



## 9<sup>th</sup> International Conference of Second Language Pedagogies



# Developing linguistic strategies for source use among international undergraduate engineering students.

Dr. Alys D. Avalos-Rivera

The University of British Columbia

[alys.avalos@ubc.ca](mailto:alys.avalos@ubc.ca)

# OUTLINE

1. Learning to Navigate Academic Intertextuality
2. A Pedagogical Intervention
3. The Study
  - ❑ Research Design
  - ❑ Findings and Discussion
  - ❑ Conclusions

# LEARNING TO NAVIGATE ACADEMIC INTERTEXTUALITY

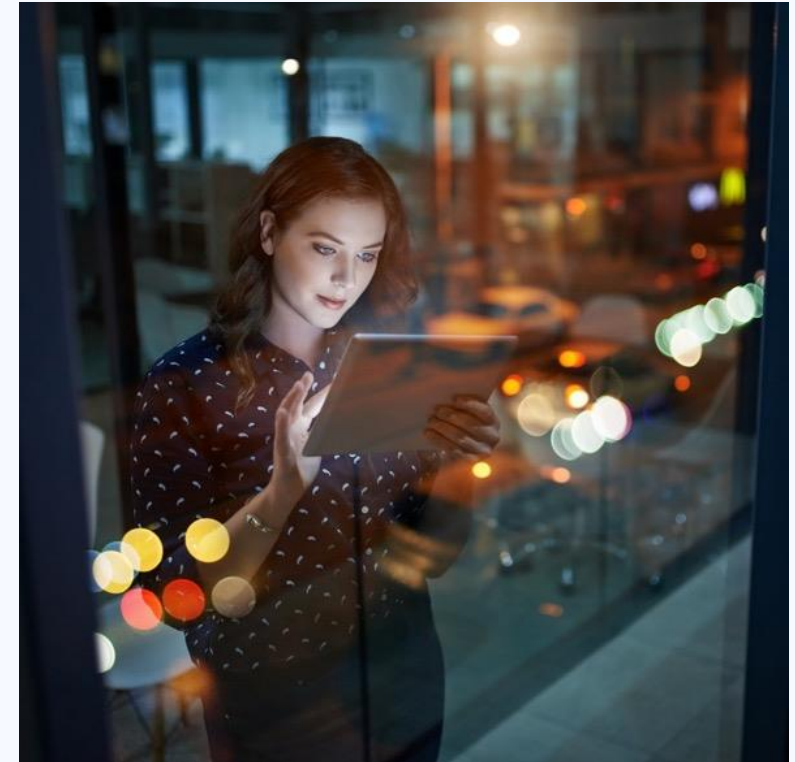


# Engaging the voices of others in one's own writing.

A long and complex learning process (Pennington, 2010, Pecorari et al., 2012).

Mediated by the aspiring writers' prior intertextual experiences (Chandrasoma et al., 2004).

Challenges are increased when the novice writer needs to overcome linguistic and cultural barriers





## What we know about this learning process:

### It requires:

- Highly developed reading comprehension (McGinley, 1992; Spivey & King, 1989)
- Familiarity with synthesis writing (Spivey, 1997),
- A language proficiency that L2 novice writers are still in the process of developing (Baba, 2009; Grabe & Zhang, 2013; Yu, 2008)



# A PEDAGOGICAL INTERVENTION



# Intervention Context

A first-year program for L2 undergraduate students with a strong academic background who require additional support to develop their L2 academic literacy.

- 10 months of credit-bearing explicit instruction on academic literacy
- Content and Language Integrated Learning (CLIL) approach
- Systemic Functional Linguistics
- Task-based approach

# Seven Weeks of Source Use Instruction

## ***Purpose***

Support the development of discipline-specific source use practices among a cohort of L2 novice writers enrolled in a first-year undergraduate engineering program.

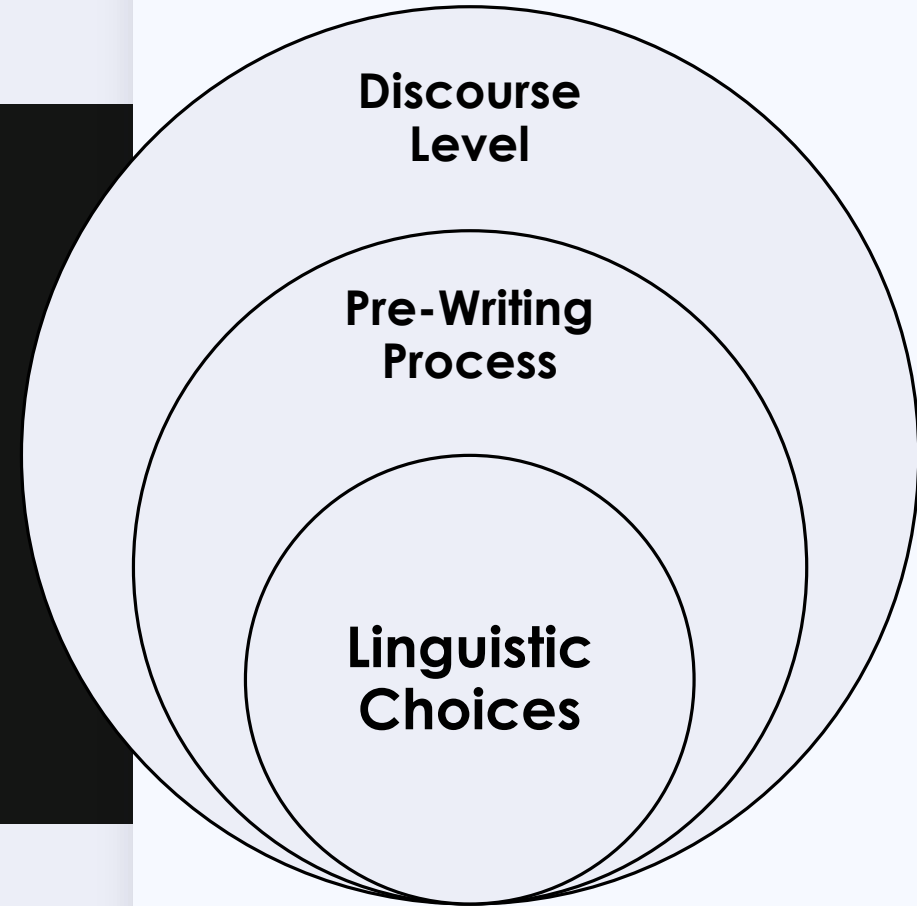
## ***Background***

Evidence regarding inappropriate textual borrowing among engineering master's thesis (Eckel, 2011).

A view of intertextuality as a heteroglossic phenomenon or as a manifestation of the dialogic nature of all verbal communication (Martin & White, 2005).



# Three Levels of Instruction



1. Conversations regarding source-use disciplinary practices characterizing them as tools used to engage academic writers and readers in the collective generation of knowledge.

2. Instruction on the pre-writing process that enable successful intertextuality:

- Evaluation and selection of reliable sources
- Organization of notes and bibliographic information.
- Use of software tools to facilitate that organization

3. Instruction on linguistic choices that help writers convey stance and claim membership in a community of academic writers in Applied Science (Mott-Smith et al., 2017).

- Use of textual shifts to generate paraphrased and summarized texts from notes.

# THE STUDY

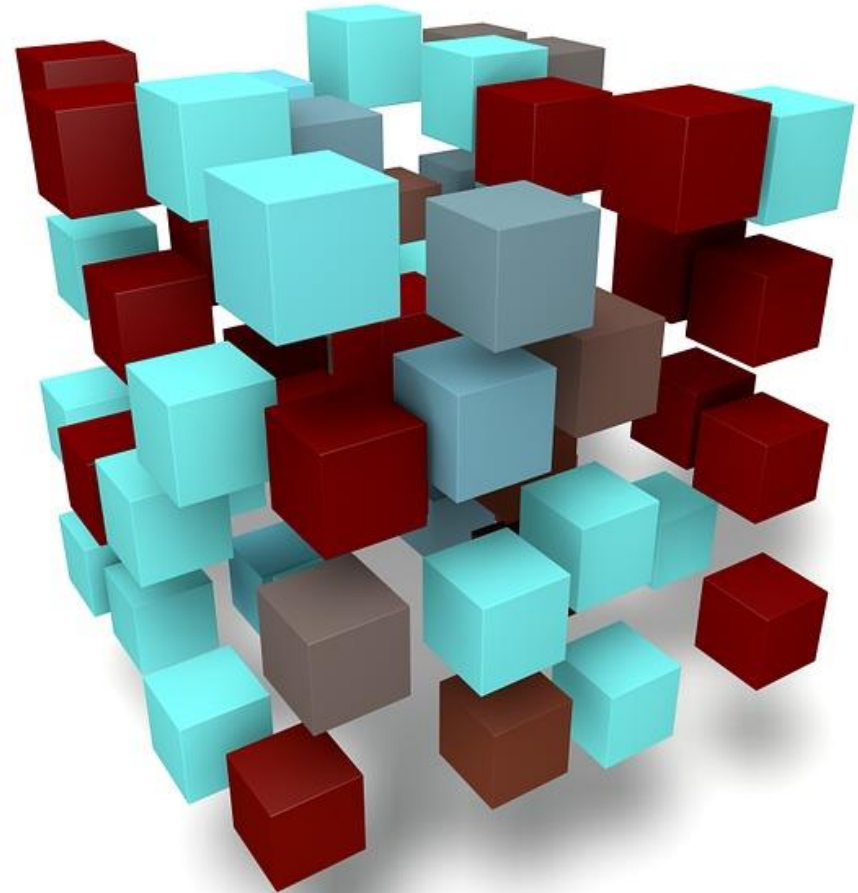
FIRST-YEAR ENGINEERING STUDENTS' INTERTEXTUALITY

## PURPOSE AND RESEARCH QUESTIONS

Further our present understanding of L2 novice academic writers' beliefs about the role of published sources in their writing and their actual source use practices after being exposed instruction.

- How do first-year international undergraduate students perceive the role of source use in their writing after receiving explicit instruction on the subject?
- Is students' ability to recognize problematic source correlated to their perceptions of the role of source use in their writing? If yes, to what extent, if not why not.
- How did the participants' textual borrowing practices change over time during and four months after specific instruction on academic source?

# RESEARCH DESIGN



## PARTICIPANTS

- 6 participants: 18 to 20 years
- 3 of them identified as women and 3 as men.
- All participants in this case study identified Mandarin as their first language.
- Below band 6 in IELTS test

## TEXTS

A descriptive report (Assignment 1)	A problem-solution text (Assignment 3)	Scholarly Research Report (IMRD)
Define and describe main features of a discipline-specific term.	Describe, and explain a discipline-specific problem/issue and present and evaluate a possible solution	Present the results of a term-long observation-based research project (campus-wide helmet use among cyclists) following the IMRD structure used in scholarly journals.
350-500 words	400-600 words	1200-1700
Submitted after 4 weeks of instruction.	Submitted after 3 months of instruction (by the end of term 1).	Submitted after 7 months of instruction (by the end of term 2).

# Textual Analysis (Halliday & Matthiessen, 1999; Yasuda, 2015)

## Textual Borrowing (word/clause)

Total number of clauses with borrowed material per text

Clauses with verbatim tokens

Rate of verbatim borrowed material per text .

## Types of textual transformations used to quote sources.

Lexical substitution (synonyms, hypernyms or hyponyms).

Minor transformations (grammatical level) and deletions.

Major rank shifts: nominalizations and denominalizations.



Confidence in Writing	Pragmatic approach to writing	Understanding authorship
Top-down approach to writing	Knowledge about plagiarism	Bottom-up approach to writing

## Survey: Student's Beliefs about their own source use skills.

An adaptation of the Student Authorship Questionnaire (SAQ) by Pittam and colleagues (2009).

6 dimensions

18 Likert-scale questions

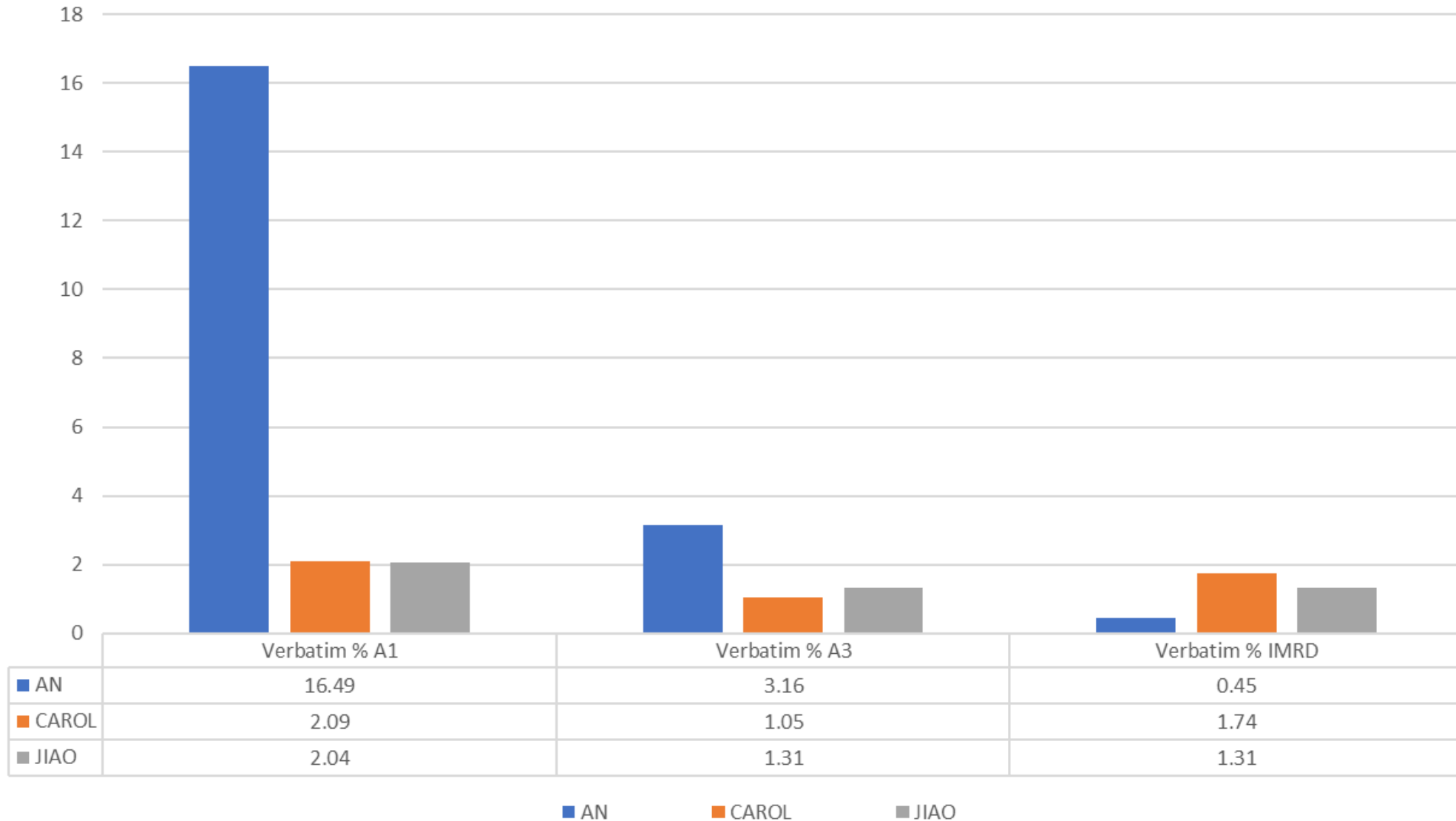
## RESULTS AND DISCUSSION



# **PATCHWRITING**

VERBATIM BORROWED MATERIAL RATE

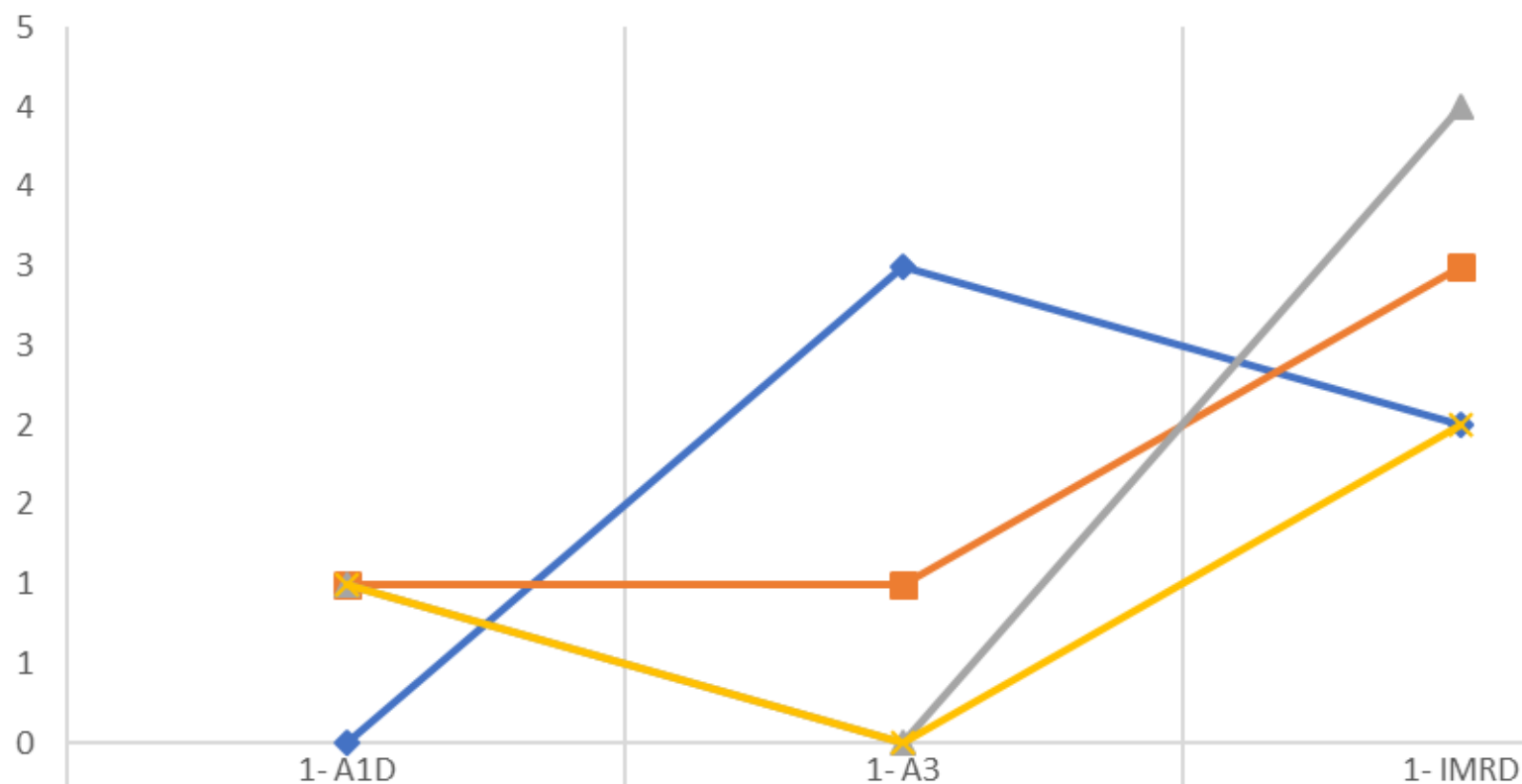
**Fig 1: Percentage of verbatim borrowed language per assignment**



# **TEXTUAL TRANSFORMATIONS**

## FIGURE 2: TEXTUAL TRANSFORMATIONS (AN'S CASE)

Lexical Substitution    Minor Lexico-Grammatical Shifts    Rank Shifts    Successful RS



Lexical Substitution

Minor Lexico-Grammatical Shifts

Rank Shifts

Successful RS

0

3

2

1

1

3

1

0

4

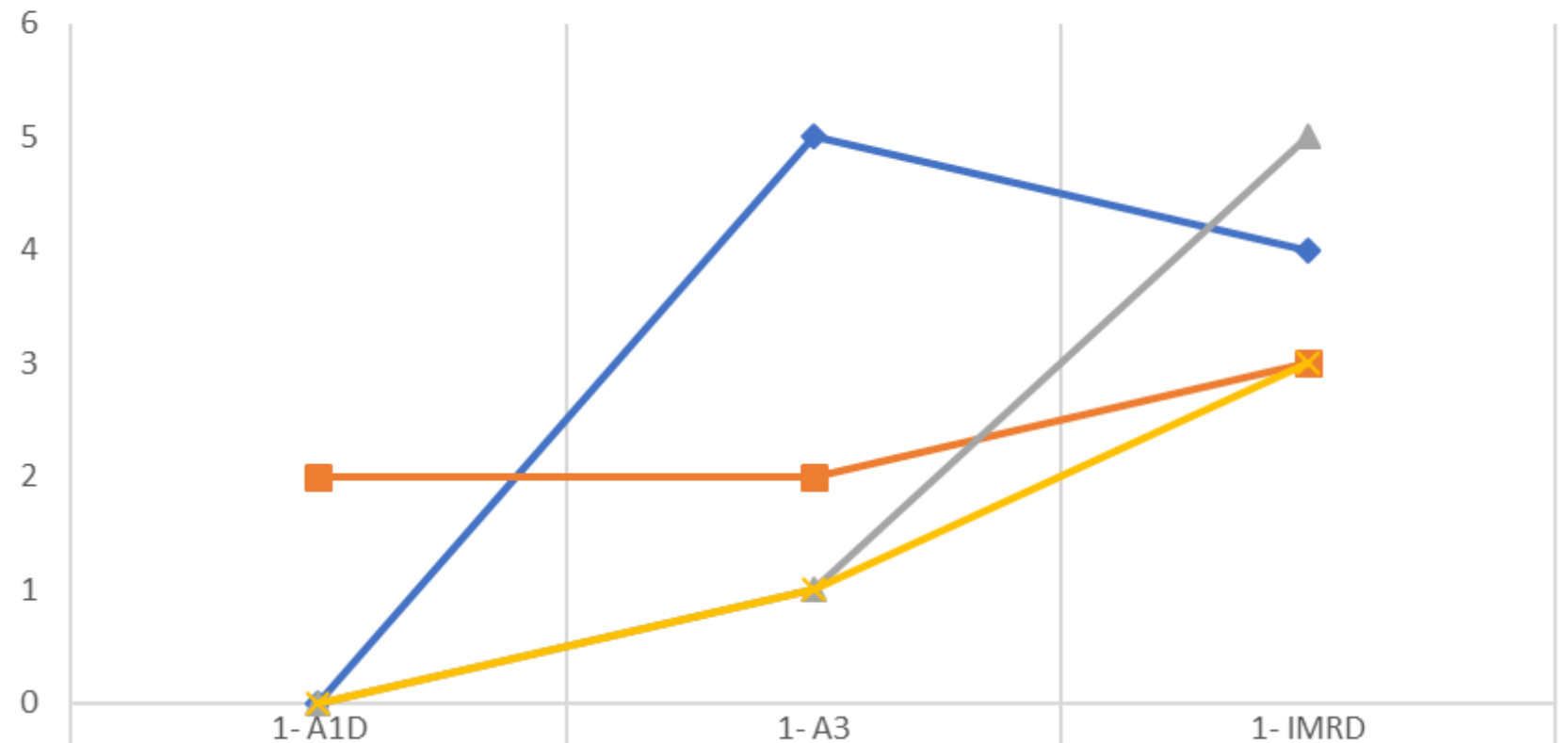
1

0

2

# FIGURE 3: TEXTUAL TRANSFORMATION (CAROL'S CASE)

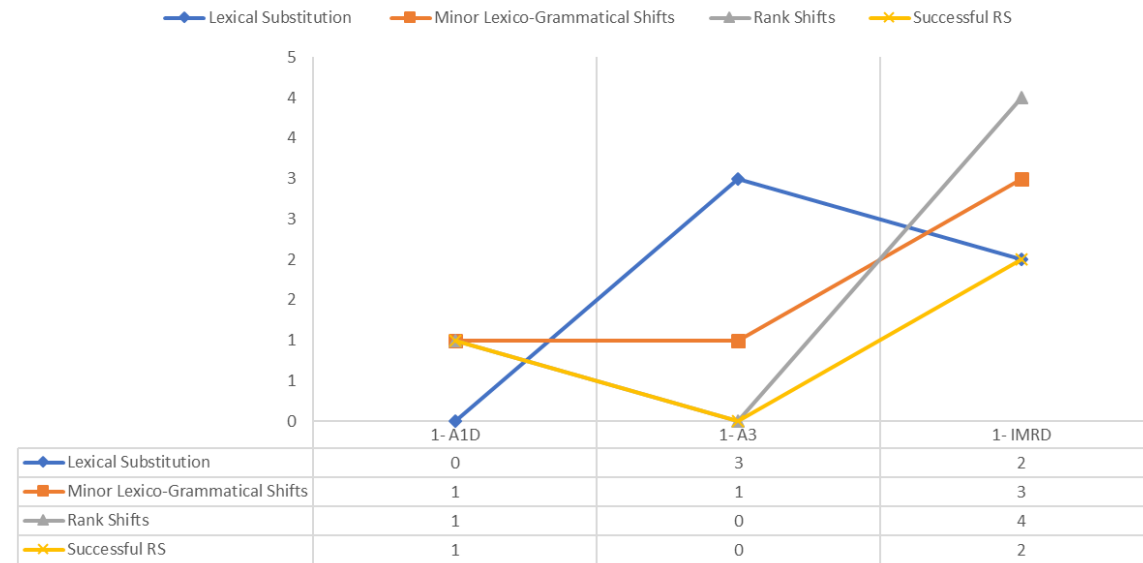
Lexical Substitution   Minor Lexico-Grammatical Shifts   Rank Shifts   Successful RS



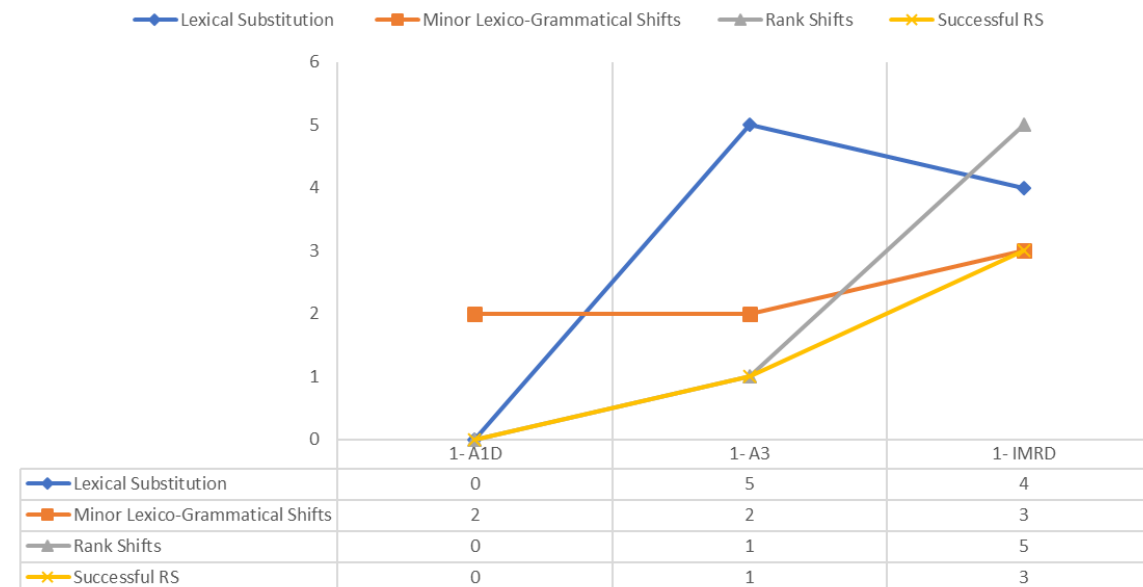
Lexical Substitution	0	5	4
Minor Lexico-Grammatical Shifts	2	2	3
Rank Shifts	0	1	5
Successful RS	0	1	3



**FIGURE 2: TEXTUAL TRANSFORMATIONS (AN'S CASE)**

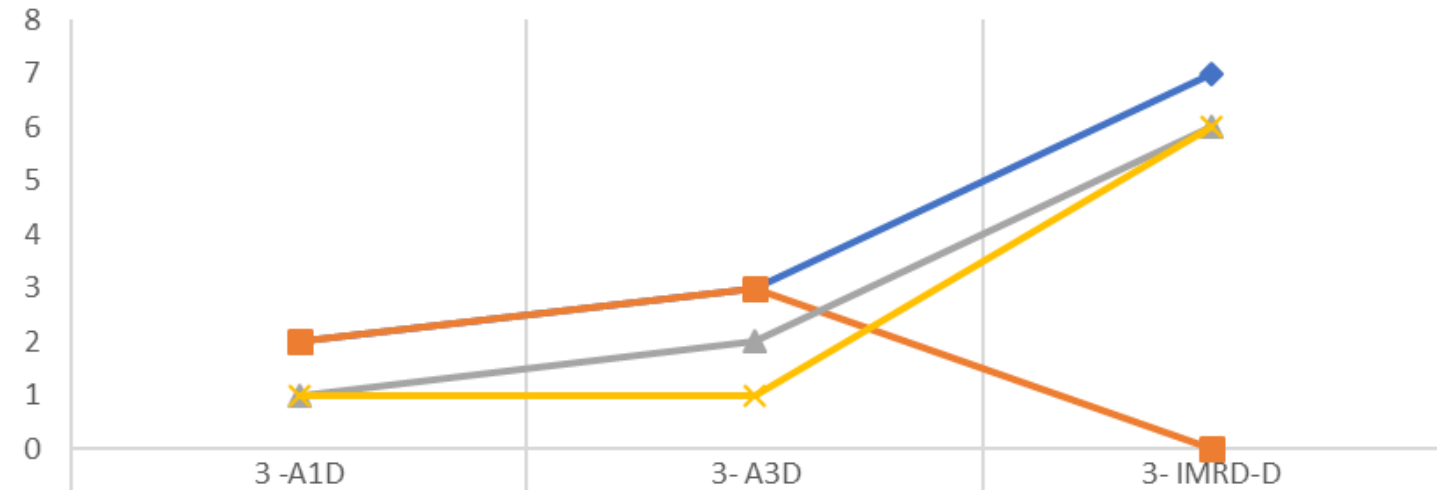


**FIGURE 3: TEXTUAL TRANSFORMATION (CAROL'S CASE)**



## TEXTUAL TRANSFORMATIONS (JIAO'S CASE)

Lexical Substitution   Minor Lexico-Grammatical Shifts   Rank Shifts   Successful RS



Lexical Substitution	2	3	7
Minor Lexico-Grammatical Shifts	2	3	0
Rank Shifts	1	2	6
Successful RS	1	1	6

## DISCUSSION

The path followed by these three learners shows that language development does not occur in a linear and straight progressive fashion, but is more likely to be represented as a system in which learners dynamically adapt to specific communicative needs (Larsen-Freeman, 2006).

The participants' level of confidence in choosing one or other textual transformation fluctuated through time.

Some common patterns in the increasing use of more sophisticated forms of textual manipulations to convey meaning seem to have emerged.

The analysis showed that the participants ability to apply acceptable forms of intertextuality had moved from the starting point, but was still a work in progress.

# **TRENDS IN THE SIX DIMENSIONS OF THE SAQ**

Mean scores per dimension (41 participants)

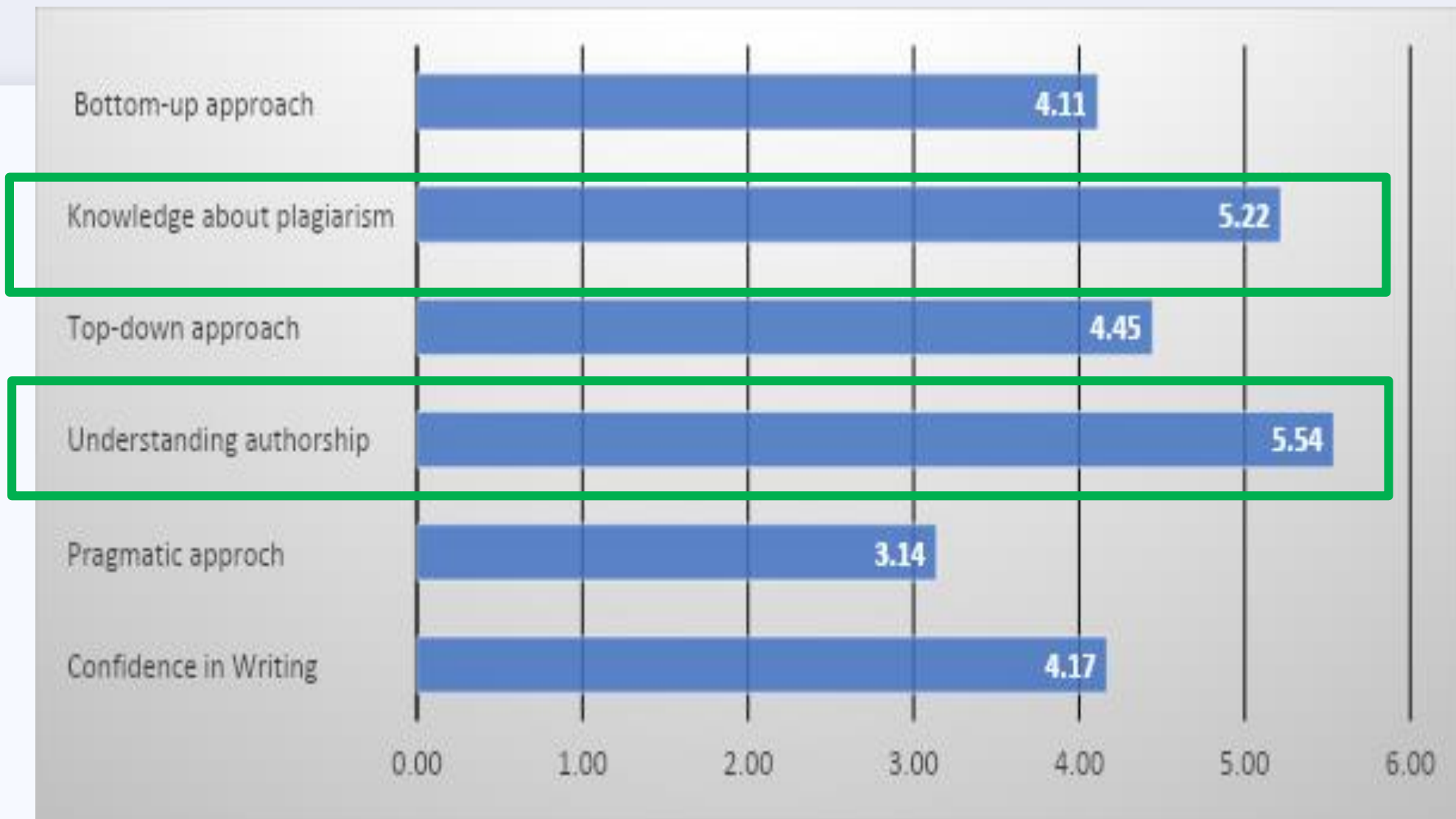


Figure 4: Trends in the dimensions of the Student Authorship Questionnaire (N=41)

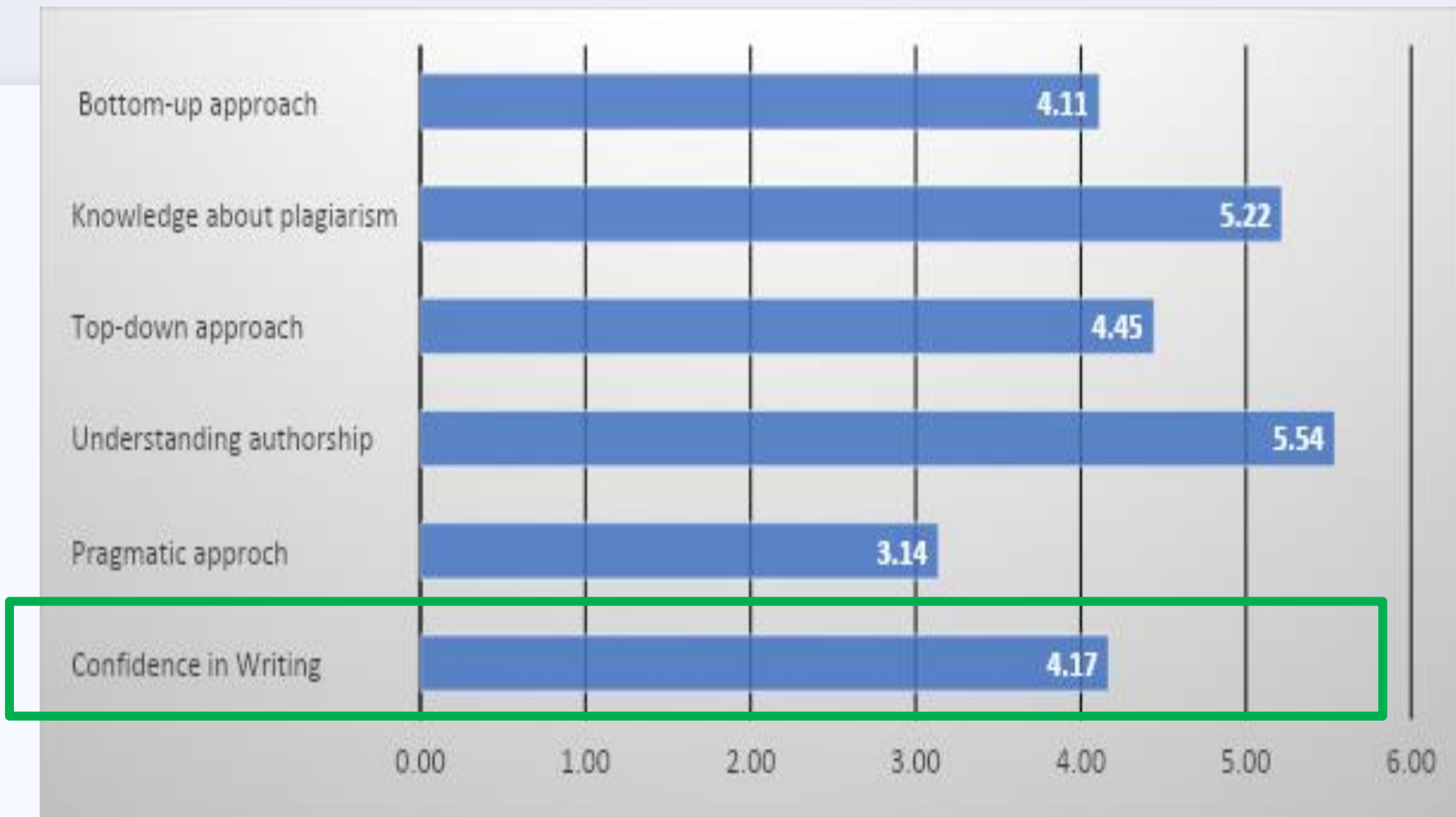


Figure 1: Trends in the dimensions of the Student Authorship Questionnaire (N=41)

## POSSIBLE INTERPRETATIONS

This variation in the responses suggests that the ability to recognize one layer of intertextual meaning does not necessarily account for the individual's overall level of sophistication to engage in academic intertextuality, which has previously been singled out as particularly difficult for novice academic writers (Angélil-Carter, 2014). However, the fact that some of the students had achieved a modest level of confidence in using multiple textual strategies gives us some hope regarding the potential effect of instructions.



# References

- Angélil-Carter, S. (2014). Stolen language?: Plagiarism in writing. In *Stolen Language?: Plagiarism in Writing*. Taylor and Francis.  
<https://doi.org/10.4324/9781315840185>
- Bakhtin, M. M. (1981). *The dialogic imagination: Four essays*. University of Texas Press.
- Chandrasoma, R., Thompson, C., & Pennycook, A. (2004). Beyond Plagiarism: Transgressive and Nontransgressive Intertextuality. *Journal of Language, Identity & Education*, 3(3), 171–193. [https://doi.org/10.1207/s15327701jlie0303\\_1](https://doi.org/10.1207/s15327701jlie0303_1)
- Halliday, M. A. K., & Matthiessen, C. M. I. M. (1999). *Construing experience through meaning: A language-based approach to cognition*. Cassell.
- Larsen-Freeman, D. (2006). The emergence of complexity, fluency , and accuracy in the oral and written production of five Chinese learners of English. *Applied Linguistics*, 27(4), 590-619. <https://doi.org/10.1093/applin/aml029>
- Mott-Smith, J. A., Tomaš, Z., & Kostka, I. (2017). *Teaching effective source use : classroom approaches that work*. University of Michigan Press.
- Pecorari, D., Shaw, P., Irvine, A., Malmström, H., & Mežek, Š. (2012). Reading in tertiary education: undergraduate student practices and attitudes. *Quality in Higher Education*, 18(2), 235–256. <https://doi.org/10.1080/13538322.2012.706464>
- Pennington, M. (2010). Plagiarism in the academy: Towards a proactive pedagogy. *Writing & Pedagogy*, 2(2), 147–162.  
<https://journals.equinoxpub.com/WAP/article/viewFile/9974/7315>
- Pennycook, A. (1996). Borrowing Others ' Words :Text, ownership, memory, and plagiarism. *TESOL Quarterly*, 30(2), 201–230.
- Pittam, G., Elander, J., Lusher, J., Fox, P., & Payne, N. (2009). Student beliefs and attitudes about authorial identity in academic writing. *Studies in Higher Education*, 34(2), 153–170. <https://doi.org/10.1080/03075070802528270>
- Yasuda, S. (2015). Exploring changes in FL writers' meaning-making choices in summary writing: A systemic functional approach. *Journal of Second Language Writing*, 27(Mar), 105–121. <https://doi.org/10.1016/j.jslw.2014.09.008>



# Q&A?

Subtitle goes Here