

Lecturer communication in a multicultural higher education context

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Abstract

The New Zealand international education sector has seen significant growth over the last decade. Associated with this change, New Zealand tertiary educators need to be increasingly aware of language and learning needs of students from non-English speaking backgrounds (NESB). Certainly, language is seen as an underlying factor influencing student socio-cultural and educational adjustment. The aim of this exploratory study was to examine the ways in which lecturers communicate in the classroom to consider factors affecting student comprehension of lecture content. The communication styles of four lecturers were analysed and the findings revealed that while lecturers spoke at an average rate of speech, their utterances tended to be quite lengthy, with minimal pauses to allow students to process complex information. Additionally, nonverbal behaviours including eye contact varied with lecturers not always addressing all class members. Supporting the current literature, it seems that lecturing staff are unaware of their communication behaviours and as such make little modification in the culturally and linguistically diverse classroom. Therefore, there is a need for greater education to inform teachers of how they may improve their communication to enhance classroom interaction and success for NESB students.

Keywords

Cross-cultural communication, lecturer discourse, student comprehension

Introduction

International education is a growing phenomenon with almost two million students annually studying in countries other than their own (Bohm et al, 2002). This is an outcome of various factors including globalisation, mobility between countries, and increased postcolonial access to higher education which, through migration, has led to a diverse student population in education (Borland & Pearce, 2002). As one of the export education industry's newcomers, New Zealand has experienced significant growth over the last ten years. Since 1993 the number of international students enrolled in New Zealand tertiary institutions increased by 295% to a total of over 13,000 (Ministry of Education, 2002). Over 80% of these full-fee paying overseas students originate from Asia, with China providing the most number of these students (Ministry of Education, 2002). Certainly, education is one of New Zealand's biggest export earners. In 2003, the contribution of the whole export education industry to GDP was 3.6% with a value of over NZ\$2.2b (Education New Zealand, 2004).

Over the last twenty years there has been a growing focus on international education and student experiences and there is extensive research into the problems faced by international students (e.g. Ballard & Clancy, 1984; Barker, 1993; Barker, Troth & Mak, 2002; Brown & Daly, 2005; Hellsten, 2002; Mulligan & Kirkpatrick, 2000; Ward, 2005). Difficulties experienced are often categorised into three areas: (1) cultural adjustment which involves adjusting to the new culture, climate, food and establishing friendships; (2) educational adjustment to become accustomed to differing attitudes of learning, and styles of thinking and writing; and, (3) language use (Jones, 1993; Eisenchlas & Trevaskes, 2003; Stephens, 1997). Research (for a review see Borland and Pearce, 1999) has shown that the performance of NESB international students is lower than English speaking background (ESB) international and domestic students due to language and cultural difficulties.

Cultural distance is known to shape psycho-social adjustment. Kim (1998) and Ward and Kennedy (1993) contend that the greater the perceived cultural distance, the greater the preference for co-national interactions.

Certainly there is a high level of cultural distance between the New Zealand Pakeha (European) culture and that of the international students originating from Asian countries. The literature consistently shows that regardless of the country in which the study is conducted, the amount of interaction between host nationals and international students is generally low (e.g. Brown & Daly, 2005; Bochner, Hutnik & Furnham, 1985; Burke, 1990; Butcher, 2002; Smart, Volet & Ang, 2000). It is this interaction and social support which is a major predictor in psychological adjustment (Searle & Ward, 1990). Ward (2005) argues that there is strong evidence that greater interaction between international and domestic students is associated with "psychological, social and academic adaptation" (p. 6 in 2003 version) of international students. In particular, studies have shown the benefits include lower stress levels (Redman & Bunyi, 1993); greater life satisfaction (Searle & Ward, 1990); and, greater communication abilities including confidence in the second language (Barker, 1990).

Individualism or Collectivism

As Littlewood (1999) discusses, cultures are often differentiated based on their orientation towards individualism or collectivism. Indeed research has shown students from Confucian Heritage cultures, such as China, place great value on academic success (Ho, Holmes & Cooper, 2004). Bodycott and Walker (2000, cited in Ho et. al, 2004) found that Chinese students had a perception of 'teachers as fonts of all knowledge' (p. 16) and were willing to accept everything the teacher said, making facilitation of class discussion difficult. Furthermore, students from collectivist cultures (e.g. China) expect to 'learn how to do' but in individualist cultures such as New Zealand Pakeha, students consider 'how to learn' is the focus (Ho, et. al, 2004). Students' cultural background leads to different classroom behaviours. For example, collectivist society students speak in class only if personally called on by the lecturer, while students from an individualist society will speak in class after a general call to discussion. Stephens (1997) recounts that Chinese students participate freely and independently in discussion where they understand the language that is being used.

Littlewood (1999) also suggests an emphasis on comparing collectivist with individualist cultures is an outdated stereotypical view. Littlewood (1999) warns against creating 'stereotypical notions of East Asian learners' (p. 71), in favour of paying attention to the needs and character of individual students. Furthermore, student populations in New Zealand educational settings now reflect the diversity of wider society. Thus, it is more difficult to make assumptions about individual student linguistic capabilities and understanding of the educational culture (Borland & Pearce, 2002).

Language

The 2004 OECD report on international education highlighted the critical role language plays in influencing a student's study destination. A significant proportion of international students in New Zealand are seeking to enhance their proficiency in English (Beaver & Tuck, 1998). Language difficulties are frequently cited as the factors behind the academic and social problems of overseas students (e.g. Samuelowicz, 1987). International students are concerned with their proficiency in the host language and the impact of classroom language (Williams, 2001). Cruickshank, Newell and Cole (2003) note that when English is the instructional language, NESB students face highly demanding situations requiring them to perform complex tasks such as participating in class discussions and debates, conducting presentations and writing essays and case studies. In their study examining the experiences and achievements of NESB students, Borland and Pearce (1999) also found that academic staff do not recognise the range of issues affecting students' learning experiences. One challenge, often unrecognised, is the assumed cultural knowledge necessary for comprehending lectures and completing set tasks.

Flowerdale (1994, cited in Mulligan & Kirkpatrick, 2000) emphasises the complexity of classroom language required by students as they must be competent in distinguishing between relevant and irrelevant material (e.g. jokes, asides); be able to take notes while listening; and be able to integrate material from a range of sources. Interestingly in their study of students' perception of their comprehension of the lecture content, Mulligan and Kirkpatrick (2000) found a large gap between students from an English speaking background and those from a non-English speaking background. At the end of the lecture, one third of ESB students understood the lecture content very well. In contrast, only one in ten NESB students felt the same and 22% of NESB students reported that they understood very little of the lecture. This has significant implications for a lecturer teaching in a New Zealand tertiary classroom, as student language proficiency rather than cultural differences may better explain classroom communication problems (Stephens, 1997).

Cummins (2003) proposes that there is a continuum of language development. This ranges from basic interpersonal communicative skills (BICS) in which meaning is embedded in the context, to cognitive academic language proficiency (CALP), which is age-appropriate and academically demanding. The development of basic

conversational proficiency, incorporating tasks such as greetings, requesting information and providing descriptions, takes up to three years. In contrast, academic language which involves comparing, contrasting, problem solving, inferring and evaluating takes between five and ten years to achieve (Collier, 1987; 1989; Collier & Thomas, 1989; Cummins, 1981). Corson (1995) found that the reason for the difference in language development relates to the origins of words. Over half of the words used in the academic setting are multi-syllabic and low frequency, originating from Greek and Latin. On the other hand, conversational vocabulary originates from the Anglo-Saxon lexicon comprising words which are one or two syllables in length and high frequency.

Language Proficiency Levels

Given the importance of language proficiency, Coley (1999) and Pantelides (1999) argue that the tests currently used by universities to determine eligibility for enrolment may not be indicative of the skills required for the academic program. In New Zealand's tertiary institutions, the International English Language Testing System (IELTS) is the most commonly cited measure to assess language competency for study purposes. IELTS covers four language skills - listening, reading, writing and speaking. Typically for academic study, scores are presented as an overall requirement with a minimum score on each of the four dimensions. A competent user will achieve an overall score of 6.0 demonstrating a generally effective command of the language despite some inaccuracies and misunderstandings. A score of 7.0 is suggested for courses requiring higher levels of language competence, while scores of 8.0 and 9.0 indicate very good and expert users of English. Misunderstandings and minimal errors would be observed with very good users of English, and expert users would be expected to be fluent with complete understanding. Table 1 shows that in order to enhance success, students studying in linguistically demanding courses such as Law, Management and English, need an overall IELTS score of at least 7.5.

Table 1: IELTS scores and course requirements (University of East London, n.d)

IELTS score	Linguistically demanding academic courses	Linguistically less demanding academic courses
9.0-7.5	Acceptable	Acceptable
7.0	Probably Acceptable	Acceptable
6.5	English study needed	Probably acceptable
6.0	English study needed	English study needed
5.5	English study needed	English study needed

Challenges for Lecturers

While language and communication are underlying problems influencing social and academic success of overseas students studying in New Zealand, these factors also present key challenges to lecturers. Teachers of international students must consider both sides of classroom interactions - the English communication skills of the students and their ability to interact in classroom discussions and tutorial exercises, and the lecturers' own competencies instructing the course content. Certainly, it is recognised that as a form of learning, lectures are quite complex. Borland and Pearce (1999) argue that the effectiveness of a lecture is dependent on students possessing 'the ability to understand spoken English, to relate what they hear to other material, and in, particular, to take notes' (p. 83). In studies conducted in Australia and New Zealand, the speed of delivery, use of idioms and slang, use of technical terms and jargon, and the structure of lectures were all identified as problems for NESB students (Asia2000 Foundation, 2003; Borland & Pearce, 1999).

Ward (2005) proposes that predominantly tertiary level academics make little change to the process or content of their education activities when international students attend their classes. However, it appears that this may be related to ability and awareness as educators often feel that they are not qualified or resourced to support NESB students' language needs. Over ten years ago it was noted that the increasing numbers of international students in the classroom was causing unease and frustration amongst academics (Ballard & Clanchy, 1991). Yet, to date relatively little has been done to help academics deal with the changing dynamics of the classroom (Pickering, 2001).

It is in the context of continuing growth of international students at New Zealand tertiary institutions that the present research was conducted. Historically, research has taken a deficiency viewpoint to see whether students are competent communicators or there has been a focus on lecturers' socio-communication styles including

assertiveness and responsiveness (McCroskey, 2003). Therefore, this exploratory research aims to review the communication of four lecturers when teaching to identify factors impacting upon student comprehension effectiveness. In turn, an additional goal is to improve the communication of tertiary teachers in diverse classrooms. This study may be applied to lecturers in other English-speaking countries such as the United States of America, the United Kingdom and Australia who also have diverse student populations in higher education.

Methodology

This exploratory study aims to review the communication of lecturers, teaching in a New Zealand tertiary institution, to identify factors impacting upon student comprehension effectiveness and to explore ways to improve the communication of tertiary teachers in diverse classrooms. A quantitative research design is utilised to enable a structured approach to collecting descriptive data from the lecturers in a real classroom lecture environment. Participants were unaware of the topic of this research during the recorded lecture, minimising the possibility of participants adapting their communication style due to the researchers' presence.

Participants

Since business and administration programmes comprise the most number of international student enrolments (Ministry of Education, 2002), this research was conducted in 2004 within a Business Faculty at a New Zealand tertiary institution. The participants in this study were four lecturers, whose involvement was obtained through a stratified probability sampling technique ensuring equal representation for gender from full-time teaching staff. In subsequent sections these four lecturers are referred to as F1, F2, M1, M2; being female lecturer 1 or 2, or male lecturer 1 or 2. As this is an exploratory study, a sample of four lecturers was considered appropriate to achieve the research aims of identifying factors impacting student comprehension and begin inferring ways to improve lecturer classroom communication.

Table 2 provides a summary of the characteristics of the lecturers. Three of the participants were New Zealand-born, with English being their first language. The fourth lecturer migrated to New Zealand at the age of two, and while he is bilingual, he has spoken English for 42 years. The average age of respondents was 38.25 years, ranging from 34 to 44 years of age. Respondents reported a mean of 3.75 years tertiary teaching experience.

Table 2: Characteristics of participating lecturers

	F1	F2	M1	M2
Age	34	40	35	44
Country of Birth	NZ ^a	NZ	NZ	NETH ^b
Years of teaching experience	5	3	2	5
Year level of class	3	2	1	1

(a) NZ = New Zealand

(b) NETH = The Netherlands

Procedure

As there is a need to assess communication effectiveness in context, this study examined speech samples of the participating lecturers obtained during teaching time (Rutherford, 2004). This study explores one speaker's behaviour in class, the teacher, it does not analyse the interaction between teacher to student or student to student. Unidirectional flow was selected as the focus for this study to highlight the lecturer's role in student classroom comprehension. The selected lecture sessions were based on current teaching workloads of the participants. This resulted in the classes of two first year subjects, one second year and, one third year subject being evaluated. Subjects were within the management and accounting fields. On average, NESB students comprised 30% of enrolments in the observed first year lectures. The second year accounting course included two NESB students in a class of ten, while the third year course had only one NESB student; 12.5% of total enrolments. As this study is exploratory, it does not attempt to make claims about what may be common to all classrooms, but instead identify lecturer communication that may affect the classroom learning environment. Therefore, the difference in subjects, class sizes and percentage of NESB students present, provides an opportunity to investigate communication in a range of settings.

A video camera was placed at the rear of the lecture room with the researcher present for 30 minutes. The lecturers agreed to their classes being recorded for the purpose of an exploratory study observing the classroom learning context, but they were not informed specifically that their communication style was the subject for this study until after their lecture. The participants were asked to conduct their lecture as usual and a five minute sample was recorded for analysis. A five minute sample was recorded due to limitations associated with time and budget constraints. The speech samples were transcribed and rated by two Speech and Language Pathologists (SLPs). The analysis was conducted using two techniques: 'Systematic Analysis of Language Transcripts' (SALT) (Miller & Chapman, 1996) and 'Language Assessment Remediation and Screening Procedures' (LARSP) (Crystal, Fletcher & Garman, 1991). Inter-rater agreement was 100%.

The assessments were focused on providing measures of types of utterances; lists and frequencies of words; total number of words; frequency of particular sets of words; speaking rate in words per minute; and length of pauses within and between utterances. The complexity of sentences, incidence of non-fluency and, use of colloquial phrases/ slang also were analysed. Finally, the SLPs described the lecturers' nonverbal communication behaviours of volume, kinesics (movement around the room, body orientation), eye contact and, their use of various media in their teaching. Inter-rater reliability was 100%. These assessments create a picture of the participating lecturers' classroom communication in order to establish potential areas that may lead to decreased comprehension of a lecture by NESB students.

Results

Each participant's communication behaviour was quite different as can be seen in Table 3. The female participants talked at a significantly slower rate than the male lecturers ($p < .01$) and the Mean Length of Utterance (MLU) was significantly higher for the women ($p < .01$). M1 and M2 were observed to produce a significantly greater number of complete sentences ($p < .01$), but they also used proportionately more partial sentences in which they started discussing a topic and then stopped to introduce a different idea. Interestingly, the two female lecturers demonstrated similar semantic variability while the males had significantly larger variation, using a greater number of different words during the five-minute speech sample. Participant F1 had minimal pauses between utterances while F2 would pause significantly longer ($p < .05$); on average for 1.12 seconds between each utterance. This participant (F2) also used longer pauses within utterances, while M1 rarely paused within his utterances.

Table 3: Linguistic measures of participating lecturers

	F1	F2	M1	M2
Rate of Speech (WPM ¹)	138.20	136	141.97	157.89
Mean Length of Utterance (MLU)	10.46*	13.83*	8.16	9.64
Number of complete sentences	61	46	86*	85*
Number of partial sentences	2	2	12	7
Number of part phrase repetitions	2%	4%	3%	4%
Number of different words	638	636	702	819
Number of different slang terms/colloquial phrases	3	6	3	8
Total between utterance pauses (mins)	0.33	1.12**	0.65	0.55
Total within utterance pauses (mins)	0.1	0.33	0.03	0.1

1. WPM- words per minute

* $p < .01$ ** $p < .05$

While the lectures taught by both M1 and M2 comprised over 50 students, those conducted by the female participants had ten or less students. The volume of presentation of the male lecturers was adequate for the size of lecture room and audience. Contrastingly, the females' volume was suited more to a conversation, which may reflect the character of their small class sizes, however at times F2 was observed to be inaudible.

In assessing non-verbal kinesics behaviour (movement around the room, body orientation), three of the participants were observed walking around the classroom while they talked. M1 and F1 tended to stay within the front section of the classroom, between the students and the projector screen. Participant M2 would walk around the classroom, and between students and would teach from all around the room. In contrast, F2 tended to stay seated at a desk with her body oriented towards the front of the room. Consequently, in each of the lecture sessions eye contact varied. Due to their location in the classroom at various times, M2 and F1 were noted to be unable to maintain eye contact with all students. Occasionally, F1 was orienting her body in such a way as to block those students to her left and M2 would be standing so that he was behind some students. F2 was observed to talk while facing the projector screen or to the notes on the table in front of her.

During the five minute lecture sample, the lecturers were observed to utilise few different media in their teaching. Specifically, M1 drew supplementary diagrams on a white board to expand and explain the new concepts; M2 and F2 engaged in discussion with students by asking open-ended questions to encourage participation and demonstrate comprehension while F1 simply presented her material through one-way communication.

All participants were observed to use colloquial phrases and slang terms however, both F1 and M1 used only three such phrases. In contrast F2 and M2 more often used language which was complex and could not be literally translated. Examples of colloquial phrases and slang terms include:

I won't let my debt ratios go outside this window

A large school of thought

Number eight wire

Carry all that baggage

A great big glob

Discussion

Holland and Fletcher (2000) noted that the average rate of speech is between 125 and 150 words per minute. So when lecturing, it appears that the female participants spoke at an average conversational rate. Conversely, the male lecturers spoke at a high-average to above-average rate, with one participant speaking on average 158 words per minute. In their study examining the teaching and learning experiences of international students at Australian universities, Ryan and Hellmundt (2003) found that the speed of lectures is one of the problems faced by students in the multicultural classroom. Moreover, when fast speech is combined with a large number of different words and unfamiliar concepts, students reported difficulties with comprehension of material. In this study, the male lecturers were observed to use over 700 different words in the five minute speech sample and significantly more complete sentences.

Mean length of utterance (MLU) is another indicator of language complexity with long sentences containing embedded clauses commonly used (Chamot & O'Malley, 1994, cited in Egbert & Simich-Dudgeon, 2001). In the current study, one female lecturer had an MLU of almost 14 words. This is a large unit of information for students to process and comprehend. Thus, it is understandable why in Mulligan and Kirkpatrick's (2000) study, less than one quarter of NESB students understood the lecture material. At the most superficial level, students are faced with a lot of information to process in a very short time frame. However, it is encouraging to note that between utterances this participant paused 19 times, which was equivalent to almost one quarter of the five minute sample. She also paused within utterances on eight separate occasions. So while communicating in complex sentences, students were permitted time to process the information.

Numerous researchers note that the type of language that lecturers use impacts on students' comprehension (see Ryan & Hellmundt, 2003 for a review). Although it is acknowledged that a lack of examination of student comprehension was a limitation of this study, Borland and Pearce (1999) found that academic staff do not recognise the style of a lecturer's communication as a challenge for NESB students. Parke (2003, cited in Ryan & Hellmundt, 2003) argued that at the tertiary level, there is an assumption of prior learning and particularly within the business disciplines, an assumption of an understanding of culture-specific issues.

Difficulties for NESB students stem from teachers using acronyms, slang and colloquial phrases (Borland & Pearce, 1999). In the five minute samples taken of the New Zealand lecturers, it was noted that each participant used at least three observable colloquial terms. This suggests participating lecturers may be unaware of the

language they are using and the problems this may cause NESB students. It is interesting to note that participant M2 was the most frequent user of such language. Thus, students in his lecture were faced with a fast rate of speech, significant variety in the words used by the lecturer, and a large reliance on colloquial phrases. Bilbow (1989, cited in Mulligan & Kirkpatrick, 2000) purports that linguistic factors impact on a NESB student's comprehension and leads them to adopt surface learning strategies. This highlights that future research examining a lecturer's communication and students' comprehension is warranted along with further research to investigate language proficiency (determined by institutions English language entry criteria) and suitability or skills necessary for academic student performance.

Mulligan and Kirkpatrick (2000) and Fahmy and Bilton (1990) identified that lecturers often fail to signal a change in topic or emphasis. The current study concurred with this finding as 14% of M2's sentences were incomplete, and on 12 occasions he would change topic or elaborate on an idea. Similarly, the other male lecturer did not complete seven sentences. Without clearly indicating a change of topic or elaboration, NESB students would experience greater difficulty identifying the information essential to the course. This is especially relevant when there is varied student language proficiency levels (based on the institutions English language entry requirements e.g. IELTS) present in the classroom.

Nonverbal behaviours are vital in ensuring effective transmission of an oral message (Dwyer, 2002). In a lecture, gestures and facial expressions combine with paralinguistic factors to signal important information in lectures. The findings in this study suggest that lecturers did not utilise such nonverbal communication to convey the information to the students. At times, participants did not maintain eye contact with the class and used minimal gestures. Further, the volume of the two female lecturers' speech was more suited to a conversation, possibly causing students in the rear of the classroom to have to strain to hear the material.

While Malthus and Gunn-Lewis (2000) argue that many researchers in this field take a deficit approach by researching issues faced by international students, there is a growing amount of literature on supportive learning strategies which lecturers may readily implement in the classroom to enhance the learning success of all students (Cruickshank, Newell & Cole, 2003; Iancu, 1993; Mulligan & Kirkpatrick, 2000; Ryan & Hellmundt, 2003). Pedagogical changes which may be implemented include providing the structure and outline of the lecture; having a clear introduction and conclusion; providing definitions of discipline and country-specific terms; writing key words on the board and explaining these before the start of the lecture and, providing handouts or access to lecture notes before the class. Tertiary students also propose the need for lecturers to use visual aids in the classroom. This enhances the opportunities for comprehension and learning (Borland & Peace, 1999). Visual aids include providing written lecture notes, using overhead transparencies or PowerPoint slideshow, and presenting information in graphs or diagrams. Lecturers may also offer for students to record the lecture.

Additionally, lecturers should minimise use of slang and colloquial phrases, and clearly signal topic changes. Iancu (1993) and Cruickshank et al (2003) suggest that lectures should be combined with a special tutorial specific to NESB students. The tutorial should provide subject-specific language assistance. Such changes to lectures may also assist international students' psychosocial and sociocultural adjustment by increasing confidence and encouraging class interaction and participation in discussions. Stephens (1997) suggests that this style of assistance informs students of the "ground rules for the expression of ideas" (p. 122).

As discussed earlier, lecturers may lack the training and resources to support international students in their classrooms (Ryan & Hellmundt, 2003). This may be compounded by the danger of stereotyping the learning style of a particular group based on culture e.g. Confucian Heritage cultures such as China being deemed collectivist learners. Educational institutions now reflect society's greater diversity with children of first generation immigrants included in student populations, so making assumptions about linguistic capabilities or learning style is difficult (Borland & Pearce, 2002). Certainly if higher education institutions wish to expand their position in the export education market, there is a strong need for specific training in pedagogical issues to be provided, and for institutions to re-consider the competencies necessary for lecturers.

This exploratory study has provided an overview of the areas of communication which could lead to decreased comprehension of a lecture by NESB students' including rate of speech, mean length of utterance, and colloquial phrases. The small sample size and speech sample are limitations of this study however, the results are significant and assist with determining ways to improve lecturers classroom teaching. Consequently, there is a need for future research to examine the communication throughout a lecture and by taking a triangulated approach, to consider the perceptions and comprehension of both local and international students. It is proposed that this would lead to the development of training and resources to assist lecturers in the multicultural classroom.

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