A Study of Spanish Students' Metacognitive Awareness in Listening Comprehension

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Biennial Conference of The UWI Schools of Education
Advancing Education Through a Culture of Inquiry, Innovation and Indigenization
April 23 – 25, 2013

Introduction

- This presentation reports on the results of a study on Metacognitive awareness in Second language (L2) Listening Comprehension. A group of 41 Spanish language undergraduate students received classroom metacognitive instruction over the first semester of the academic year 2012-2013 at The UWI;
- First, the term ‘metacognition’ is defined and its impact on Second Language (L2) listening is explored;
- The next sections are focused on the methodology, findings and discussion;
- The final section outlines some conclusions.

Metacognition and Learning

- A construct that refers to thinking about one's thinking or the human ability to be conscious of one's mental processes (Flavell, 1979)
- Metacognitive knowledge refers to knowledge about learning (Wenden 1998)
- Metacognition has to do with cognitive tasks, goals, actions, and experiences (Flavell, 1979)
- In L2 learning: The act of reflecting on our "thinking" as we engage in the learning of an L2, can direct the L2 learning process and make a difference in the outcome of one's learning (Bolitho et al, 2003, Purpura, 1998, 1997)

Metacognitive Knowledge

- **Person knowledge**
  Knowledge about how factors can affect L2 learning (age, gender, learning styles, etc.)
- **Task knowledge**
  Knowledge about demands and nature of learning tasks (mental, affective processes, a open-ended listening test, background noise, listening for details, etc.)
- **Strategy knowledge**
  Knowledge about specific strategies that are likely to achieve specific L2 learning goals (for instance, what strategies are effective or ineffective for listening, etc.)

(Goh, 2002)

Metacognition and L2 Listening

- A number of studies have explored the impact of raising metacognitive awareness on L2 learner listening performance and motivation (Cross, 2010; Vandergrift, 2002, 2003, 2005; Goh, 1997; O'Malley & Chamot, 1990)
- A variety of procedures have been used to elicit participant's metacognitive knowledge about L2 listening: journals, interviews, questionnaires, etc. (Vandergrift 2005, 2002; Goh, 2000, 1997, 2002)
- Research has shown that L2 learning, performance, confidence, and motivation can be enhanced through classroom metacognitive instruction (Goh & Taib, 2006; Graham, 2006; Vandergrift, 2003)

Metacognition and Listening – cont'd

- Goh (2000) administered questionnaires to elicit learners' strategy knowledge and strategy use in L2 listening comprehension and learning. She found that the more skilled listeners demonstrated a higher degree of awareness of their L2 listening problems.

- Vandergrift (2005) explored the relationship between metacognition and L2 listening proficiency. He found that test scores were correlated when students reported their use of cognitive and metacognitive listening strategies.

Metacognition and Listening – cont'd

- Vandergrift &Tafaghodtari (2010) led learners through the metacognitive processes (Prediction/planning, monitoring, evaluating and problem solving). They utilised the Metacognitive Awareness Listening Questionnaire* (MALQ) and found that metacognitive awareness of the listening process helped participants to better regulate their comprehension and the outcome of their learning.
- Vandergrift &Tafaghodtari (2010) also found that raising learners' metacognitive awareness facilitated listening and that less skilled listeners had a greater growth in metacognition, though such growth was only in Problem Solving and Mental Translation.

* Vandergrift, 2006

Methodology

- Participants (N=41, Female=37, Male=4) were university students who were pursuing SPAN3001 – Spanish Language IIIA (a Level 3 course during the 13 weeks of semester I of the academic year 2012-13) at The UWI - St Augustine Campus;
- 90% of the participants studied Spanish Language for academic purposes for about 8 years;
- Level of Listening performance:
- Less skilled= **7**, Mid= **27**, More skilled= **7**;
- All less & more skilled participants were Spanish majors;
- Spanish Majors = 35;
- Other Majors = 6

Participants (cont'd)

Degrees	Students
Spanish Major (only)	10
Spanish & Major in French	14
Spanish & Major in Linguistics	3
Spanish & Minor in Int'l. Relations	2
Spanish & Major in Literatures in English	1
Spanish & Major in Communication Studies	1
Spanish & Minor in French	1
Spanish & Minor in History	1
Spanish & Minor in Brazilian Studies	1
Spanish & Minor in Gender Studies	1
Total number of students pursuing Majors in Spanish	35 **(85.4%)**
Students pursuing other Majors:	
Latin American Studies	2
Int'l. Relations - Special	2
History	1
Biology & Environmental Natural Resource Mgmt.	1
Total number of students pursuing other Majors	6 **(14.6%)**
Total number of participants	41 **(100%)**

Instruments for Data Collection

a) Listening tests (based on authentic texts):
   - **Pre-Test** (assessment of initial students' listening performance administered on week 1) consisted of 7 open-ended questions,
   - During the 13 weeks of the semester students took 3 Listening comprehension Tests (weeks 4, 7 and 10). The same open-ended question format was utilised for these 3 listening comprehension tests,
   - **Post-Test** (which consisted of 5 open-ended questions and was administered on week 13);

b) The Metacognitive Awareness Listening Questionnaire (MALQ) was administered after each examination (Vandergrift, 2006);

c) 2 Self-assessment forms to be completed after Pre-Test (week 1) and the week 7-Test.

The Metacognitive Awareness Listening Questionnaire (MALQ)

- It is comprised of 21 questions on the use of metacognitive strategies (6-point Likert scale, ranging from “strongly disagree” to strongly agree);
- MALQ-items are randomly interwoven with others; some are negatively worded to avoid learners to mark only one side of the rating scale (mental translation);
- The internal reliability of the MALQ (Cronbach’s alphas) for the items were respectable, ranging from .68 to .78 (Vandergrift, 2006, 446)
- MALQ was useful to assess the extent to which language learners are aware of and can regulate the process of L2 listening comprehension;
- It is also intended to serve as a self-assessment instrument. Learners themselves can use it to appraise the awareness of the listening process as well as to reflect on their use of strategy when listening to texts in the L2.

(Vandergrift, 2006)

MALQ – Problem Solving (PS)

Q#	Questions on PS strategy or belief/perception
5	I use the words I understand to guess the meaning of the words I don't understand.
7	As I listen, I compare what I understand with what I know about the topic.
9	I use my experience and knowledge to help me understand.
13	As I listen, I quickly adjust my interpretation if I realize that it is not correct.
17	I use the general idea of the text to help me guess the meaning of the words that I don't understand.
19	When I guess the meaning of a word, I think back to everything else that I have heard, to see if my guess makes sense.

(Vandergrift, 2006)

MALQ-Planning/Evaluation (PE)

Q#	Questions on PE strategy or belief/perception
1	Before I start to listen, I have a plan in my head for how I am going to listen.
10	Before listening, I think of similar texts that I may have listened to.
14	After listening, I think back to how I listened, and about what I might do differently next time.
20	As I listen, I periodically ask myself if I am satisfied with my level of comprehension.
21	I have a goal in mind as I listen.

(Vandergrift, 2006)

MALQ-Mental Translation (MT)

Q#	Questions on MT strategy or belief/perception
4	I translate in my head as I listen.
11	I translate key words as I listen.
18	I translate word by word, as I listen.

- The MALQ questionnaire also provided the researcher with data on a counter-strategy which is the Mental Translation strategy.

(Vandergrift, 2006)

Procedure

From week 1 to week 7	From week 8 to week 13
“Arte” (Arts)	“Mujer, Género y Sexualidad” (Woman, Gender and Sexuality)

Week 1	Week 4	Week 7	Week 10	Week 13
Pre-Test	Quiz	**Test**	Quiz	**Post-Test**
MALQ - 1	MALQ - 2	MALQ - 3	MALQ - 4	MALQ - 5
Self-Assess. Form & Discussion	**Self-Assess. Form and Discussion**	**Self-Assess. Form & Discussion**	**Self-Assess. Form & Discussion**	

Week 2	Week 5	Week 8	Week 10
Feedback of Pre-Test	Feedback of Quiz	Feedback of Test	Feedback of Quiz

Figure 1. Procedure followed

Results --- Variation in Strategy Use by Participant's Level of Proficiency

	Less skilled	More skilled	Group
PS	8.51%	2.11%	4.44%
PE	19.08%	12.86%	15.73%
DA	16.89%	3.91%	8.45%
PK	3.37%	-13.89%	-7.42%
MT	-9.29%	-8.08%	-8.37%

Note: **PS**: Problem Solving; **PE**: Planning and Evaluation;
DA: Directed Attention; **PK**: Person Knowledge;
MT: Mental Translation.

A positive value indicates increase in strategy use; a negative value indicates decrease in strategy use. This value was calculated using the final (week 13) minus the initial (week 1) values from the MALQ for the respective strategy.

Results from the MALQ

Average Use of Metacognitive and Mental Translation Strategies vs Level of Proficiency

Met. Strategy	Low proficiency		High proficiency	
PS	**4.67**	**77.9%**	**4.79**	**79.8%**
PE	**4.53**	75.5%	**4.43**	73.9%
DA	**4.14**	68.9%	**3.98**	66.3%
PK	**4.52**	**75.3%**	**3.41**	**56.8%**
Mental Translation (MT)				
	3.46	**57.7%**	**2.69**	**44.8%**

Note: **PS**: Problem Solving; **PE**: Planning and Evaluation; **DA**: Directed Attention; **PK**: Person Knowledge.

Strategy use in the MALQ is expressed in the Likert scale ranging from a minimum use = 1 (strongly disagree) to a maximum use = 6 (strongly agree).

Average Use of Metacognitive and Mental Translation Strategies*

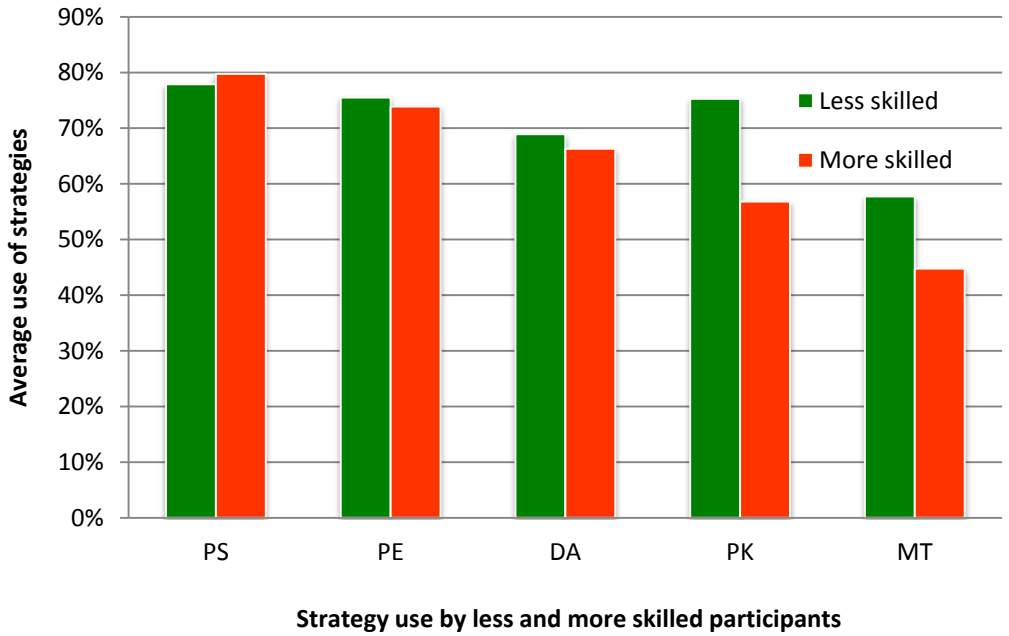


Figure 2. Average Use of Strategies

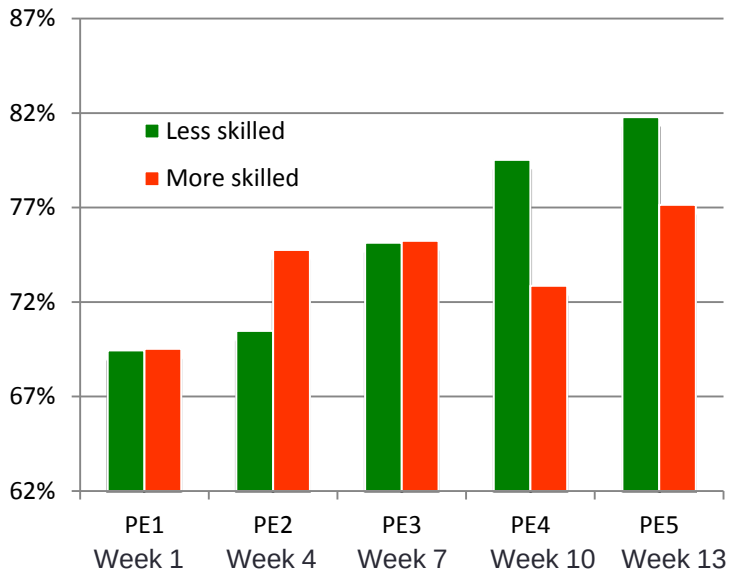
Note: **PS**: Problem Solving; **PE**: Planning and Evaluation; **DA**: Directed Attention; **PK**: Person Knowledge; **MT**: Mental Translation.

* Data collected from 5 MALQs, each MALQ was completed after a listening test.

Problem Solving (PS) & Planning and Evaluation (PE) Strategies*

Score of Problem Solving Strategies

Figure 3. Problem Solving Strategies

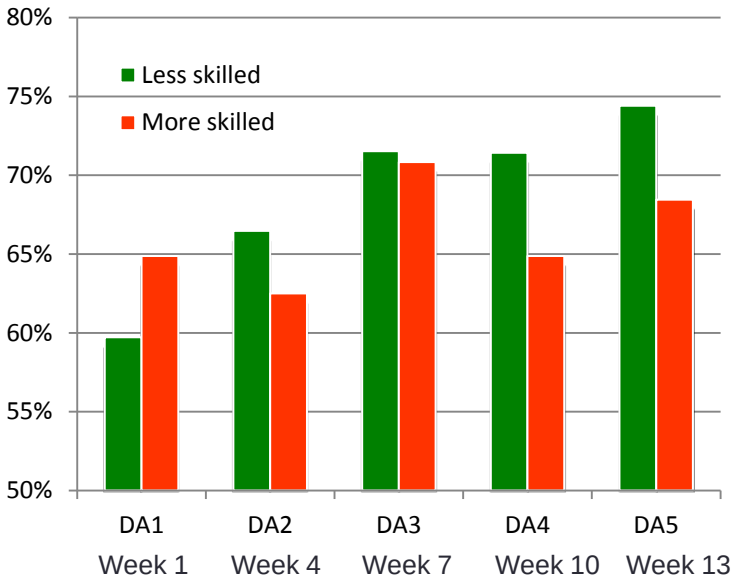


Score of Planning & Eva. Strategies

Figure 4. Planning and Evaluation Strategies

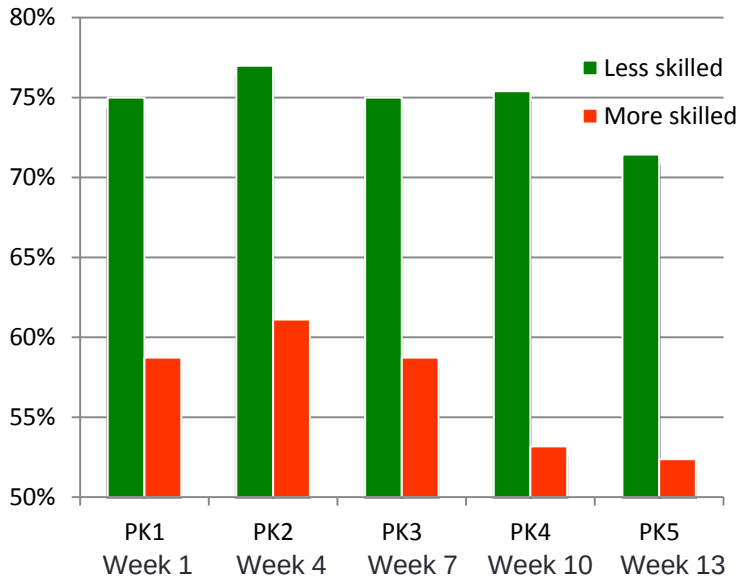
* Data collected from 5 MALQs, each MALQ was completed after a listening test.

Directed Attention (DA)
&
Person Knowledge (PK) Strategies*



Score of Directed Attention Strategies

Figure 5. Directed Attention Strategies



Score of Person Knowledge Strategies

Figure 6. Person Knowledge Strategies

* Data collected from 5 MALQs, each MALQ was completed after a listening test.

Mental Translation (MT) Strategies*

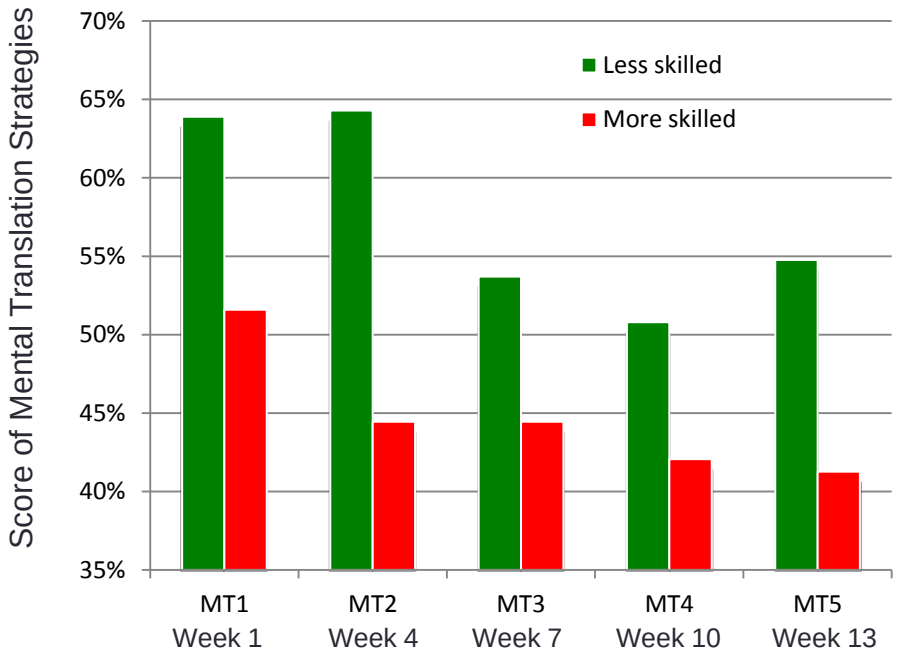


Figure 7. Mental Translation Strategies

* Data collected from 5 MALQs, each MALQ was completed after a listening test.

Performance in Listening Tests

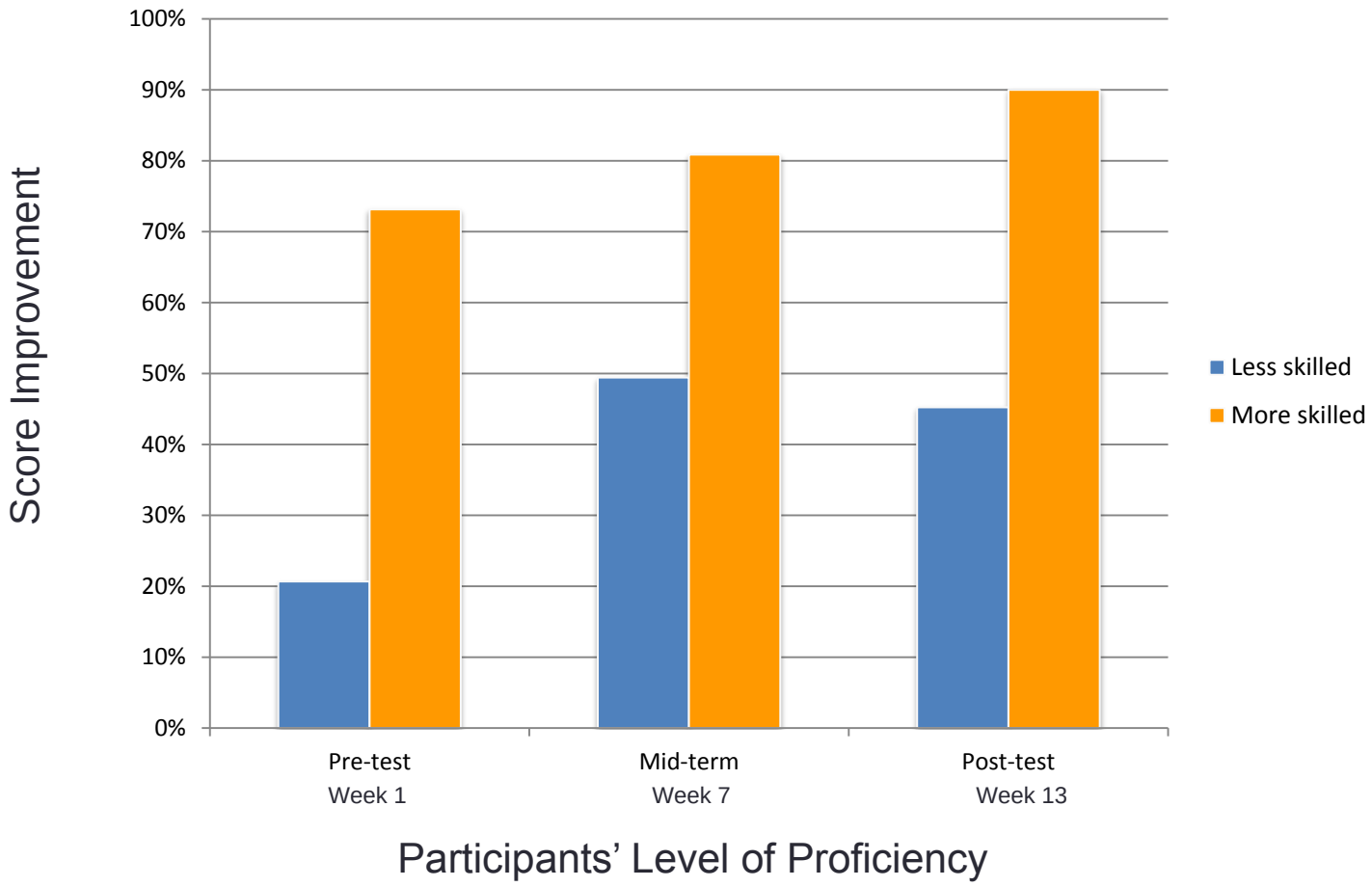


Figure 8. Listening performance vs level of Proficiency

Achievement in Listening

Level of proficiency	Gain Score
Less skilled	24.6
More skilled	16.9

Score difference= 7.7

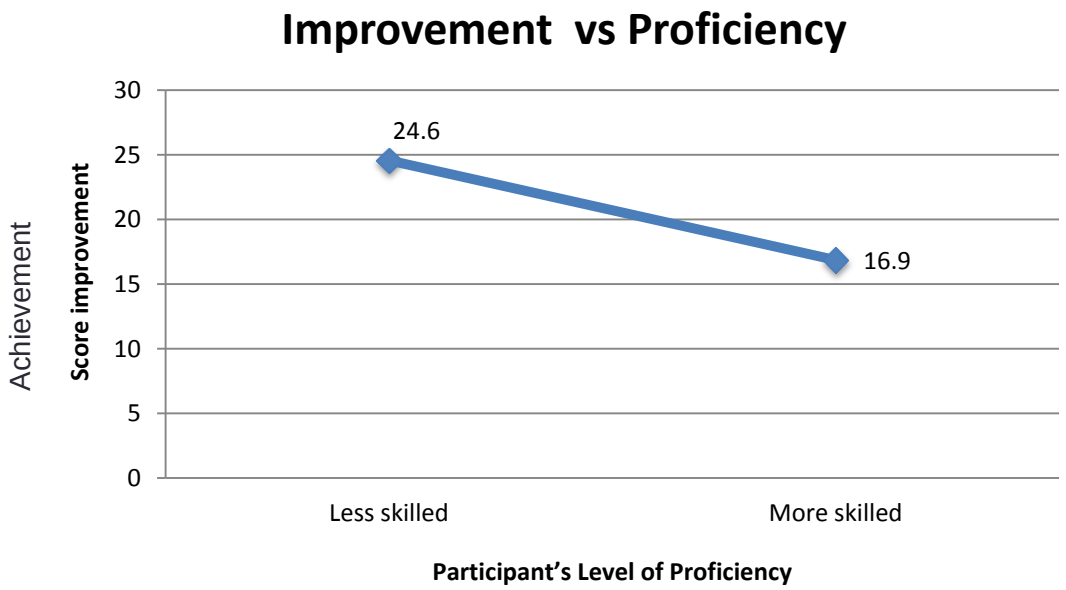


Figure 9. Achievement vs Level of Proficiency

Self-assessment forms - Responses

What would have helped you better understand the audio?

Less skilled listeners:

- “I need to listen to more audios, voices of different speakers” (ATY);
- “If I was more familiar with the topic, I would have understood better” (SHA);

More skilled listeners:

- “Paying more attention would have helped. I believe if I made inferences that would have also helped” (FT);
- “A third listening to catch those last one or two pieces I didn’t understand. Very interesting audio” (EF).

Results

- It is important to notice that less skilled participants used more metacognitive strategies and less mental translation than at the beginning of this investigation (see Figures 3, 4, 5 and 7)
- The findings of this investigation are similar to those of Vandergrift &Tafaghodtari (2010) regarding Problem Solving and Mental Translation strategies. The average value for Problem Solving strategies use is slightly higher for more skilled participants (79.8%) than for less skilled (77.9%).
- More skilled learners used more Problem Solving strategies which is associated with higher levels of metacognition (see Figure 3). These strategies are used by listeners to infer and monitor these inferences. (Vandergrift et al, 2006)

Results– cont'd

- Less skilled participants used more mental translation (57.7%) than more skilled participants (44.8%). As Goh (2000) and Vandergrift (2003) suggest, less skilled listeners may have been allocating more attentional resources (memory resources) to mental translation than to metacognitive processes (such as problem solving). This could be explored by means of a more in depth interview to participants or another introspective procedure.
- More skilled participants used less Person Knowledge and Mental Translation strategies than less skilled participants (see Figure 6 and 7) which indicates a good level of automaticity.
- Participants who were less skilled L2 listeners showed a greater improvement than their more skilled counterparts in the listening tests. They seemed to have benefited more from metacognitive instruction (see Figure 8 and 9).

Conclusions

- Metacognitive instruction was beneficial in terms of improving listening proficiency and raising students' awareness of their L2 learning (listening strategy use).
- The inclusion of discussion on the use of strategies, feedback to learners on their performance, as well as self-assessments and reflections helped them to grow in a more strategic behaviour, to learn to orchestrate the use of strategies and to be aware of mental translation.
- More time allocated to the "listening" and "post-listening" phases, in the classroom, encouraged learners to verify (through discussion with peers) their perceptions, reflect on their performance and plan what strategies they would try or use the next time, etc.

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Thank you!