
Technical Words Instruction by ESP Teachers: Types and Strategies

Abdullah A. Alghamdi
Mecca College of Technology

Citation: Alghamdi A.A, (2022) Technical Words Instruction by ESP Teachers: Types and Strategies, International Journal of English Language Teaching, Vol.10, No.7, pp.,1-10

ABSTRACT: *This work examines the beliefs and practices of the ESP Teachers about using direct and/or indirect teaching of English Technical Vocabulary (ETV) items in a Saudi Arabian Industrial college called Yanbu Industrial College (YIC). It also aims to discover the specific vocabulary teaching strategies VTS they use to achieve their instructional goals. The study is qualitative in nature under the case study tradition. Six ESP Teachers (ESPTs) were interviewed to understand their beliefs regarding the directness and/or indirectness of ETV items instruction and to list the strategies they employ towards this endeavor. The study found that ESPTs stated that they directly and frequently use the following strategies: definitions, exemplifications and recycling. These three strategies, according to all the ESPTs interviewed, are used jointly most of the time to directly present the meaning of novel ETV items. Some strategies were also reported to be used instead of some other techniques due to different reasons. The study suggested some educational implications and recommended experts in the area of L2 vocabulary instruction to carry out future scrutiny to understand this topic from different dimensions.*

KEYWORDS: ESPTs, ETV items, beliefs, English for specific purpose, DVT, IVT.

INTRODUCTION

‘Vocabulary instruction normally provides a discussion of the relationship between one or more of the following aspects: teacher, student, teaching, test, syllabus and textbooks (O’Malley, Chamot, Stewener-Manzanara, Kupper and Russo, 1985: 22). However, in this work, vocabulary teaching stands mainly for the stages of presenting new ETV items and practising learnt ones. Other issues such as assessing, selecting and rating will not be discussed in this paper.

Teaching English Technical Vocabulary (ETV) items is in many ways similar to teaching general English vocabulary (e.g. Kennedy and Bolitho, 1984). Nation (personal communication) argues that the main difference when teaching ETV items is that it needs to be done in the subject area lessons. Beyond that, he thinks it should largely be the same as other vocabulary teaching and learning. Therefore, many of the Vocabulary Teaching Strategies VTS used in general English Language Teaching (ELT) apply to ETV items.

However, some researchers (e.g., Khwaileh, 1995, Alghamdi, 2011) argue that ESPTs face several challenges in teaching ETV items in an ESP context. The challenges involve, for instance, a lack of subject knowledge by ESPTs, contextual factors (e.g., administrative regulations), and feeling shy when they teach advanced level student who may know the subject knowledge more than their language teachers.

‘Strategy’, ‘technique’ and ‘skill’ are sometimes used interchangeably in the literature. Abdel Latif (2006: 18) reports that, in general, strategy is defined as “operations, techniques, steps, processes, behaviours, or thoughts used... to guide, facilitate and solve problems in both language learning and language use”. The same can be utilised by the teacher to solve problems in language teaching (in this study, vocabulary form and meaning teaching) and language use (in this study, vocabulary use); therefore, I refer to such strategies as VTS. The present study will also use the words ‘strategies’ and ‘techniques’, sometimes interchangeably.

REVIEW OF RELEVANT LITERATURE

One of the major issues in vocabulary teaching is the direct vocabulary instruction DVT and Indirect Vocabulary Teaching IVT. The ‘Direct vocabulary teaching’, ‘rich instruction’ or ‘rich scripting’ (McWilliam, 1998) is not sufficiently defined in the literature. Beck *et al.* (2002) argue that direct vocabulary instruction should go beyond definitional information with the purpose of actively involving learners with the word’s meaning. I also argue that Direct Vocabulary Teaching DVT is the teaching that normally leads students to learn words.

In addition, there have been many articles on how to teach vocabulary directly (Nation, 2001; Baumann and Kameénui, 2004; Scott and Nagy, 2004; Hiebert and Kamil, 2005). Mezynski (1983) and Stahl and Fairbank (1986), for instance, reviewed DVT and concluded that in order for it to be effective it first needs to offer the multiple exposure of the words being taught; this is usually achieved by using recycling and repetition strategies. Secondly, it should also involve depth; depth of DVT occurs when the student thinks about, and interacts with, the word. Finally, it should involve a breadth of information, which usually occurs when definitions are used jointly with other VTS, such as text guessing (when the teacher forces the students to guess as a task), exemplifications and the like. Having both depth and breadth present in the rich instruction of vocabulary will usually “establish networks of connections from the new words being learned to words, experiences, and ideas they already have” (McKeown and Beck, 2004: 16)

Indirect Vocabulary Teaching, on the other hand, is the teaching or training of students on how and when to use certain strategies, so that they can use them independently in learning and increasing their lexical repertoire. IVT has been given different labels across various vocabulary studies, such as ‘strategy instruction’, ‘learner-to-learn training’ and ‘learner

training' (Kouraogo, 1993; Fujiware, 1990). Direct and indirect vocabulary instruction will be used to describe how certain ETV items are taught by ESP Teachers.

Taxonomy of Vocabulary Teaching Strategies

The literature written about the types of vocabulary teaching strategies is rich and extensive. Most of the strategies are the result of advice for experienced teachers in the field of vocabulary instruction. For the sake of simplicity and clarity, I have developed a taxonomy for the different types of vocabulary teaching techniques. Strategies in general can be divided into direct and indirect ones. DVT strategies can be used either for form presentation or practice. IVT strategies, in turn, can be used for discovery or consolidation. Table 3.1 provides a classification for the groups of individual vocabulary teaching strategies which is expected to be used by the ESP teachers at the context of this study.

Table 3.1: Groups of Individual Vocabulary Teaching Strategies (VTS)

Groups of VTS	Individual VTS that belong to the group
DVT strategies for meaning presentation	Translation, definitions, exemplifications or attention to register, pictures, photos, posters and other illustrations, real objects (realia), scales and body actions
DVT strategies for form presentation	Word parts
DVT strategies for use presentation	Associations and collocations
DVT strategies for practice	Memory images, semantic mapping, labels, conversations and dialogue, synonyms and antonyms, repetitions, vocabulary tests and games
IVT strategies for discovery	Dictionary use, guessing from context
IVT strategies for consolidation	Recycling

METHODOLOGY

This is a qualitative study which was carried out under the case study tradition. It was employed to gather data about the beliefs of six ESPTs at YIC who teach English for different purposes (see table 5.1). The ESPTs were pre- observation interviewed to listen to their self-reported practices about the strategies they use in teaching technical words.

Then, they were observed in their classrooms with the purpose to gather information about their actual classroom practices (i.e., strategies they employ in teaching ETV items. Then, the ESPTs were post- observation interviewed through (stimulated recall) type after each classroom observed to find out why certain VTS were utilised in their lessons. The main advantage associated with using stimulated recall interviews, which is another technique for eliciting verbal commentaries on language teacher cognition research, is that it examines interactive thinking, since teachers cannot teach and talk about their thoughts at the same time (i.e. concurrent verbalisation is not possible). However, this technique has been criticised for not being accurate, since participants' information is no longer in their short-term memories, participants' answers are needed at the time of the interview, the stimulus (e.g. tape-recorder) supplements teachers' incomplete memories, and the extent to which the prompts used to assist participants' recall may impact their style of reporting their thinking (Borg, 2006: 211).

Table 5.1: YIC Participants' Background Information

Participant	Degree held	Teaching experience	Major	Nationality	Module observed
ESP NS	BA TEFL	12 yrs.	TEFL	Jordanian	Technical English
ESP NL	MSc in ESP	18 yrs.	ESP	Jordanian	Business English
ESP JB	BA in Education & TESOL Certi	19 yrs.	TESOL	American	Technical English
ESP PM	BA in Social Sciences	27 yrs.	Social Sciences	British	Technical English
ESP WH	BA in Linguistics	7 yrs.	Linguistics	Saudi	Business English
ESP MD	MA in Lang. & Literature	8 yrs.	Language & Literature	American	Technical English

This study intends to answer the following research questions:

RQ1: Do English for Specific Purposes Teachers (ESPTs) at YIC teach English Technical Vocabulary (ETV) items directly or indirectly?

RQ2: What are the preferred Vocabulary Teaching Strategies (VTS) for teaching ETV items from the viewpoint of the ESPTs at YIC?

STUDY RESULTS

This part presents the findings of the study based on the two research questions introduced in the previous section.

Findings about the direct/indirect teaching of technical vocabulary by ESPTs

This section will concentrate on the way the strategies were employed (directly and/or indirectly) as well as the type of strategy itself. The pre-observation interviews showed that ESPTs say they teach ETV items both directly and indirectly. Their responses to the general open question “How do you teach ETV items?” as well as the interview prompt cards have supported this overall finding.

As far as DVT is concerned, many ESPTs said they use definitions, exemplifications and recycling more than any other strategies. In other words, the majority of these ESPTs reported that they define the ETV item and follow that by giving examples. Other strategies are used according to the nature of the lesson. Some teachers (e.g. ESP WH, ESP NL, ESP JB) reported that they use pictures directly from different sources, such as books, PowerPoint or the Internet, together with definitions to present new ETV items. Semantic mapping was reportedly used by some to practise pre-learnt ETV items directly, while others said they use body actions and the key word method, which combines direct vocabulary presentation with practice. To give an example of using a

variety of strategies (such as pictures, exemplifications and real objects) directly in a vocabulary focused task to get to the meaning of certain ETV items, ESP JB stated:

“First, I ask if anybody knows what the word is... and if they don't know I look for a picture in the book, and if they don't know that then I ask them about something they do know like a car or a windmill; something they can relate to. So, trying to explain it by finding something real”. (ESP JB)

As far as IVT is concerned, most of the ESPTs said they encourage their students to use a dictionary, which is an indirect technique for discovering information about novel ETV items. All in all, the ESPTs reported that they use different styles of teaching that combine

direct and indirect ETV teaching methods, with the former being employed more than the latter.

Overall, the data revealed several interesting findings about the direct and indirect teaching of ETV items. First of all, ESPTs stated that they directly and frequently use the following strategies: definitions, exemplifications and pictures. These three strategies, according to all the ESPTs interviewed, are used jointly most of the time to present the meaning of novel ETV items directly. ESP NL, for instance, reported that:

“Using definitions is a teaching and learning necessity. Defining new technical vocabulary helps in many ways and facilitates learning these words”. (ESP NL)

Recycling and individual repetition strategies, in turn, were reported to be used frequently by ESPTs as DVT for practising the forms of previously learnt ETV items and to avoid choral repetition strategy which is, according to some participants, an undesirable strategy for adult students, who feel embarrassed at this age.

Secondly, the data also shows that ESPTs use most of the strategies to teach directly. In a few circumstances, ESPTs said they train their students to use dictionaries which is a strategy reported to be used for teaching ETV items indirectly.

Thirdly, some strategies were also reported to be used jointly. Definitions, for example, were reported to be used with synonyms and antonyms, pictures, exemplifications and translations, or with any combination of these aforementioned strategies. To give an example of coupling definitions with synonyms to present the meaning in a direct manner, ESP PM said:

“When defining the word, I definitely use synonyms and antonyms to get the meaning across”. (ESP PM)

Fourthly, some ESPTs on the other hand, claimed that they use certain ETV items teaching strategies instead of others. Table 6.1 shows the preferred VTS which the participants reported that they used.

Finally, ESPTs said that they face some contextual (mainly administrative) obstacles in using strategies such as wall charts. They added that YIC rules don't allow them to hang charts or other instructional materials which may damage the classroom wall.

Table 4.1: VTS ESPTs Reported They Prefer Using

VTS ESPTs reported they prefer using
Pictures > wall charts
Pictures > guessing
Pictures > real objects (realia)
Dictionary > guessing from context
Exemplifications > memory images
Repetition > recycling
Guessing from context > dictionary & word parts
Synonyms > definitions
Scales > associations
<i>Key: (>) = 'instead of'</i>

DISCUSSION

The findings of the present study coincide with the findings of some studies of L2 vocabulary instruction, especially within the topic of the superiority of VTS for meaning presentation and practice. For example, Beck *et al.* (2002), Nagy (2005) and Folse (2004) argue that rich vocabulary instruction (direct) cannot be rich without definitions, which is what the teachers in the present study believe as well. Likewise, findings from the present study also stress that combining definitions with exemplifications achieves different instructional goals, which is in line with other L2 vocabulary studies as noted by Baumann and Kameénui (2004) and McKeown and Beck, 2004: 16). The teachers in my study were also found to use a strategy which is considered effective by other researchers (Mezynski, 1983; Stahl and Fairbank, 1986) who believe that in order for DVT to be effective, it first needs to offer multiple exposures of the words being taught.

At a more regional level, this study found that ESPTs find some challenges in doing their job at the ESP domain. Although this general finding goes in line with the problems mentioned by other researchers (e.g., Khwaileh, 1995, Alghamdi, 2011) in a similar context, it differs in the nature of the challenge faced by ESPTs at YIC. That said, we can argue that every ESP context should be considered a case by itself and researchers in the area are advised to avoid the trap of looking at similar contexts as identical ones.

Implications to research and practice

The findings of this study, practically-speaking, are expected to serve more than one purpose by creating knowledge which will be useful to researchers in the field of language teacher cognition and L2 vocabulary instruction, teachers and teacher educators, materials writers and administrators in the local context, as well as for a wider audience. That said, the following pedagogical implications will be important:

- ESPTs are encouraged not to rely on their preferred VTS. Instead of this practice, they should use a mixture of strategies. This diversity will help in the issue of students' individual differences.
- ESPTs should give more time for indirect vocabulary teaching in which they train their science students to use different types of dictionaries and context guessing to explore the meaning of newly met ETV items.
- Communicative Language Teaching (CLT) method stresses the importance of student-centered classrooms which encourages us to advise teachers to give student wider room to select their preferred learning strategies.
- The administration at the study context is advised to listen to the concerns of the CATs regarding the difficulties they face in achieving the mission of ETV instruction and provide needed support.
- The material designers are encouraged to select topics which allow for using different VTS. They are also recommended to consider revision chapters in which students use practice VTS.
- It is also recommended to have teachers' guide for introducing and revising ETV items by the course designers in which they suggest some strategies for teaching specific advanced ETV items.
- Methodologically, it is important for the researchers in the area of teachers' beliefs and practices to distinguish between teachers' practices and their self-reported practices. The former means what teachers do in their classrooms whereas the latter refers to what they think should be done.

CONCLUSION

The main overall objective of this study was to investigate teachers' stated beliefs regarding how ETV items should be taught (i.e., direct / indirect) vocabulary instruction and the

influence of this in their actual instructional practices. To achieve this goal, twelve participants from YIC were pre-observation interviewed, observed and post-observation interviewed. The study design, which involved a predominantly qualitative approach, was utilised to collect valid data and consequently obtain credible findings from the context of the study.

The ESPTs stated that they directly and frequently use the following three strategies: definitions, exemplifications and pictures. ESPTs interviewed said they used these strategies to present the meaning of novel ETV items directly. ESPTs also believe that IVT strategies such as dictionary should be used by to discover the meaning of novel ETV items. All in all. ESPTs reported that a mixture of direct and indirect strategies should be used jointly to achieve their instructional goals.

The challenges ESPTs face in teaching ETV items were both instructional and contextual. Administrative regulations that prevent teachers from using some strategies such as wall chart were also viewed as obstacles in doing their mission.

Future Research

This study is an initial step in the process of understanding the stated beliefs and actual practices of ESPTs' teachers in technical words instruction. It is highly recommended to further our understanding about the ESPTs' beliefs and practices in ETV items teaching strategies by conducting future comprehensive study which compares teachers' beliefs (what they believe should be done), teachers' self-reported practices (what they reported they do), and teachers' practices (what they do).

It is also recommended to conduct another study to find out why some strategies were more preferred in teaching particular technical words. This type of studies will help course designers to introduce research-based strategies instead of the advice given by experienced teachers.

A final study can be carried out to explore the possibility of using some direct strategies in an indirect way. For example, we can understand if ESPTs can indirectly use definitions and exemplifications which are two direct strategies for meaning presentation. We are also encouraged to suggest similar studies to investigate if indirect vocabulary teaching strategies can be in a direct manner.

References

- Abdel Latif, M. (2006). The teachability of second/foreign language learning strategies. *Essex Graduate Student Papers in Language and Linguistics*, 8, 18-42.
- Alghamdi, A. (2011). The Problems of Teaching Technical Vocabulary. *Voices Newsletter, IATEFL journal*, 223, November-December (2011).
- Baumann, J., & Kameénui, E. (2004). *Vocabulary instruction: Research to practice*. New York: The Guilford Press.
- Beck, I., McKeown, M., & Kucan, L. (2002). *Bringing words to life: Robust vocabulary instruction*. New York: The Guilford Press.
- Borg, S. (2006). *Teacher cognition and language education: Research and practice*. London; New York: Continuum.
- Folse, K. S. (2004). *Vocabulary myths: Applying second language research to classroom teaching*. Ann Arbor: University of Michigan Press.
- Fujiware, B. (1990). Learner training in listening strategies. *JALT*, 12(2), 203-17.
- Hiebert, E., & Kamil, M. (2005). *Teaching and learning vocabulary: Bringing research to practice*. New Jersey: Lawrence Erlbaum Associates, Inc.
- Kennedy, C., & Bolitho, R. (1984). *English for specific purposes*. London: Macmillan.
- Khwaileh, A. (1995). Is the TEFL teacher a hostage in ESP? An overview of the recent status and problems of the TEFL teacher in ESP. *The ESPecialist*, 17(1), 39-56.
- Kouraogo, P. (1993). Language learning strategies in input-poor environment. *System*, 21(2), 165-173.
- McKeown, M., & Beck, I. (2004). Direct and rich vocabulary instruction. In J. Baumann & E. Kameénui (Eds.), *Vocabulary instruction: Research to practice* (pp. 13-17). New York: The Guilford Press.
- McWilliam, N. (1998). *What's in a word? Vocabulary development in multilingual classrooms*. Stoke on Trent: Trentham Books. training on reading comprehension. *Review of Educational Research*, 53(2), 253-279.
- Mezynski, K. (1983). Issues concerning the acquisition of knowledge: Effects of vocabulary
- Nagy, W. (2005). Why vocabulary instruction needs to be long-term and comprehensive? In E. Hiebert & M. Kamil (Eds.), *Teaching and learning vocabulary: Research to practice* (pp. 27-44). New York: Routledge.
- Scott, J., & Nagy, W. E. (2004). Developing word consciousness. In J. Baumann & E. Kameénui (Eds.) (2004). *Vocabulary instruction: Research to practice* (pp. 201-217). New York: The Guilford Press.
- Stahl, S., & Fairbank, M. (1986). The effects of vocabulary instruction: A model-based meta-analysis. *Review of Educational Research*, 56, 72-110.