

# A Training Program to Enhance Communication Skills of International Students

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## Abstract

*Teaching and learning enhancement is one of the strategic priorities of Swinburne University of Technology. The aim of this research project was to design a customised program that teaches communication skills to TAFE international students. The “Reading Strategies for Better Understanding of E-Texts” training program was unique in its approach to teaching communication skills. This program had a pre- and post-test program design and included eight sessions where students learnt how to apply metacognitive reading strategies to comprehend e-texts effectively as well as to use information from different sources for their writing (summarising, paraphrasing and quoting). The results of this program have shown that metacognitive strategy training enhanced international students’ e-text comprehension performance significantly. The findings of this research have provided an innovative solution to training international students in communication skills. Finally, a methodology of teaching communication skills to international students has been outlined in this paper.*

**Keywords** International students, metacognitive strategy training, e-texts comprehension, communication skills

## Introduction

Enhancing international students’ academic skills and performance is a key responsibility of the Language and Academic Skills (LAS) program. In the LAS program, which sits within the Centre for VET Practice, senior management and staff are dedicated to finding new and innovative ways of addressing the current needs of international students. It is well known that very often international students’ academic success is dependent on their proficiency in the English language. Also, according to the ‘Employability skills for the future’ report (DEST, 2002), communication skills are one of the essential employability skills, which contribute to a productive and harmonious relationship between employees and customers.

However it may take some time for students to realise that they do have some problems with the language and these problems need to be addressed. One of the strategies that was employed by the LAS Program, was to develop and evaluate a customised communication skills program for TAFE international students studying Certificate IV

in Marketing/International Business and Advanced Diploma in Hospitality Management. This program was intended to be offered in addition to the mainstream courses to teach in the area of communication skills.

Extensive consultations with departmental managers and international student coordinators were conducted to determine the needs of the students that should be addressed in the program. An overall opinion was that both oral and written workplace communication skills are important for successful business communication and have to be addressed. Thus, two programs were developed. However, this paper will discuss the design, delivery and evaluation of the program which was designed with the focus on developing students' ability to comprehend and interpret hypertexts (i.e. e-texts) in the Business context.

With newer forms of literacy, such as e-literacy, becoming more and more important, understanding of e-texts and communicating the information correctly is important in the business world. Thus, the aim of the 10-hour 'Reading Strategies for Better Understanding of E-Texts' program was to develop/improve international students' business communication skills. In particular, it aimed at improving students' e-text comprehension skills by teaching them metacognitive strategies and e-text reading strategies. It was hypothesised that training would improve international students' reading comprehension of linearly and hierarchically structured hypertexts. It was also hypothesised that international students' hypertext comprehension performance would be significantly greater when reading linearly structured hypertexts compared to hierarchically structured hypertexts.

## **Literature review**

Australia is a popular study destination for international students to continue their education. Learning and comprehending materials in English is considered to be a key challenge of academic success for international students who come from non-English speaking backgrounds.

The quality of international students' learning and general satisfaction with their student experience seem to be related to effective communication strategies being employed in the classroom. Strategies include practical activities that incorporate an element of fun with teamwork and leadership guidance from the facilitator to engender confidence and minimise misunderstanding. Misconceptions and mistranslations need timely clarification and immediate demonstration in a practical way is an excellent way of doing this. Activities need to be relevant to the learning outcomes. Students find security in close ethnic friendship bonds in the classroom and are reluctant to break these and work with confidence with other students. The more they gain confidence with written language, the more they participate in class.

Mulligan and Kirkpatrick (2000) conducted a study to observe and investigate international students' learning behaviour in class activities. The data were collected from researchers' observations. Researchers observed students class activities of students from non-English speaking backgrounds in terms of participation in questioning, class discussion and note-taking. Also, they evaluated the styles of knowledge delivery and overall presentations of lectures. The results indicated that international students experienced difficulties in terms of note-taking and comprehending lectures. International participants also had difficulties in linking lecture content to real life. Moreover, their cultural backgrounds (most participants came from Asia) determined that they would not express themselves in lectures as freely as local English-speaking students. Thus, it is suggested that lecturers could provide comprehensive unit outlines to international students; start each lecture with a clear class outline and teach according to the class outline; deliver lectures at reasonable pace; and increase communication with international students.

Eighty percent of international students in Australian universities are from Asian countries. It is argued that Asian students' participation in tutorial activities and discussions is relatively low (Marlina, 2009). He commented that poor tutorial participation happened due to passive learning styles in their countries of origin. International participants in this study commented that they wanted to take part in class activities in their countries of origin; however, passive teaching and learning styles did not provide many opportunities for them. Also, international participants argued that they were active in some tutors' classes, because these tutors were motivating and supportive. If tutors deliver classes in an authoritarian way, they would be passive, silent or even withdraw from these tutorials. Thus, the study suggested that tutors are responsible for designing and delivering their tutorials thoughtfully in order to encourage and engage international students in class activities.

As ICT has been increasingly employed in the field of education, students need to master adequate skills to comprehend online learning materials. Comprehending online texts, or hypertexts, is considered to be a key challenge for students, due to the design of hypertexts, as well as the cognitive load created by online materials.

Hypertexts are defined as electronically connected information networks that allow readers to navigate and build their own pathways (Salmeron 2005). When e-texts are used for educational purposes, three types of structures could be used while designing educational e-texts, known as linear, hierarchical and referential structure (Oliver & Herrington 1995). Linearly structured hypertexts resemble traditional print-based texts, whose reading sequences are pre-determined by authors. Hierarchically structured hypertexts require readers to navigate in a tree-like fashion. Hypertexts with referential structures provide readers full freedom in terms of link selection and navigation. In this respect, strategies that direct readers to select hyperlinks are vital components while comprehending hypertexts.

In order to teach students to comprehend e-texts effectively, it is of great importance to teach students to apply metacognitive strategies. Prior studies have confirmed that metacognitive strategy training could enhance students' hypertext comprehension performance. Azevedo and Cromley (2004) conducted a study concentrating on exploring the effect of self-regulation training on learning with hypermedia. Two groups, an experimental one and a control one, took part in the study. Both groups were given a pre-test. The experimental group was given a 30-minute training session on utilising various self-regulation strategies, including planning, monitoring and evaluating. The control group did not get any training on self-regulation strategies. Both group had a post-test simultaneously. Students' performance was measured by how many marks they got from answering questions related to what they read online. The result revealed that self-regulation strategies training has led to significant improvement in students' performance while learning in the hypermedia context.

A study conducted by Verezub and her colleagues (Verezub et al. 2008; Verezub & Wang 2008) had a pre- and post-test design with three training sessions. In the pre-test participants read linearly structured hypertexts with text links, picture links and audio links. Students had three training sessions where they were taught to apply metacognitive strategies in the hypertext reading context. Six metacognitive strategies were taught in this research, including:

- 1) Clarifying purposes of reading;
- 2) Activating and applying prior domain knowledge;
- 3) Paying attention to important content;
- 4) Evaluating what has been read;
- 5) Monitoring comprehension processes;

6) Reviewing comprehension processes.

The instruction approach of this research followed principles proposed by Duffy (2002). According to Duffy (2002), five steps were used in Verezub's (2008) training phase. They were as follows.

- 1) Explicit description: each strategy was described explicitly;
- 2) Modelling of strategy in action: each strategy was modelled by the instructor by using examples of materials and texts to which it can be applied;
- 3) Collaborative use of strategies: strategies are used in action;
- 4) Guided practice: students had exercises under instructor's supervision;
- 5) Independent use of strategies: students were encouraged to use strategies independently.

After three training sessions, students were asked to complete the post-test, in which they also read linearly structured hypertexts with text links, picture links and audio links. The study concluded that students' hypertext comprehension results had improved significantly after the training program (Verezub et al. 2008; Verezub & Wang 2008).

Hypertext comprehension performance is influenced by readers' levels of prior knowledge. Calisir and Gurel (2003) compared the hypertext comprehension of students who are knowledgeable and who are non-knowledgeable in a particular domain. The result asserts that knowledgeable students' comprehension performance surpasses those who are non-knowledgeable. This result has been confirmed by studies conducted by Muller-Kalthoff and Moller (2006) and Amadiou, Tricot, and Marine (2009). Apart from domain knowledge, readers' system knowledge is considered to be part of readers' prior knowledge. System knowledge represents readers' knowledge of computer systems used, including general computer experience and experience using hypertext and the Internet (Mitchell et al. 2005). Mitchell et al. (2005) suggested that readers who are interested in the Web are more able to cope with the non-linear learning environment. Moreover, Waniek and Schafer (2009) revealed that students with high system knowledge are good at information search online; whereas students who have no idea of the hypermedia system but have prior domain knowledge of topics used in the study take more time reading nodes but less time navigating.

E-text comprehension performance is also determined by e-text structures. McDonald and Stevenson (1996, 1998) conducted two research studies on investigating the effects of different hypertext structures (i.e. linear, hierarchical and referential) on students' performance during navigation. Navigation scores were based on the amount of information students were able to recall after reading. Their results revealed that students' performance was the best amongst all structures when they were reading linearly structured hypertexts. Students' performance was the worst when they read hypertexts with referential structures. Although their research has not focused on hypertext comprehension, their results have implied that linearly structured hypertexts could lead to higher performance when used for educational purposes.

In general, research studies that have explored international students' e-texts comprehension performance are relatively limited. In this regard, the present study focuses on investigating post-secondary international students' e-text comprehension patterns and making suggestions for future studies.

## Program overview

The aim of this research project was to design a customised program that teaches communication skills, in particular, in the areas of Marketing and Management, to TAFE international students. The program aimed at improving international students' e-text comprehension skills by teaching them metacognitive strategies and e-text reading strategies. The program was unique in its approach to teaching communication skills.

*The Key Features* of the program are as follows:

- It is course-related and customized to the students studying within the Department of Marketing and International Learning and the Department of Hospitality, Tourism and Event Management.
- Individual and small group consultations are offered to students after each session.
- It is research-based. Quantitative and qualitative evaluation of the program results has proven that students improved their written communication skills significantly after the training.
- It is offered in addition to the mainstream courses. The program is offered to students in the middle of the day between their mainstream classes (so called 'sandwich program').
- It is flexible in its content delivery. The teacher is able to make changes and/or adjustments to the content based on current requirements to ensure that it is up-to-date and delivered 'just in time'.

## Methodology

Twenty international students studying Certificate IV in Marketing/International Business and Advanced Diploma in Hospitality Management participated in the program. The participants came from diverse language and cultural backgrounds, including Chinese, Vietnamese, Lao, Thai, Malay and Japanese. They were given a consent statement and a consent form prior the program commenced. They were free to withdraw from the program at any stage. As the program continued, three participants decided to withdraw, two participants missed the post-test; and three participants missed more than three training sessions. In this regard, the data used for the statistical analysis were based on twelve participants' e-text comprehension performance, their post-test questionnaires, as well as their oral feedback.

This program had a pre- and post-test program design and included eight sessions where students learnt how to apply metacognitive reading strategies to comprehend Business-related e-texts effectively as well as to use information from different sources for their writing (summarising, paraphrasing and quoting).

Participants were randomly assigned into two experimental groups. One of them comprehended hypertexts with linear structure; the other group comprehended hypertexts with hierarchical structure. In the pre-test, both groups read hypertexts with either a linear or a hierarchical structure with nine hyperlinks. They were asked to complete 9 comprehension tasks. Eight training sessions were delivered to participants on a weekly basis. Participants were taught reading comprehension strategies to comprehend hypertexts effectively in light of metacognition. In particular, metacognitive strategies, such as activating and applying prior knowledge and evaluating what has been read, were taught to participants explicitly with clear and simple examples. Hypertext comprehension strategies, such as selecting links and making connections amongst links and nodes, were also taught to them. In addition, they were taught writing skills in order to incorporate information from different sources in to their written assignments. In the post-test, participants' hypertext comprehension performance was assessed under the same conditions as in the pre-test.

The overall instructional design followed principles proposed by Merrill (2002). According to Merrill (2002), learning is maximised when instruction is designed based on tasks students need to accomplish. There are four key principles of this framework, including demonstration, application, activation and integration. Demonstration principles emphasise the importance of explicit instruction of new knowledge to students. In the present program, participants were taught metacognitive strategies and hypertext comprehension strategies in training sessions, as well as writing skills. Application principles require teachers to offer opportunities for students to apply what they have learnt. In this program, participants were asked to complete hypertext comprehension tasks in every training session. Activation principles highlight the importance of evoking students' prior knowledge. In this study participants were encouraged to recall and exchange their own online reading experience in training sessions. Integration principles emphasise that students should be fostered to integrate new knowledge into their existing knowledge bases. Participants in the present study were encouraged to apply strategies they learnt in training sessions in their everyday study.

Both qualitative and quantitative data were collected. Participants' writing skills performance was assessed based on students' oral feedback on the instruction of incorporating information from different sources into their written assignments. Quantitative data were gathered based on participants' hypertext comprehension performance in the pre- and the post-tests. Moreover, participants were also asked to complete post-test questionnaires to express their attitude towards comprehending hypertexts and applying various strategies.

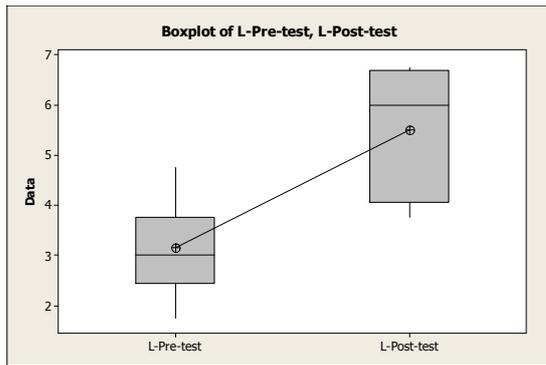
## Results and discussion

The means, standard deviations, minimum and maximum of international students' hypertext comprehension performance for two types of hypertext structures (linear structure and hierarchical structure) before and after metacognitive strategy training, are presented in Table 1.

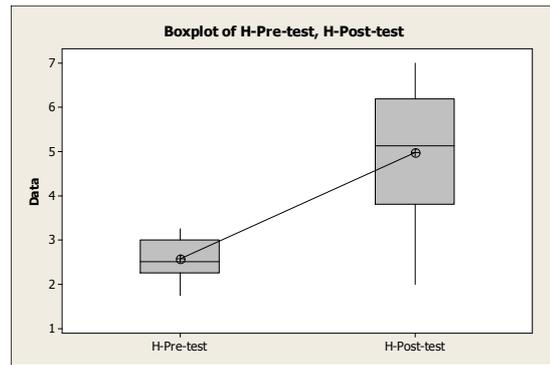
*Table 1: Basic Statistics*

Structure	Stage	Mean	StDev	Minimum	Maximum
Linear	Pre-test	3.156	0.935	1.750	4.750
	Post-test	5.500	1.309	3.750	6.750
Hierarchical	Pre-test	2.575	0.487	1.750	3.250
	Post-test	4.975	1.557	2.000	7.000

The influence of metacognitive strategy training on international students' hypertext comprehension performance across two types of hypertext structures (i.e. linear structures and hierarchical structures) was tested by paired t-tests. Figure 1 and Figure 2 show the comparison of hypertext performance by participants in each experimental group in the pre- and the post-tests respectively. The results reveal that international students' hypertext comprehension performance when they read linearly ( $t=-5.62$ ,  $p<0.05$ ) or hierarchically ( $t=-4.81$ ,  $p<0.05$ ) structured hypertexts improved significantly after metacognitive strategy training. Therefore, metacognitive strategy training has enhanced international students' hypertext comprehension performance across two hypertext structures.



*Figure 1* Boxplot of hypertext comprehension performance by participants who read linearly structured hypertexts

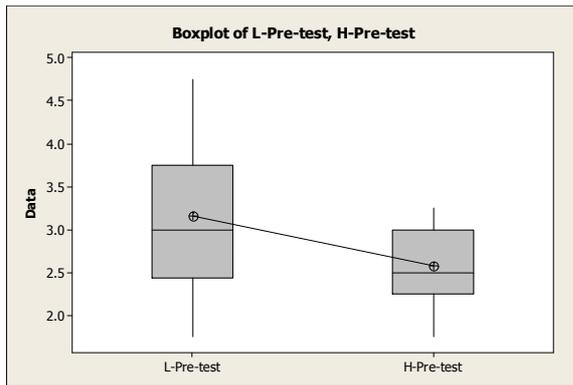


*Figure 2* Boxplot of hypertext comprehension performance by participants who read hierarchically structured hypertexts

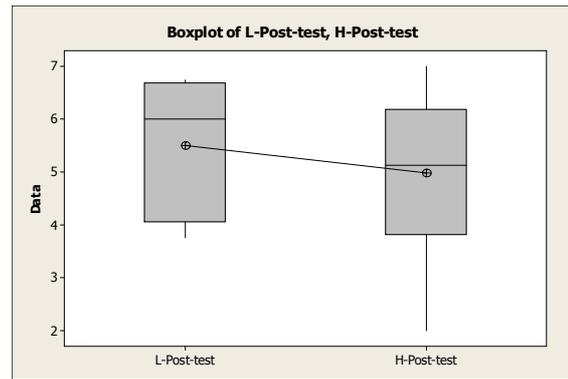
This particular result is consistent with conclusions made by prior studies on similar topics. Azevedo and Cromely (2004) also concluded that metacognitive strategy training could benefit students' e-texts comprehension performance. However, the training session in Azevedo and Cromely's (2004) study was relatively short (30 minutes). In this sense, it could be difficult to argue long-term effects brought up by metacognitive strategy training based on their methodology.

The results of the present study are also in line with research by Verezub et al (2008) which confirmed that students' hypertext comprehension performance would increase significantly after reading comprehension strategy training. The differences between the present study and Verezub et al's (2008) study are: 1) there were three training sessions involved in Verezub et al's (2008) study, while eight training sessions were included in the present study; 2) participants in Verezub et al's (2008) study were from both the native English-speaking background and non-English speaking backgrounds (international students), while participants in the present study were purely international students; 3) only linearly structured hypertexts were used in Verezub et al's (2008) study, whereas both linearly structured and hierarchically structured hypertexts were employed in the present study; 4) multimedia contents (audio links and picture links) were employed in Verezub et al's (2008) study, while only written e-text discourses were used in the present study.

The influence of hypertext structures on international students' e-text comprehension was tested by Two-sample t-tests. Figure 3 presents students' performance in the pre-test for the group that read linearly structured hypertext and for the group that read hierarchically structured hypertext. Similarly, Figure 4 shows students' performance in the post-test for the two groups. The results revealed that there is no significant difference between e-text comprehension performance by participants who read linearly structured hypertexts and those who read hierarchically structured hypertexts both before ( $t=1.59, p>0.05$ ) and after ( $t=0.78, p>0.05$ ) metacognitive strategy training. This result contradicts conclusions made by McDonald and Stevenson (1996, 1998), who compared students' hypertext recall scores of reading linearly structured hypertexts and hierarchically structured ones. They concluded that students' recall scores of reading linearly structured hypertexts were higher than of those of reading hierarchically structured hypertexts. In the present study, the difference in comprehension scores between students who read linearly structured and hierarchically structured hypertexts was not significant. It could be due to the fact that participants in the present study had high level of computer literacy. Thus, they could have possessed high levels of system prior knowledge.



*Figure 3* Boxplot of hypertext comprehension performance in the pre-test by participants in two experimental groups



*Figure 4* Boxplot of hypertext comprehension performance in the post-test by participants in two experimental groups

According to participants' feedback on the post-test questionnaire, approximately 70% of participants read e-texts frequently in their daily lives. Some commented that reading and searching online has allowed them to access more information than they were able to when reading conventional written texts. This phenomenon is consistent with Mitchell's (2005) conclusion that readers who are proficient with the Web environment are able to learn in the non-linear environment effectively. Furthermore, Waniek and Schafer's study (2009) suggested that students who possess high levels of system prior knowledge tend to spend more time on navigating through hypertext systems, which, to some extent, could compensate for their domain prior knowledge. In this regard, in the present study it could be anticipated that participants who read linearly structured hypertexts did not surpass those who read hierarchically structured hypertexts because the participants who read hierarchically structured hypertexts had higher levels of system prior knowledge than those who read linearly structured hypertexts.

The questionnaire data disclosed that two participants had obtained their master degrees before they commenced their TAFE courses; some participants had acquired bachelor degrees before they had come to Australia; whereas others started their TAFE courses after they had finished their secondary education. Therefore, some participants' levels of domain prior knowledge and levels of the English language could also compensate for their disadvantage in terms of hypertext structure knowledge while comprehending e-texts. This result could be linked to Calisir and Gurel's (2003) conclusion that students who possess higher levels of domain prior knowledge could outperform those whose domain prior knowledge is lower. Thus, participants' diversified cultural and educational backgrounds could be one of the reasons that leads to the insignificant difference between comprehension performance by participants in two experimental groups at different experimental stages.

## **Conclusion and recommendations**

ICT has been widely employed in the field of education. Thus, it becomes vital for students to comprehend online business-related learning materials effectively. The present study examined the influence of metacognitive strategy training on international students' e-text comprehension performance. It also compared international students' e-text comprehension performance when they read e-texts with two different structures. The results of the present study have confirmed that international students' e-text comprehension performance would be enhanced after receiving metacognitive strategy training. Therefore, it is of great importance to teach international students to comprehend e-texts in light of metacognition.

In order to teach international students communication skills, with a focus on developing their reading comprehension and writing skills, a thoroughly designed training program is essential. A methodology for designing an effective program aimed at teaching writing skills in the e-context, is outlined below.

- 1) The design of e-texts should take into account targeting students' levels of prior knowledge and levels of English. Prior studies have confirmed the effects of students' prior knowledge on their e-text comprehension performance. Thus, it is important to address students' prior knowledge while designing e-texts. Besides, the students' levels of English should also be considered, since complex language could lead to cognitive overload.
- 2) The content of e-texts should be chosen from one of the mainstream subjects, so that targeting students' e-text comprehension competence and subject-matter knowledge could both be strengthened.
- 3) A face-to-face instructional approach is recommended. Although there are a number of computer-based reading strategy training mechanisms (such as 3D-Readers and iSTART), international students' participation in class activities should be taken into account. In order to minimise the feeling of isolation, the present study recommends that the training program should be delivered on a face-to-face basis to increase international students' interactions with teachers and peers.
- 4) Appropriate principles of instructions should be employed in order to deliver the program successfully. *The First Principles of Instruction* (Merrill 2002) is recommended as a guideline to design and deliver training sessions to international students. This particular framework highlights the importance of revision and practices. In this respect, students should be able to apply strategies they have learnt. Also, as the program continues, strategies they have learnt could become part of their knowledge base. In other words, reading comprehension strategies could be transformed into reading comprehension skills as they keep practising these strategies.

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