

# Persuasive Discourse

Exploring the links between verbal working memory, personality traits, and the ability to produce persuasive discourse in high school students

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# Overview of the larger persuasive project

**Problem:** School-based SLPs are required to assess and treat persuasive skills in their students with language problems, yet lack adequate elicitation procedures and benchmarks to carry out this mandate.

Typically developing (TD) high school students in grades 9-12 in

- Wisconsin, U.S.A = 113 students
- Queensland, Australia = 66 students

(Heilmann et al., 2015)

# What is persuasion?

**Persuasion involves the use of argumentation to convince another person to perform an act or accept the point of view desired by the persuader. (Nippold, 2007)**

This type of discourse is different from narration or exposition, is directed to a specific audience, and is social.

It is one of the most complex sophisticated language tasks that high-school students complete (ACARA, 2015).

It is the type of discourse we engage in on a daily basis (politics, arguments,...). Persuasion plays a role in decision making and analyzing different opinions.

# The persuasion knowledge model

Three knowledge structures interact to shape and determine the outcomes of **persuasion attempts**:

1. Topic knowledge
2. Persuasion knowledge
3. Agent knowledge (beliefs about the traits, competencies, and goals of the persuasion agent such as an advertiser or salesperson);

What other factors may influence a students' performance **to produce** persuasive discourse?

Working memory, language proficiency, personality, age / year of schooling?

# Persuasive discourse – influencing factors?

**Working memory** – involved in strategic processing and storage of information. Generation may not be as susceptible to WM deficits as retelling. Previous small-scale research found small (-.023 to -.478) non-significant correlations between persuasive discourse measures and WM (Moran et al., 2012). However, quality of discourse was not assessed.

**Language ability** – at word and sentence level.

**Personality** – has received much attention in psychology literature or related to advertising (e.g., Nussbaum, 2003)

# Development of persuasive discourse?

**Adolescence** is a time of great social development (Nippold, 2007).

Construction of self-identity, development of independent values, morals, and opinions.

Persuasive discourse is a medium for developing social skills, and one's sense of identity (Turkstra, 2000)

# Research Questions

1. Are there differences in persuasive discourse performance between grades 8, 10, and 12?
2. What are the correlations between persuasive discourse measures (quality, verbal productivity, semantic diversity, grammatical complexity) and with WM, personality traits, or language competence?



# Methods

1. Persuasive Discourse Task (Heilmann et al., 2015)
2. Recalling sentences subtest – RS (CELF-4) – language competence
3. Competing Language Processing Task (WM) (Gaulin & Campbell, 1994) – measure of executive functioning
4. Big 5 Personality domains – brief measure (Gosling et al., 2003)

**Students select an issue - *suggested* Topic List provided - from:**

- ✓ School, Work or Community

**Direct their argument** for a change in policy toward an authority figure, with the examiner standing in for a:

- ✓ Principal, Boss, or Governmental Official (e.g., mayor, senator)

**After writing notes** (not sentences) on a planning sheet:

- ✓ Speak persuasively for several minutes
- ✓ Without interruption (i.e., a monologue, not a dialog)
- ✓ Prompted only by their notes + the examiner's

“Is there anything else you can tell me?”

**Persuasive Task**

Mixing speaking and writing makes the task more authentic since this is how extended adult persuasion is structured.

# Planning Sheet

I am talking to my \_\_\_\_\_ *i.e., principal, boss, government official*

## What to Talk about When Trying to Persuade Someone

Points	What's Covered?	Notes
1. Issue Identification	What rule or situation do you want changed? What would you change it to?	
2. Supporting Reasons	What facts or values or evidence helps your side? Be sure to include how your change would help or benefit the listener or people the listener cares about.	

- Additional points to be covered: Counter Arguments, Response to Counter Arguments, Compromises (aka., fallback position or Plan B), Conclusion
- PSS is largely based on the seven points listed on the planning sheet

# Participants

66 high school students (grades 8, 10, and 12): 44 girls, 22 boys.

No known history of language difficulties.

Performing within the average range in English at school.



# Results – Research Question 1

Improvement in performance on microstructure measures, but  
No *significant* differences between grades on any of the measures

	Grade 8		Grade 10		Grade 12		eta <sup>2</sup>
	M	SD	M	SD	M	SD	
PSS	22	4	22	4	22	6	.001
NDW	119	40	135	33	145	63	.054
UTT	20	11	21	9	24	18	.021
MLU	15.2	4.1	16.4	4.0	17.5	4.1	.050

PSS = Persuasive Scoring Scheme; NDW = number of different words; UTT = no. of utterances; MLU = mean length of utterance

# Results – Research Question 2

## For all students combined

- PSS correlated with UTT (.352\*\*) and NDW (.368\*\*), not MLU (-.093)
- PSS – significant correlations with WM (.337\*\*) and RS (.422\*\*)
- UTT/NDW – significant correlations with WM (.386\*\* and .469\*\*)
- No correlations between personality domains and persuasive measures for all students combined (n = 66)

## Results – PSS correlations by grade

	Grade 8 (n = 28)	Grade 10 (n=22)	Grade 12 (n = 16)
Extravert	ns	ns	.623**
Agreeable	ns	ns	.500*
Conscientious	ns	.586**	ns
Emotional stability	ns	ns	ns
Openness	ns	ns	ns

5 personality domains (Gosling et al., 2003); \*  $p < .05$ ; \*\*  $p < .001$

# Summary and Future directions

- Persuasive discourse performance seems relatively stable during the high-school years.
- Persuasive samples revealed very complex syntax –promising context for eliciting language samples.
- Persuasive quality shows correlations with executive functioning (WM) and language competence (RS).
- Future studies should investigate persuasive discourse performance in high school students with developmental language disorders.



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For a copy of the protocol, the slides  
and our previous presentation  
(Heilmann et al., 2015)