANNOUNCING START OF LECTURE> (MElec_002)

**Looking ahead:** In this step, the lecturer refers to information that will be included in future lectures (Thompson, 1994) or in future parts of the same lecture.

<LOOKING AHEAD> and then er for Tuesday class we’re going to have like er reviewing final exam question okay we look sample of previous question okay so that’s my plan for Tuesday </LOOKING AHEAD> (MElec_011)

The last move which deals with Putting the topic in context had the least share in our corpus with only 12 occurrences. In this move, the lecturer normally provides a context for the lecture using the steps of this move. One of the steps did not occur in our corpus. The lecturers in our corpus did not show the importance of the topic at all. This could be due to the fact that each of the lectures is a part of the university’s syllabus and it is understood that the lectures are important as content of the lectures may be questioned in the final examination. Because of the same reasons, Relating “new” to “given” was not as frequent as it is used in only two lectures. Although three of the lecturers Referred to earlier lecture(s) with five occurrences, four of the six lecturers preferred to Review the earlier lecture(s) with five occurrences as well. These show how much the lecturers see Referring and Reviewing earlier lecture(s) steps as important. Since the lectures are part of a series of lectures, three of the lecturers find it very important to refer to the main points of earlier lecture. If the content of an earlier lecture has a higher probability to appear in the final examination, the lecturer would prefer to review it. All the lecturers except two reviewed earlier lecture(s). For the most important ones, the lecturer would both refer and review the earlier lecture. This was done by one of the lecturers. The following provides explanation and examples of the steps in move 3.
Showing the importance of the topic: Here the lecturer states the interesting, main, or particular points of the lecture to provide his evaluation to the audience (Thompson, 1994). There is no occurrence of this step in our corpus.

Relating “new” to “given”: In this step, the lecturer relates the topic of the lecture (new) to the information the audience already have/share (given) or to an uncontroversial earlier reality (Thompson, 1994). Here is an instance:

<RELATING “NEW” TO “GIVEN”> right and then you have this big eaters you know we talked about monocytes and so on yes your immune response yes okay </RELATING “NEW” TO “GIVEN”> (MBmhe_001)

Referring to earlier lecture(s): “The lecturer reminds the audience of the ‘new’ information from the previous lecture and transforms it into the ‘given’ for the new lecture” (Thompson, 1994, p. 179).

<REFERRING TO EARLIER LECTURES> okay as i say yesterday the more important parameter in communication is the noise </REFERRING TO EARLIER LECTURES> (MElec_001)

Reviewing earlier lecture: This is the step where the lecturer reviews the whole, most or just the main parts of earlier lecture(s). This is one of the steps added to the model based on the occurrence in the corpus as in the following example:

<REVIEWING EARLIER LECTURES> that is actually what we did last time eh so have two different controller t-controller and integral controller so what is the conclusion that we get last time class what is the advantage of er i-controller t and i-controller lah right advantage is in terms of statistical error so using i-controller we can eliminate the statistical error what about the advantage of t-controller <unclear> with er integral in terms of time concern it is faster than the integral controller okay so that is designing control system using route locus stagnate </REVIEWING EARLIER LECTURES> (MMec_011)

Findings of the analysis also revealed that the lectures coded as MBmhe_001 and MMec_011 had the most steps with 19 and 13 occurrences which are respectively far more than the other four with only six (MElec_001), seven (MElec_002), or eight (MElec_003 and MCiv_005) steps. The lecture coded as MElec_002 had the best Warming up as the lecturer used the whole four steps while lecture MMec_011 was the best in Setting up the lecture framework (seven occurrences) using almost all the steps in move 2 (five out of six steps). Concerning Putting the topic in context, there was not much difference between the lectures as they used more or less the same number of steps.

We found that Housekeeping was the most frequent step used by the lecturers which is most probably related to the importance of class attendance that most of the universities in this part of the world pay attention to as any students who are absent for more than three class meetings will be dismissed from the course. Reviewing earlier lecture was used by four out the six lecturers which suggest that most of the content from the lectures will be questioned in the final examination. The lecturers also like to Announce the start of the lecture and Announce the topic of the lecture. This could mean that by these announcements, the lecturers would like to advice the students that they are getting into the main parts of the lecture and the students should pay more attention and concentration. In this corpus, the lecturers often Greet and Recite prayer which signify a sincere, relaxed and less formal lectures which could be one of the characteristics of the people in the Eastern region.

6. Conclusion

Investigating the research questions, it is found that Malaysian engineering lecturers in this study used the same three moves of Lee’s (2009) model; namely, Warming up, Setting up the lecture framework, and Putting the topic in context to manage their lecture introductions. However, two steps namely Greeting and Reciting prayer are included to move 1, the Warming up move. As for move 2, Setting up the lecture framework, two steps are added. One of the steps is Looking ahead, which is originally in move 1 of
Lee’s (2009) model and the other is Announcing the start of the lecture. Move 3, Putting the topic in context has an additional step called Reviewing earlier lecture(s).

In terms of the sequence of moves in the Malaysian engineering lecture introductions, the lecturers normally start with move 1 by means of Greeting or Housekeeping followed by move 2, Announcing the start of the lecture. They then shift back to move 1, Reciting prayer followed by move 2, Announcing the topic and on to move 3, Referring or Reviewing earlier lecture(s).

Concerning the steps used in each of the three moves in the engineering lecture introductions, there is much difference in the type of steps used. Using much Housekeeping step shows the importance of discipline in this society and that discipline is institutionalised in Malaysia. Lack of Presenting the aim step could be because of PowerPoint slides usage. This usage shows that there is much dependence on electronic devices and software which could be considered a negative point. Lectures should be aimed at stimulating the students’ mind with minimal use of electronic or other devices to make it livelier and provide more interactions between the students and their teacher.

Reviewing earlier lecture(s) has been used in most of the lectures which would help the students to recall the earlier main points after the interval between the two meetings which could be one week. It will also probably help in simplifying the material psychologically as they are presented in another way. Furthermore, it will show more continuity of the information in the current lecture with the previous ones. It may also help the lecturer in creating a true base for the new lesson so that the students could better relate the “new” to the “given” material.

In conclusion, the findings of this study may offer language instructors with some form of guide in preparing English for academic purposes materials that would help engineering students improve their listening comprehension skills of academic lectures.

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