Available online at www.sciencedirect.com

SciVerse ScienceDirect

System 41 (2013) 283–297

SYSTEM

www.elsevier.com/locate/system

Communication strategies of non-native speaker novice science teachers in second language science classrooms

Abd Aziz Azian*, Abdul Halim Abdul Raof, Fauziah Ismail, Masputeriah Hamzah

University Teknologi Malaysia, Language Academy, 81310 UTM, Malaysia

Received 3 April 2012; revised 18 January 2013; accepted 15 February 2013
Available online 25 March 2013

Abstract

This study sets out to examine the communication strategies (CSs) employed by non-native speaker novice science teachers (NNS-NvSTs) in teaching science in English. Twenty Secondary Four science lessons conducted by ten NNS-NvSTs were audio-recorded, transcribed and coded deductively as well as inductively. Perceptions on the meanings and uses of the CSs were also obtained from all ten NNS-NvSTs via stimulated recall and sixty-one Secondary Four students via group interview. The findings indicated that the NNS-NvSTs employed a variety of CSs for diverse intentions reflecting their multiple roles as teachers, novice teachers, and English language learners. In general, there is a high congruence between the NNS-NvSTs' and students' perception on the meanings and uses of CSs. The NNS-NvSTs were able to articulate the reasons for employing the specific CSs, allowing them to execute their roles as science teachers in the L2 science classroom. Nevertheless, there is still a need to address NNS-NvSTs strategic competence, particularly those CSs which require a greater production of the L2.

Keywords: Communication strategy; Communication intention; Novice science teacher; Second language science classroom

1. Introduction

Current practices in teacher training programmes tend to emphasize content-area knowledge, pedagogical knowledge and general education courses. This emphasis is understandable, as several research studies have found that lack of content-area or subject knowledge can be a barrier against better content subject teaching (see Halim and Meerah, 2002; van Leuvan, 1997). Nevertheless teacher training programmes which ignore teachers' oral instructional language needs, particularly where the medium of instruction is the second language, might be inadequate. This is because language is needed to reformulate thought processes (Vygotsky, 1978), allowing meaning to be conveyed and created (Marton and Tsui, 2004). In short, communication, particularly in the form of teachers' oral language, which takes place in a pedagogic context, is at the heart of teaching and learning. This suggests that being good in a particular subject matter, for instance, mathematics or science, does not equate to being good at teaching them (Ozgun-Koca and Sen, 2006) as effective language in which to impart the knowledge is also an important element.

* Corresponding author. Tel.: +60 17 736 9291; fax: +60 7 556 6911.
E-mail addresses: azian@utm.my, azianutm@yahoo.com (A.A. Azian).

0346-251X/$ - see front matter © 2013 Elsevier Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.system.2013.02.003

The inclusion of language training in teacher training programmes is not only contentious, but also fraught with an array of other issues, particularly what language competencies to include. In English language teacher education, regardless of whether the teacher trainee is a native speaker (henceforth NS or NSs) or non-native speaker (henceforth NNS or NNSs), the general consensus is for the novice teachers to be equipped with knowledge about the language, and proficiency in the language (Davies, 2002). In fact, Marinova-Todd et al. (2000) went so far as to suggest that the success of students' language education is very much dependent on well trained teachers who are native or native-like speakers. Being native or native-like has the implication of having NSs' communicative competence. The most notable communicative competence framework is the one proposed by Canale and Swain (1980) involving three competency areas, namely, grammatical, strategic, and sociolinguistic competence, which Canale (1983) further refined to include discourse competence.

However, the view of whether the same English language competency expectations should be applied to NNS teachers using English as a second language (L2), as a medium of instruction in mainstream classrooms is debatable. Alptekin (2002) for one argues that training NNS to attain native like communicative competence is a massive undertaking which might not be achievable. Thus, perhaps a more realistic approach would be the one advocated by Hoekje and Williams (1992) who suggest that a more realistic expectation is for NNS teachers to attain L2 proficiency levels which reflect both the role of the NNS as teachers and the context in which the L2 is used, namely in the classroom. Amongst the four communicative competence components, strategic competence comprising communication strategies (henceforth CS or CSs) is arguably the most urgent to be included in NNS teachers' L2 language training. As pointed out by Dörnyei and Thurrell (1991), lack of strategic competence would result in an inability to carry out any communicative intent despite having adequate grammatical competence. Hoekje and Williams (1992) although of the view that the training of NNS teachers should include all four communicative competence elements, argued that the question of the relative importance of each of the communicative elements, and the relationship between one element to another element remains a point of contention. They further suggest that although the use of communication strategies may not improve NNS teachers' linguistic competence, "…there may be gains in teaching effectiveness." (p. 259).

Thus, primarily due to the short duration of time allocated for teacher training programmes, and in light of the arguments that CSs may contribute to NNS teachers' L2 oral instructional language repertoire, this study intends to describe, analyse, and interpret CSs employed by NNS novice science teachers (NNS-NvSTs) in teaching science in English (henceforth referred to as L2 science classroom). Results of the investigation could act as baseline information in formalising and profiling effective NNS teachers' CSs features which could help facilitate students' understanding in L2 mainstream classroom in general, and L2 science classrooms in particular.

2. Literature review

2.1. Definition and classification of communication strategies

Use of communication strategies by NNS learners has been extensively studied over the years. This proliferation has resulted in various definitions, identification methods and classifications of CSs. Earlier definitions tend to associate the use of CSs with some element of conscious planning (see Faerch and Kasper, 1983) in order to solve L2 related problems (see Faerch and Kasper, 1983; Tarone, 1977). Later ones include notions of unconscious CS use (see Bialystok, 1990), not only for the purpose of solving communication problems but also for enhancing communication (see Bialystok, 1990; Canale, 1983). Taking into consideration the different points of views of the various researches, together with the objectives of this study, CSs for the purpose of this study have included both conscious and sub-conscious use of both verbal and vocal communication strategies to either solve communication problems or enhance communication effectiveness.

In terms of CS identification, seminal work tended to rely somewhat extensively on collecting CS data via controlled environments, involving NS-NNS or NNS-NNS interaction. Furthermore, these studies tended to be either from the Pros' or Cons' perspectives, terms coined by Yule and Tarone (1997). The Pros based their CS categories on observable inter-individual communication, thus, generating an extensive CS list (see Faerch and Kasper, 1983; Tarone and Yule, 1987). In contrast, the Cons based their CS descriptions on non-observable intra-individual cognitive processing, thus resulting in a parsimonious CS taxonomy (see Bongaerts et al., 1987; Poulisse, 1990). Nevertheless, although the respective CS taxonomy is organised around a different criterion, they show many similarities. Bialystok (1990) suggests that the similarities are a result of two main factors. Firstly, the continuity is a result of researchers building on previous work and refining them to suit their own ideas. Secondly, the convergence in CS description is due to the differences in criteria being apparent rather than real. In other words, the differences lie in the surface