

A Longitudinal Study of Writing by Psychology Majors:

A Quantitative Text Analysis

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Introduction

- Hartley, Pennebaker and Fox (2002) performed a LIWC analysis of abstracts, introductions and discussions.
- APA Style emerged as a part of the Behaviorist movement in Psychology
- APA writing style is a genre different from ones in Science and Arts & Humanities
- This archival study examined student papers in electronic department portfolio
- We asked whether and how papers vary from first to fourth year in both linguistic features and psychological processes
- The overall study focuses on four papers, however; present analysis focuses on 2nd and 4th year papers due to similar formatting which allows an analysis similar to Hartley et al.
- Papers were broken into abstracts, introductions, and discussion sections for analysis with the goal of comparing students papers with an analysis of published articles.

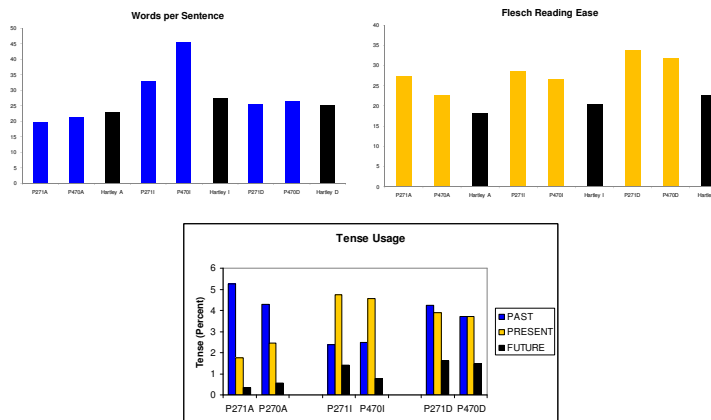
Method

- Analyzed the structure and language of research papers from four different levels of undergraduate psychology classes
- Papers in WebPortfolio for Psych majors
- N = 23 students provided complete papers
- Linguistic Inquiry and Word Count (LIWC) Software & MS Word Readability statistics
- Performed analysis for 11 variables from the LIWC dimensions.

LIWC Dimensions

- **Standard Linguistic**
 - Dictionary Words *Percent captured*
 - Words Per Sentence *Mean Number*
 - Six Letter Words *Percent*
- **Psychological Processes**
 - Percent Passives
 - Tentative *Maybe, perhaps, guess*
 - Certainty *Always, never*
 - Past, Present and Future *Percent tense captured*
- **Microsoft Word Readability**
 - Flesch Reading Ease *Readability statistic*
 - Passive sentences *Percent*

LIWC Linguistic Significances



LIWC Linguistic Means

Course	Abstract		Introduction		Discussion	
	P271	P470	P271	P470	P271	P470
WPS	19.88	21.36	32.81	45.64	25.73	26.68
DICTIONARY	79.20	79.14	79.50	74.71	83.12	81.30
SIX LETTER	33.14	35.48	31.16	30.88	29.50	29.59
PASSIVE	31.13	31.30	18.95	24.61	24.11	25.61
FLESCH	27.29	22.66	28.49	26.60	33.85	31.68
PAST	5.25	4.28	2.38	2.50	4.25	3.73
PRESENT	1.74	2.44	4.72	4.55	3.90	3.73
FUTURE	.34	.56	1.42	.77	1.62	1.46
TENTATIVE	2.88	2.85	2.95	2.07	3.77	3.16
CERTAIN	.43	.80	.75	.722	.72	.89

Web Portfolio

University of Wisconsin-Eau Claire

Psychology Courses and Objectives

Psyc 101	Psyc as a Discipline and Profession	Learn APA Style
Psyc 271	Psyc Research Methods	APA style research report
Psyc 300-level	Any upper Psyc class	APA reviews and reports
Psyc 470	Senior Research Seminar	Final APA research report

Results

- 2 (course) x 3 (section) ANOVA was performed for each linguistic variable.
- Of the 11 linguistic variables, 1 (word count) was significant across course.
- Of the 11 linguistic variables, 10 were significant across section of paper.
- Results imply that students in upper and lower-level Psychology courses perform similarly.
- Flesch Reading Ease was consistently rated as "difficult"
- Significant differences for 10/11 linguistic variables across sections.
- There was significantly more use of tentative vocabulary than certain vocabulary.

Implications

- Disappointing similarity in performance across courses. It would be preferable to have a greater difference across courses.
- Suggests little improvement in writing over time.
- Suggests need for better stylistic writing programs or implementation of different grading guidelines.

Discussion

- Students follow APA guidelines across courses.
- Professors can require students to submit a Word Count and Flesch Reading Ease score in with their submitted papers to verify progress
- Future research will include information gathered directly from students on how they learned APA style
- Future research will expand to include text analysis of full APA style papers as well as sectioned analysis.

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