Meanings and Concepts Lost: The Use of Conversational Language in Students' Descriptions of Economics and Business Studies Graphical Representations[1]

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Abstract

As part of a larger project that sought to investigate the need for an English for Specific Purposes course in a teacher education programme, a preliminary investigation was carried out to establish students' capacity to use subject specific English in writing descriptions of graphical representations of demand and supply. The results of the survey indicated that respondents have a limited ability in the use of subject specific English and tend to rely more on conversational English. The paper therefore purports that South Africa's teacher training programmes need to consider a strong focus on subject specific English courses in their curriculum. This will ensure that such programmes are able to produce teachers who are well prepared as subject specialists.

Keywords: Language proficiency; English for Specific Purposes; Graphical descriptions; Economics; Business studies

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Introduction

Second language (L2) learners are known to take longer to develop proficiency in Academic English (AE) than in Conversational English (CE) (Cummins 1994; Haynes 2007; Lucas, Villegas & Freedson-Gonzalez 2008). In relation to this issue, Cummins (2008) stated that L2 learners develop basic interpersonal communication skills (BICS) within 2 years of initial exposure to a language, but they need up to 7 years to develop cognitive academic language proficiency (CALP). In view of Cummins' statement, it is therefore expected that to be successful in the areas of specialisation, L2 students need well-tailored instruction in subject specific AE (also known as English for Specific Purposes and English for the professions). Such instruction would ensure that students have access to input that will support efforts towards the mastery of AE as suggested by Echevarria, Vogtand Short (2004). This would especially be so because subject specific language is considered to be a vehicle for success in mainstream content subjects in the L2 environment (Echevarria, Vogt & Short 2004). Moreover, if the students learning in the medium of a L2 are in a teacher training programme, it becomes essential that their curriculum be tailored to ensure the eventual production of a 'well-grounded subject specialist' (ELRC 2003; NDHET 2011). In other words, this means the production of a teacher who will handle subject matter confidently using appropriate subject specific language.

Scholars such as Nickerson, Gerritsen and Meurs (2005), Zhu, (2004) and Mukattash (2003) enunciate that the use of English in L2 communities can no longer be seen as being separable from other disciplines, but rather has a critical role in orienting students into the academic communities of acquiring not only language proficiency, but also specific genres pertaining to these communities. This implies the importance of ESP in academic communities. For non-English native language speakers who, apart from learning English in general, are expected to learn and apply the English language specific for their field of specialisation, the importance of ESP is even more pronounced (Cummins 2008; Leki 2003). In pursuing the objectives of this study, understanding the concept of ESP as distinct from general English for academic purposes is of great value if meaningful strides are to be made in as far as the development of this discourse is concerned.

In Hashimoto's (1992) view, English for Specific Purposes (ESP) as opposed to general English is not a particular language product but an

approach to language teaching which is directed by specific and apparent reasons for learning. This explains the fact that there are concrete purposes for learning subject/field/discipline specific language. Some of these include, for example, technical, professional, and/or academic reasons. Consequently, the focus of ESP should not be much on content but rather on methodology. For example, Hashimoto (1992), as well as Hutchinson and Waters (1992) used ESP to acculturate respondents into a particular field of study. Similarly, Swales (1992: 300) defined ESP as '…the area of inquiry and practice in the development of language programmes for people who need a language to meet a predictable range of communicative needs'. For example, L2 students in a specialist learning area such as Economics and Business Studies (EBS) may need a well-developed ESP course to ensure their success. This may be true for students located in programmes such as the one described in the section that follows hereafter.

The Location of this Study

The research reported in this article was conducted in the Bachelor of Education (B.Ed.) programme at the University of Limpopo's Turfloop Campus. In its current design, the programme does not offer an English for Academic Purposes (EAP) or ESP course. The only course that could be aligned to EAP is the Communication in Education course which is not subject specific and offered in the first year of study for students registered in content subject specialisation such as the EBS field. According to Ngoepe (2012), the Communication in Education course is to a large extent not fit for the purpose for which it had been devised as it does not meet the language needs of under-prepared students. Furthermore, the university also admits students mainly from rural backgrounds. These students have been described by Mabila, Addo-Bediako, Kazeni, Malatjie, and Mathabatha (2006) as disadvantaged due to their poor schooling experiences, and the lack of access to quality education which was often associated with a low socioeconomic status and living in isolated, remote areas. This may further be compounded by the fact that in most rural schools mother tongue is heavily used in teaching because of low levels of proficiency in English amongst learners (Ler 2012). The notion of disadvantage is accentuated by a number of authors, including Nkuna (2001), Howie, Scherman and Venter (2008),

Ngoepe (2012) and Richards (2015). Nkuna (2001) as well as Ngoepe (2012), in particular, have made calls for South African higher education students to be offered ESP courses in their programmes.

The Need for English for Specific Purposes in the EBS Field

Several studies (Leki 2003; Haynes 2002; Warschauer 2002; Flowerdew & Peacock 2001; Street & Verhoeven 2001; Creese 2000; Jones, Turner & Street 1999; Jordan 1997) confirmed that cross-field pollination and collaborative teaching between the English language course and the discipline specific subject course plays a significant role in students' language acquisition and literacy for a discipline specific purpose. Parks and Maguire (1999) also argued that students need to acquire discipline specific literacy in order to be successful in their fields. Indeed, disciplinary enculturation can be accomplished through a collaborative process of cultivating discipline specific language expression. A case in point is the acquisition of discipline specific language proficiency for students in EBS, since, the EBS field uses discipline specific concepts that allow people in the discipline to communicate logically and eloquently, within the parameters of the field. For example, Hashimoto (1992) revealed that about 3719 words are specific to just the Economics subject without overlaps with other Economic and Management Sciences subjects, such as Accounting, Taxation, and Auditing. The aforementioned implies that the use of general conversational English in EBS writing may distort effective subject communication in the field (Few 2005). Indeed, conversational English may have serious implications for student performance as the texts (both oral and written) that are meant to convey a discipline specific message and meaning may be expressed and interpreted incorrectly by a listener or reader. The problem of incorrectly expressing and misinterpreting subject specific discourse can be compounded when the student is a trainee teacher who in the near future will teach a specific subject and thereby create a cycle of distorted discipline specific language. Harrabi's (2009) view that raising trainee teacher's language proficiency in content subject settings prepares them for successful communication in their future profession is of particular importance for those involved in the preparation of a cadre of competent discipline specialists. It therefore, makes sense for authors such as Hashimoto (1992), Nkuna (2001)

and Ngoepe (2012) to recommend the teaching of ESP to students studying in the EBS and other fields of specialisation.

Additionally, a study by Few (2005) revealed that the bulk of subject specific language challenges are more acute in the interpretation of graphs and charts. Considering the critical and extensive use of graphical representations in EBS teaching and in other related communications such as business news and reports, the need to overcome the challenges of preparing competent subject specialists is of paramount importance.

The Importance of Graphical Representations in EMS

Few (2005) believes that no information is more important in the EBS field than quantitative information. For instance, data and information that measure performance, identify opportunities, and forecast the future are best presented graphically and in charts. This notion may hold true given that the use of graphs, charts, tables and many other forms of illustrations is very frequent in business, financial and economic reports. Few (2005) further expressed the importance of graphical presentation when he argued that a failure to fully understand and interpret graphical information can have deadly implications. For example, misinterpretation can lead to misinformation which can be deleterious in the world of business where a single piece of misinformation can have serious consequences on the wellbeing of the entire economy. Hence, in addition to the acquisition of general academic skills, Bosher (2010) suggests that EBS students should learn how to draw, interpret and communicate information presented in graphical format and more so if the student is expected to teach a subject within this field.

Theoretical Framework

The foregoing discussion needs to be understood in the light of the 'communicative-cognitive' debate espoused by Cummins (1979). A very important distinction in L2 education is that between 'communicative' and 'cognitive' abilities. This distinction was first formalised by Cummins (1979) after investigating an area of failure in an early Canadian immersion programmes. Cummins noticed that students would spend a few years in a

sheltered class, during which they received content lessons in their first language (L1) and language lessons in the L2. When the students were assessed as proficient in the L2, they would then enter mainstream education in which they studied through the medium of the L2. Many of these students performed very poorly after being mainstreamed. This led Cummins (1984) to recognise that the aspect of the second language in which they were assessed as proficient (namely, BICS) is not the same aspect required for successful studies through the medium of a L2 (namely, CALP). According to Cummins' the conceptualisation of language, BICS, which is embedded in a rich linguistic, and paralinguistic context (for example; repetitions and facial expressions), is a useful and necessary part of language in social-communicative situations. However, BICS alone does not represent full proficiency in a language. For more cognitively demanding academic tasks, proficiency in context-reduced CALP (for example; words on a bare page) is required. Without CALP, a student pursuing advanced academic studies through the medium of a L2 is seriously disadvantaged. However, with the emphasis on communicative language teaching, and more readily visible (and hence measurable) nature of BICS, Cummins found that language educators tend to concentrate disproportionately on BICS, and neglect CALP, even though CALP is more important for academic success.

In line with Cummins (1984), this paper is premised on the notion that there is a direct relationship between CALP and educational achievement. Consequently, this study is an investigation to establish trainee teacher's capacity to use subject specific English in writing descriptions of graphical representations of demand and supply.

Materials and Methods
The Approach
The study followed a mixed methods approach as espoused by Creswell, (2010). This method resonates with a number of authors, for example, Tashakkori and Teddie (1998), Johnson, Onwuegbuzie and Turner (2007) as well as Clark and Creswell (2011: 5) in that 'it involves [sound] philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in many phases in the research process'.

In order to ensure a sound approach to data analysis the study employed the sequential explanatory design of mixed methods where quantitative data was collected and subjected to descriptive analysis. Thereafter, qualitative data was collected and subjected to thematic analysis.

The Context

The study was conducted at the University of Limpopo (Turfloop), a historically black South African university located in the Limpopo Province of South Africa. The institution offers a microcosmic view of the country's larger population group of L2 students. The aim of the study was to investigate the use of subject specific English in descriptions of graphical representations written by EBS students in the Bachelor of Education programme. Hence the population in this study was all students studying in the field of EBS at the university.

Description of the Sample

In the light of the purpose of the study, the sample of respondents was chosen for theoretical salience as advocated by Coyne (1997). Coupled with this, the sample of respondents was also selected under the logic of theoretical sampling (Glaser & Strauss, 2009). This ensured that respondents were selected on the basis of their characteristics and purpose of the study. For example, the main characteristics of the target population in this study were year of study (fourth or final year of study) and the major subject (Economics and Business Studies). They were also mainly characterised as students who had gone through their learning in a second language environment. Hence, from the targeted population, a purposeful sampling technique was used to select the respondents. Further, and subsequent to preceding reasons for the sampling procedure, the sample of respondents were included in this study because they had exposure to EBS content, a precondition for a viable study on their ESP abilities (Cummins, 2008). Thus, according to Kurtz and Wheaton (2010), studies following purposeful sampling are useful as they target specific groups of a population according to certain predefined characteristics.

Data Collection

For data collection, a research instrument which was specifically designed to investigate biographical details (Section A) as well as the respondents' descriptions of graphical representations (Section B) was administered.

Efficacy of the Data Collection Instrument

The efficacy of the data collection instrument was ensured by presenting the questionnaire to subject experts whose feedback was used to improve on the initial questionnaire. It is strongly recommended by researchers such as Rowe and Wright (2001) that expert opinions in forecasting the effectiveness of research instruments are essential. Similarly, Lancaster, Dodd and Williamson (2004) point to the value of pilot studies in increasing the efficacy of data collection instruments. Hence, the instrument for data collection in the study reported in this article was piloted within a group of third year students in the same programme.

Data Analysis

Data collected through the questionnaires were analysed as follows: the quantitative data from the questionnaires were analysed using the IBM SPSS statistics version 23. Frequencies of responses graphs were constructed and cross-tabulations were done to determine the relationships among variables. Hence, the findings of this study are presented using tables, graphs, and charts to enable easy comparison and clear projection of the situation. In addition, qualitative data collected through the students descriptions were analysed through thematic analysis.

Ethical Considerations

Information and explanations about the purpose of the study were given by the first author prior to requesting the 4th year EBS students to participate in the study. Both the EBS lecturers were absent during that data collection. Most importantly, the students were assured that the data collected was solely going to be used for research purposes and nothing else. During the information session, the participants were also informed that both their

Economics and Business Studies lecturers were co-investigators in the project. In view of the power relations that obviously exist between students and their lecturers, this was done in order to ensure that the students consent for their participation in the study was free from any fears. It also ensured that students who agreed to participate and those who opted out were assured of their anonymity throughout the whole process.

Shortcomings of Mixed Method Design

A review of literature related to the design and implementation of mixed method studies reveal several shortcomings that researchers need to be cognisant of prior to their implementation of such studies. Authors such as Creswell (2010), as well as Moghaddam, Walker and Harre (2003) reveal that the limitations of this design amongst others are lengthy time and feasibility of resources to collect and analyse both types of data. To overcome such limitations, the researchers in this study ensured that the data was collected in a once off event through a straight forward process. In addition, the use of experts in the field of EBS as described earlier in the section on the efficacy of the data collection instruments ensured the feasibility of the instruments in the collection of relevant data. In addition, dealing with these shortcomings helped to ensure that the straightforwardness of the mixed method design. It also offered an opportunity for the researchers to explore the results of the inquiry in more detail (Ivankova, Creswell & Stick 2006).

Results

The empirical procedure described in the preceding sections yielded the following results.

All in all, fifty five (55) questionnaires were distributed and forty seven (47) usable questionnaires were returned. This shows that the study achieved an 85% response rate and this was deemed sufficient to conduct data analysis. Large volumes of data were collected and analysed in the study, however for the sake of brevity only a summary of the main findings is presented in the figure which follows:
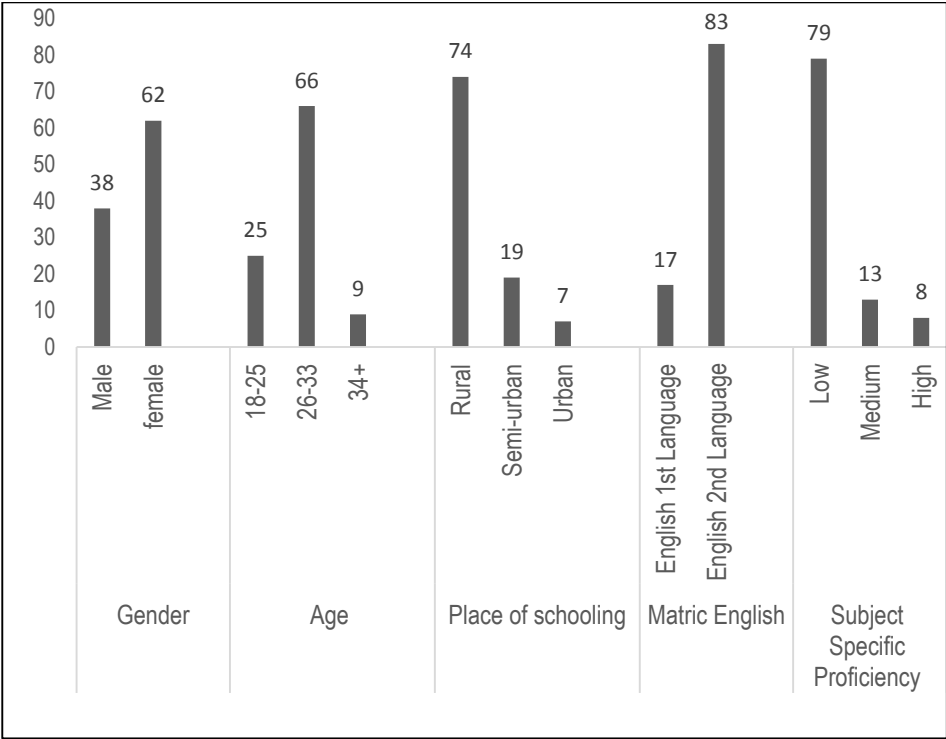
Fig. 1: *Descriptive Statistics of Sample*

Descriptive Analysis

As figure 1 illustrates, 62% of the respondents in this study were female and 38% were male. The majority of the respondents (66%) were between the ages of 26-33, followed by 25% in the 18-25 age range, with only 6% of the respondents above 34 years old. In terms of place of schooling the majority of the respondents (74%) attended rural schools. In terms of the matric English studied, the majority of respondents (83%) studied English as a L2. Seventy-nine percent of the respondents demonstrated a low level of subject specific English proficiency, as measured through their descriptions of graphical representations of basic demand and supply in price determination. Only 8% of the respondent demonstrated a high level of subject specific English proficiency.

Thematic Analysis

The low level of subject specific English proficiency by EBS respondents, particularly in graphical descriptions and interpretation was a cause for concern for the researchers and this necessitated the need for further in-depth qualitative investigation. Each of the thematic areas which emerged is presented and discussed in detail in figure 2, hereunder.
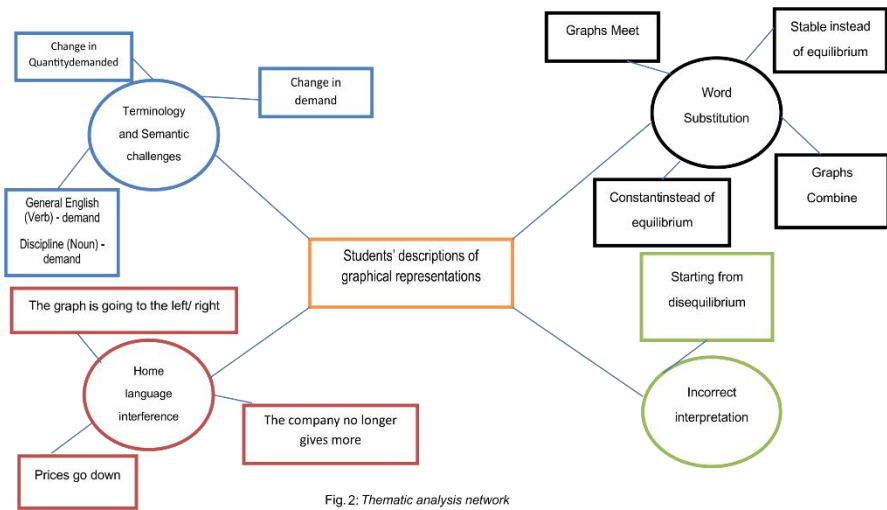

Fig. 2: *Thematic analysis network*

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As figure 2 shows, the analysis yielded four themes. These are: terminology and semantic challenges; word substitution; home language interference and incorrect interpretation. These themes were then organized in a thematic analysis network (Attride-Stirling 2001; Braun & Clarke 2006), and illustrated in a diagram of the themes in a coherent manner (See Figure 2).

Terminology and Semantics

The theme of terminology and semantics has to do with misconceptions in the

description of *phenomena.* In this study, the focus was on description of graphical illustrations in Business Studies and Economics using an example of basic demand and supply graphs as illustrated in price determination. These included respondents confusing the meaning in concepts such as 'change in quantity demanded' and 'change in demand'.

In EBS, the concept *change in quantity demanded* generally refers to a movement along the demand curve, whilst a *change in demand* entails a shift of the demand curve. The descriptions by the respondents in this study seem to show a lack of understanding of the difference between the concepts change in quantity demanded and change in demand. Hence, it was observed that in most of the respondents' descriptions of the graphical representations respondents used these concepts interchangeably.

Certain phrases have contextual meaning related to the discipline. For instance, a word in general English can belong to a word class which may be different from the one predominantly found in particularised fields like EBS. This also applies to EBS where the usage of some phrases differs from general English usage. This study revealed the respondents' confusion when using demand and supply in phrases. Whereas in general English, demand and supply are classified as verbs and nouns, they are more commonly used as verbs. Contrarily, in EBS phrases, they are largely used as nouns. An example of one phrase, '*the consumers demand more goods than would be supplied*', which was repeatedly expressed by students, exemplified how the words 'demand and supply' were used as verbs instead of a proper phrase with appropriate use of the words as nouns like '*the demand was higher than supply*'.

Word Substitution

Word substitution in this study deals with displacing key discipline specific words in favour of more general conversational words in the description of graphical representations. For instance, a number of respondents used the word 'meet' instead of the more appropriate 'intersect'. Further, a substantial number of respondents used the word 'combined' when they referred to the lines shown in graphs that intersect. On another issue, the respondents mostly used the words 'constant' and 'stable' when referring to equilibrium. The words 'stable' and 'constant' have a different meaning in the discipline which

is not related to the aspect of equilibrium. Where two curves intersect in EBS, the point is referred as equilibrium, for example where the demand and supply curves intersect. This is the state where economic forces such as supply and demand are balanced and in the absence of external disruptions the values of economic variables will not change. This has a completely different meaning to stability which refers to the behaviour of an equilibrium, whether it is sustainable in the long run as variables return to their steady state values. Constant in EBS normally mean unvarying in nature or not liable to change and is closely related to mathematics definition of a number representing a quantity assumed to have a fixed value in a specified context. Thus the interchangeable use of these words can be misleading and can lead to misinterpretation and misunderstanding of concepts taught in EBS.

Home Language Interference

According to Sanderson (2005), the L2 can be interfered on two levels. One is known as the positive level while the other is regarded as a negative level. L2 production can be interfered positively by L1, when the relevant unit or structure of both languages is the same. In this case, linguistic interference can result in correct language production as aspects of the L2 that are the same in the L1 and will be learnt more easily, because they do not have to be learnt from scratch. Negative interference occurs when speakers and writers transfer items and structures that are not the same in both languages (Sanderson, 2005).

In the case of the study reported in this article, it was observed that the respondents' descriptions of graphical representations were negatively interfered by their home language. For example, respondents' expressions of *upward* or *downward* slopes were constructed as *'the graph is going to the left or right'*. Although this expression suggests a movement within the graph, it is, in our view, unfortunate as the word *'going'* personifies rather than describes the slope of the graph. In explaining and describing the different types of home language interference, Mothoa (2001) and Manganye (2007) categorise this level of interference as 'the use of the progressive tense'. Another set of examples of home language interference includes an observed prevalence of the use of the word *'give(s)'* instead of 'produce(s)' as exemplified in some students expression such as *'the company no longer*

gives more' as well as *'prices go down'*. In this case the example shows a loose association of the concept production with the term 'give'. This usage can directly be associated with the meaning of the equivalents of the word 'give' in the dominant languages of the Limpopo province where the study reported in this article was conducted. For example, in order to say, 'If you want flour to produce more scones, add baking powder', in Sepedi, a person might say:

> *Ge o nyaka gore folouru e go fe dikuku tšedintšhi, tšhela pediša.*

In Xitsonga, one would say:

> *Loko u lava kuri fulawuri yiku nyika magwinya yo tala, chela baking powder.*

Meanwhile, in Tshivenda the statement would be:

> *Musi vhatshitoda fulauri itshivhafha zwikontsi zwinzhi vhashele baking powder.*

In all three instances, the words *e go fe; yikunyika; itshivhafha* literally mean 'to give you' in the dominant African languages of the Limpopo province.

This research is in line with Bhela's (1999) contention that L2 learners appear to accumulate structural entities of the TL, but demonstrate difficulty in organising this knowledge into appropriate, coherent structures as it appears that there is a significant gap between the accumulation and the organisation of knowledge. Although, this is normal in language acquisition, it is problematic when it manifests in and inhibits students' attempts to articulate specific phenomena. This is evident in the examples shown above and in the many expressions used by students during their writing in content subjects such as EBS. It is for this reason that L2 speakers produce structures that have errors as they tend to rely on their L1 structure to produce a response (Bhela 1999). The respondents in the study reported in this article revealed the same notions as that of Bhela (1999), Mothoa (2001) and Manganye (2007).

Incorrect Interpretation

Description and interpretation of graphs in EBS start from a position of equilibrium. Then making use of the 'ceteris paribus' assumption (which in EBS simply means with other conditions remaining the same; other things being equal) an analysis can be done on the changes in one of the variables which leads to disequilibrium. This enables analysis to be made on the factors that lead to deviation from equilibrium position and correction thereof. However, the study found that respondents started their analysis of the graphs given by trying to explain and correct disequilibrium first and concluding by identifying equilibrium. For example, in the demand and supply graphs used in this study, respondents were supposed to first identify the equilibrium position of the two curves, before describing the marked positions of excess supply and excess demand, which are disequilibrium positions.

Discussion

The students' difficulties revealed in the above results and analysis can be better explained in the light of a model devised by Cummins (2008). This is a model whereby in different tasks, students are expected to engage in cognitively undemanding to cognitively demanding tasks along a continuum of context-embedded to context-reduced tasks (See figure 3 below).

A context-embedded task is one in which the student has access to a range of additional visual and oral cues; for example, he or she can look at illustrations of what is being talked about or ask questions to confirm understanding. Hence, the task on graphical representations can be placed within quadrant D of the model, which is both cognitively demanding and context- reduced. According to Cummins (2008) this is the most difficult task for students in L2 education. From the results of this study, Cummins' model provides a vivid explanation for the students' difficulty in using appropriate terminology and semantics. It also explains the heavy reliance on general conversational language, and the observed negative interference of the home language.
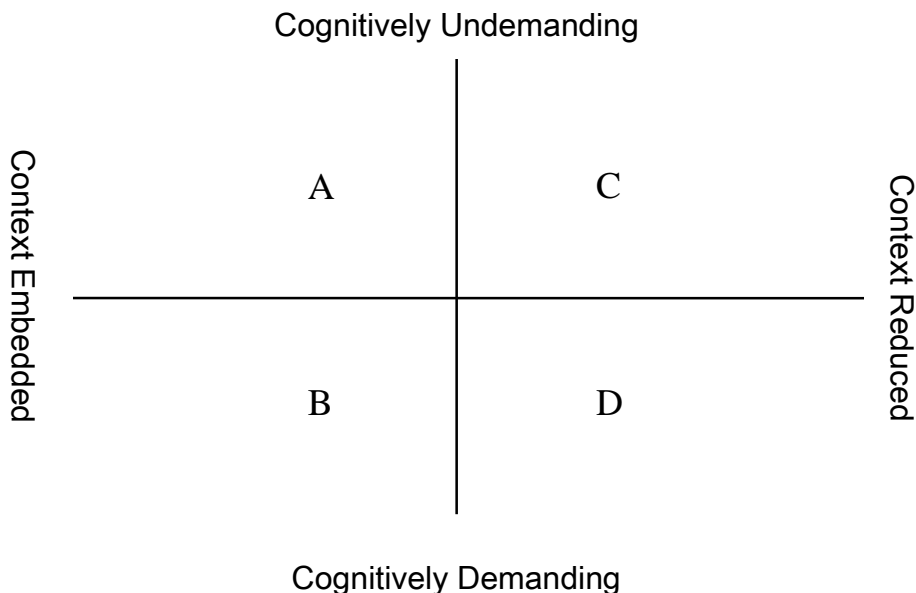
Cognitively Undemanding

Fig. 3 *Cummins model for evaluating language demand in content activities*

Conclusion

The results of the study reported in this article revealed that the use of conversational language instead of more appropriate subject specific language results in loss of meaning and poor descriptions. In the light of the BICS and CALP distinction made in the section on theoretical framework, it could be concluded that attempts by students in this study are reflective of the prevalence of BICS amongst students coming from a L2 educational background. Furthermore, the findings of the study provided evidence that the use of general conversational English may distort effective communication and clear understanding of field/subject specific concepts and meanings. This conclusion is also echoed in Few (2005) as well as Harrabi (2009) who maintain that statements that are meant to convey discipline specific meaning and message may be expressed and interpreted wrongly if

general English terms are used. The findings presented in this study call for policy makers and all the stakeholders involved in EBS curriculum development to consider integrating subject specific language courses at all levels of study throughout the Bachelor of Education programme. This is even more important in the group of future EBS teachers, as a firm grasp of the subject specific language will enable them to filter down the correct usage of subject specific concepts to their own future students.

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Meanings and Concepts Lost

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