



NEES

NÚCLEO DE EXCELÊNCIA EM TECNOLOGIAS SOCIAIS

SERP WordGen Weekly Brasil

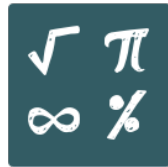


UNIVERSIDADE
FEDERAL DE ALAGOAS



Promoting Text-Based Discussion to Strengthen Literacy Outcomes

WordGen WEEKLY





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Núcleo de Excelência em Tecnologias Sociais

Overview

What we did so far?

What are the main results and
first impressions?

What is next?



Team



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(Team Leader)
Assistant Professor of Foreign Languages at Federal University of Paraná



Leonardo Marques
(Gen. Coord.)
Assistant Professor of Education at Federal University of Alagoas



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(Researcher Leader)
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Master Grad. Student. (PPGI/IC/UFAL) Municipal Department of Education



Geiser Chalco
(Data Science Leader)
Professor of Federal University of the Semi-Arid Region



Catherine Snow
Professor at Harvard Graduate School of Education



Seiji Isotani
Visiting Professor at Harvard Graduate School of Education



Ig Ibert Bittencourt
Visiting Researcher at Harvard Graduate School of Education

**+facilitator
s &
Teachers**



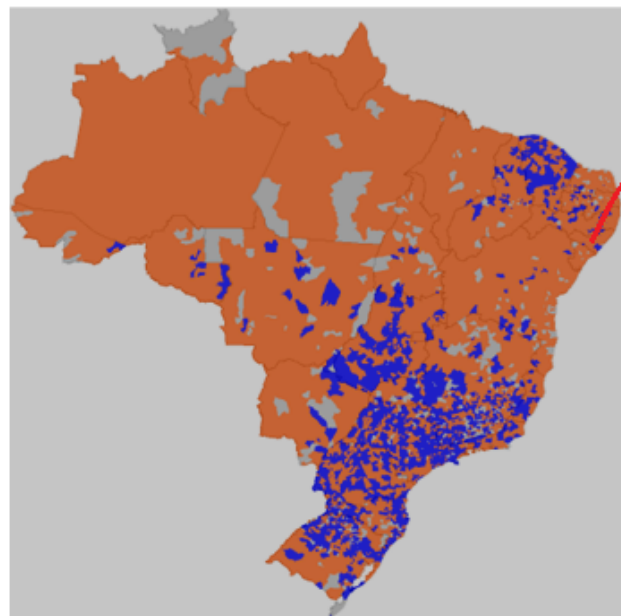
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The City's Context

Target Population

São Sebastião (AL)



Average proficiency by city

São Sebastião (AL)

- No results
- Above national average
- Equal or over national average



6 local (city) schools	2.393 alunos
1 state school	180 alunos


Dados de - 2021

THE PILOT

Target students for the program

Students below grade level (SAEB - 2021)

Grade	Total	Average per classroom	Score/Performance below the average
6th grade	579	34 students	28.7%
7th grade	678	36 students	38.1%
8th grade	632	37 students	34.2%
9th grade	504	36 students	36.1%





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What we did so far?

from **Feb to Jun,**
2023

| Material adaptation/translation

| Training/Preparation

| Study Pilot

| *4 weeks WordGen application*

The Journey

DEVELOP HUMAN, EFFECTIVE AND SUSTAINABLE SOLUTIONS TO IMPROVE LEARNING IN COLLABORATION WITH LOCAL ACTORS.

FOR Students
through education managers, principals, and teachers of small Brazilian municipalities.

NEES EVIDENCE SUPPORT AND EVALUATION

PROFESSIONAL DEVELOPMENT (IN SERVICE) - NEES SCHOOL SUPPORT

LEARNING
ANALYSIS

SYSTEMIC
ANALYSIS

CO-CREATE

IMPLEMENT
&
EVALUATE

SUSTAINABILITY

EXISTING EDUCATIONAL SOLUTIONS

Preparation

Material Cultural-Adaptation (Translt)
Teacher Training

0

Pilot Implementation & Study

Study Design | Validation

01

Pretest and demographic

Students Baseline and literacy
assessment

3 Weeks

2.1

Experimental: WordGen

175 participants
Initial assessment low scores

Intervention

WordGen Weekly
Teaching Assistants | Separated
Groups

02

2.2

Control

50% of participants. (N=175)

Posttest

Post intervention literacy and
vocabulary assessments

04

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PHASE I

Study Design | Validation

3 Weeks

2.1

Experimental: WordGen

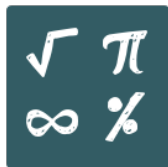
35% of participants
Initial assessment low scores (N=~175)

2.2

Control

50% of participants. (N=175)

WordGen WEEKLY



TRANSLATION
AND
CULTURAL
ADAPTATION

coordination

**MINA
ISOTANI**

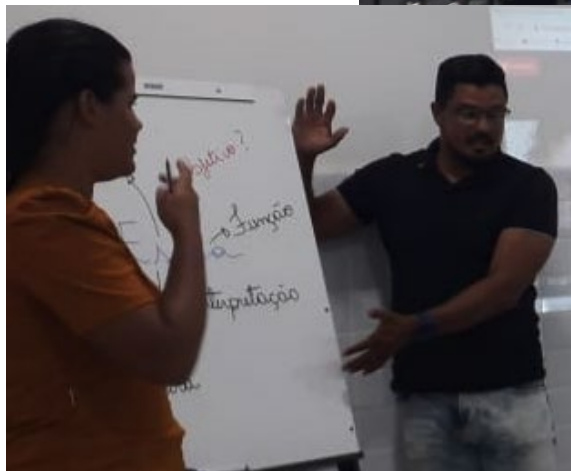




OBJECTIVE

Translate and to adapt the WordGen material from the chosen *Unit Topics*.

Focus groups to validation





Challenge

1. Prioritize topics relevant to Brazil's reality

SERIES 1 PART A

What is the purpose of school?

Should schools be responsible for students' mental health?

Junk food: Should schools sell it?

When should someone be considered an adult?

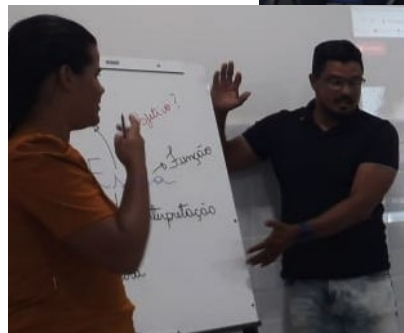


Challenge

2. Adapt exercises' difficulty to students level

- MATHEMATICS and SCIENCE exercises were checked and redesigned when appropriated to be aligned with the Brazilian national curriculum.
- Furthermore, level of students' knowledge were also taken into consideration.

Focus groups to validation

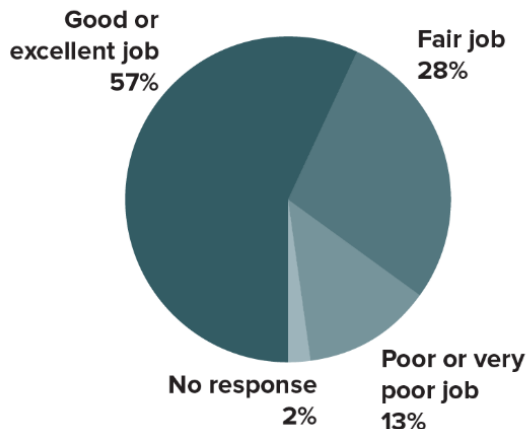


Challenge

3. Data update (find parallel relevant local data)

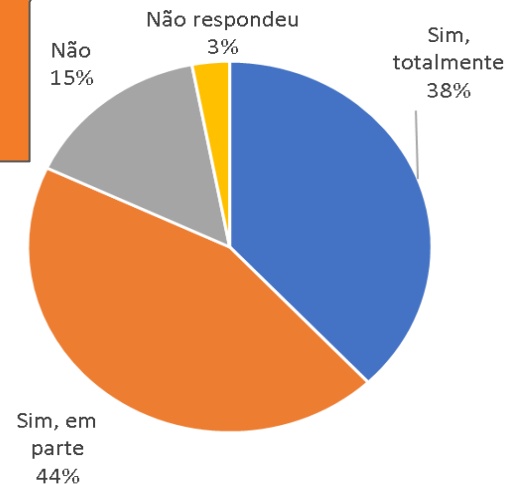
Graphs and data from surveys carried out in Brazil were used in order to adapt the exercises to the students' reality.

How well do local public schools prepare students for college?



The school helps to think about your future and develop skills?

Escola ajuda a definir o futuro e a desenvolver competências?



What we did so far?

Challenge

4. Legal and normative local adaptation

The Cultural content adaptation is necessary because of law differences, youth reality, etc.

The law to buy alcohol in Brazil and USA is different.

"The legal age for voting or joining the military is 18, but those under the age of 21 are not considered mature enough to buy alcohol or, in most states, to rent a car. And clients aged 21–25 are charged a large extra daily insurance fee by most car rental companies".

A idade legal para votar, dirigir, ingressar nas forças armadas ou comprar álcool é de 18 anos. Contudo, mesmo que não sejam considerados maduros o suficiente para casar ou beber álcool, os jovens são incentivados a votar a partir dos 16 anos de idade.



Qual é o objetivo da escola?
analisar | fator | função | interpretar | estrutura

WordGen Weekly Unidade 1.01

Atividade da semana 01:

Qual é o objetivo da escola?

analisar | fator | função | interpretar | estrutura

Por que frequentamos a escola? Enquanto muitos concordam que a escola é importante, existe uma interpretação equivocada quanto ao seu propósito. Algumas pessoas consideram que a função mais importante da escola é ensinar informações factuais. Eles acreditam que todos os

FAÇA AS CONTAS

Como os brasileiros veem suas escolas públicas? Analise os três gráficos abaixo. As informações não correspondem às pesquisas realizadas no Brasil. Considere os dados apenas para o exercício.

Quão bem as escolas públicas preparam os alunos para a faculdade?



Quão bem as escolas públicas preparam os alunos para serem bons cidadãos?



Quão bem as escolas públicas preparam os alunos para o mercado de trabalho?

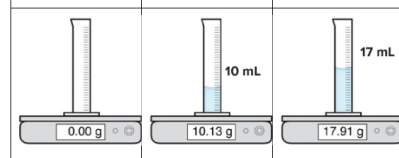


Mariana e Pedro decidiram verificar a densidade da água, mas cada um interpretou a tarefa da professora Marta de maneira diferente.

Mariana coloca um cilindro marcado em milímetros em uma escala e zera a escala, para que não conte a massa do cilindro.

Então Mariana coloca um pouco de água no cilindro e registra o volume e a massa da água.

Em seguida, Mariana acrescenta mais água e registra o volume e a massa novamente.



ASSUMA UMA POSIÇÃO

Defenda sua posição com razões claras e exemplos específicos. Tente usar palavras relevantes da lista de palavras em sua resposta.

DEBATE

Escolha uma dessas suposições (ou crie outras).

A A função primária da escola é preparar os estudantes para o mercado de trabalho.

OU

B A função primária da escola é ensinar os alunos a analisar, interpretar e a pensar por si próprios.

OU

C A função primária da escola é preparar os estudantes para a cidadania democrática.

OU

D A função primária da escola é garantir que todos os alunos tenham conhecimento comum de história, ciência e matemática.

OU

Co-creation of the implementation

Application Format

Separated groups



Each facilitator was responsible for 6 student's groups (ranging from 5 to 6 students)

30 minutes WordGen sessions outside the classroom on pre scheduled time slots



Sivaldo Joaquim
Coordination



School System Support

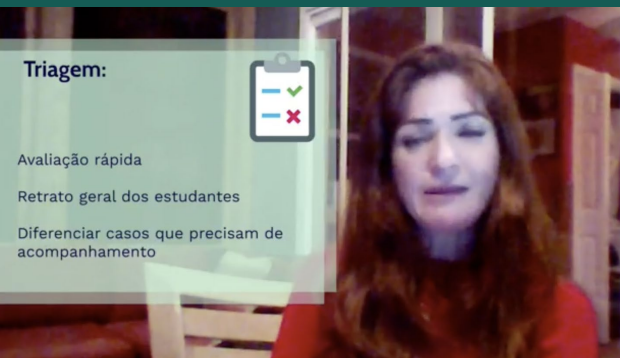
online

Team (facilitators) training



Introduction & Mobilization

Characterization of the program.
Evaluation methods. Strategies for engagement [12 hours]



in service

Weekly supervision during the 5 weeks of application of the program [1 h per week]

in loco

Local workshop focusing on the implementation of the program [8h]

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PHASE I

Study Design | Validation

3 Weeks

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Experimental: WordGen

35% of participants
Initial assessment low scores (N=~175)

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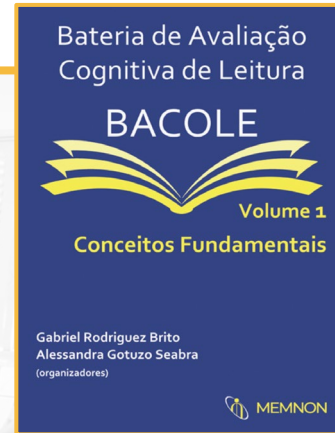
Pilot

Screening Process

**Fluency (Group assessment/application)
Comprehension**

Base Line

**WordGen's vocabulary test
Well-being Inventory (DFS-Short BR)
BACOLE (Cognitive Reading Assessment Battery)
Individual Fluency
Word recognition test
*Cloze test (text comprehension)***



Julia Zanetti Rocca
Coordination

**30% of the
students
couldn't write
their names
properly.**



grupo	gender	n
Controle	F	73
Controle	M	64
Experimer	F	52
Experimer	M	68
Total		257





Preparation

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PHASE I Study

Study Design | Validation

4 Weeks



2.1

Experimental: WordGen

137 participants
Initial assessment low scores

2.2

Control

120 participants.

Brasil



6 schools (3 urban and 3 rural areas) of the public school system in the municipality of São Sebastião (AL);

350 students of the 6th grade of Element. School (age: 10 - 16 y) | Groups: 5 - 6 students per day
257 students data were used.

14 supervised undergrad students (facillitators)

The secretary of education decided to work with facilitators than teachers



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What are the main results and first impressions?

from **Feb to Jun,** | Study Pilot
2023 | *4 weeks WordGen application*

Results - Learning Achievements

What we observed:

- Words readings per minute;
- Reading comprehension;
- Learning vocabulary;
- Competency of reading words and pseudowords (TCLPP)
- Well-being

Pre-test

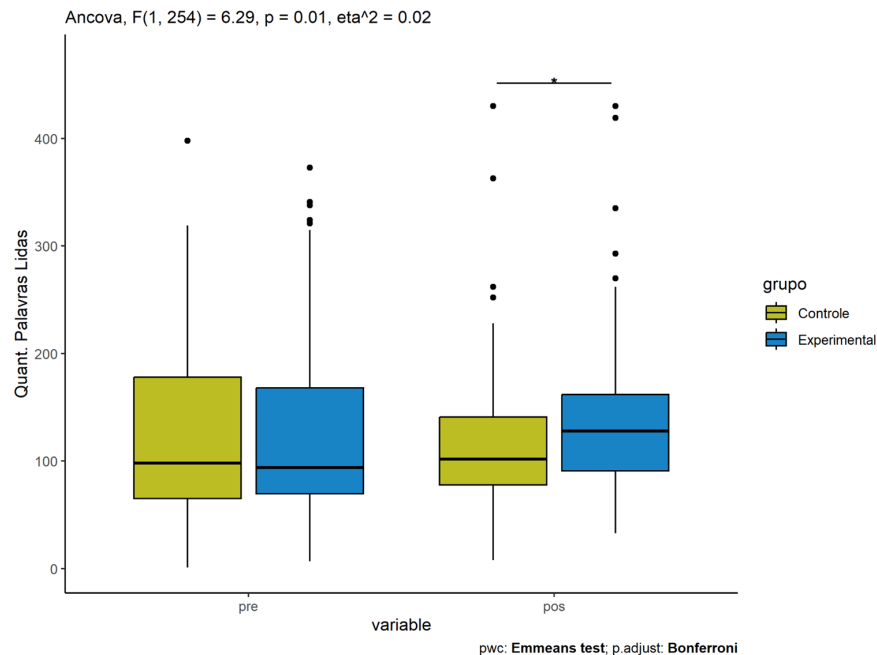


Pos-test



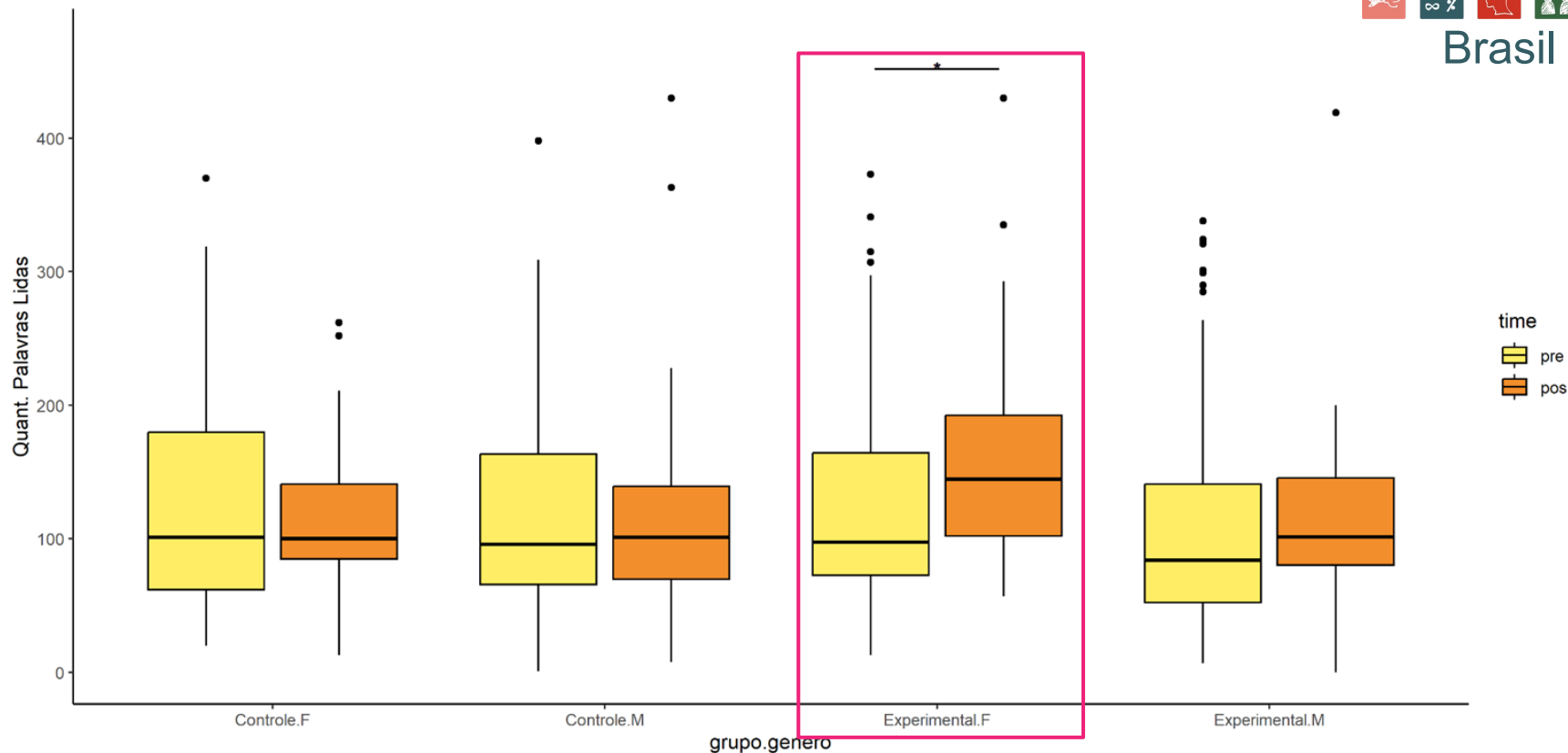
VIDEOS

Words Read per Minute



Grupo	n	M	SE
Control	137	115.319	5.406
Experimental	120	135.16	5.777

Words Read per Minute and Gender



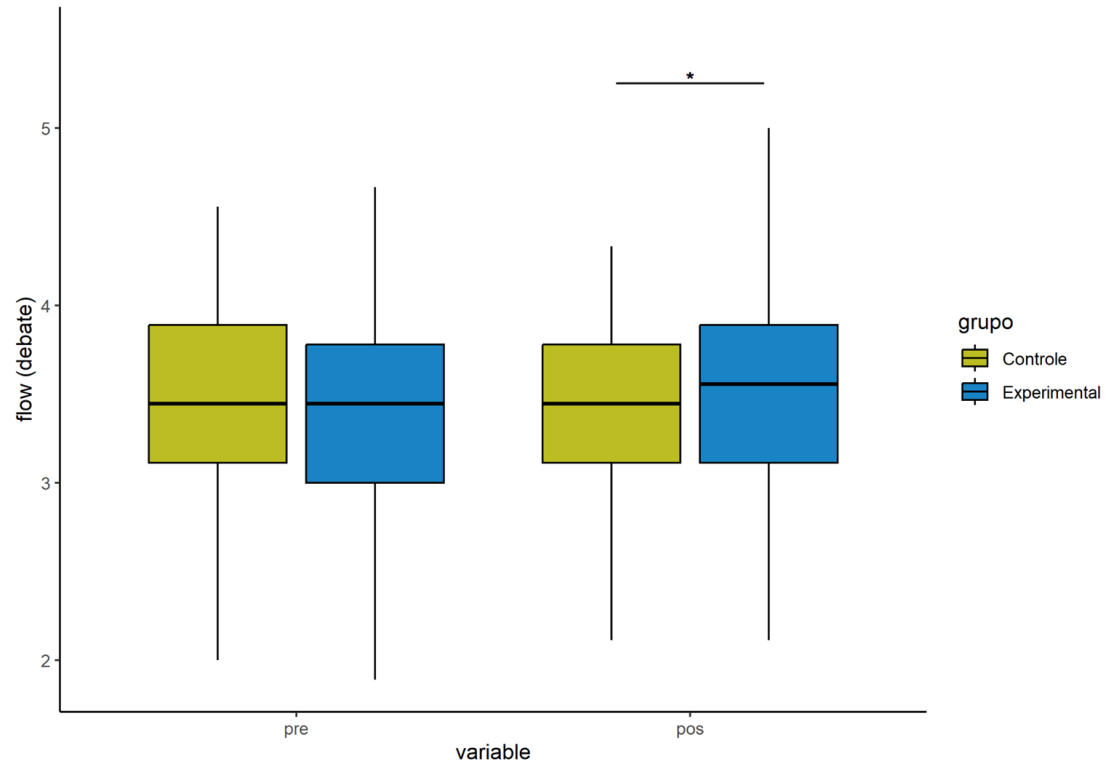
pwc: Emmeans test; p.adjust: Bonferroni

Well-being in Debate Activities



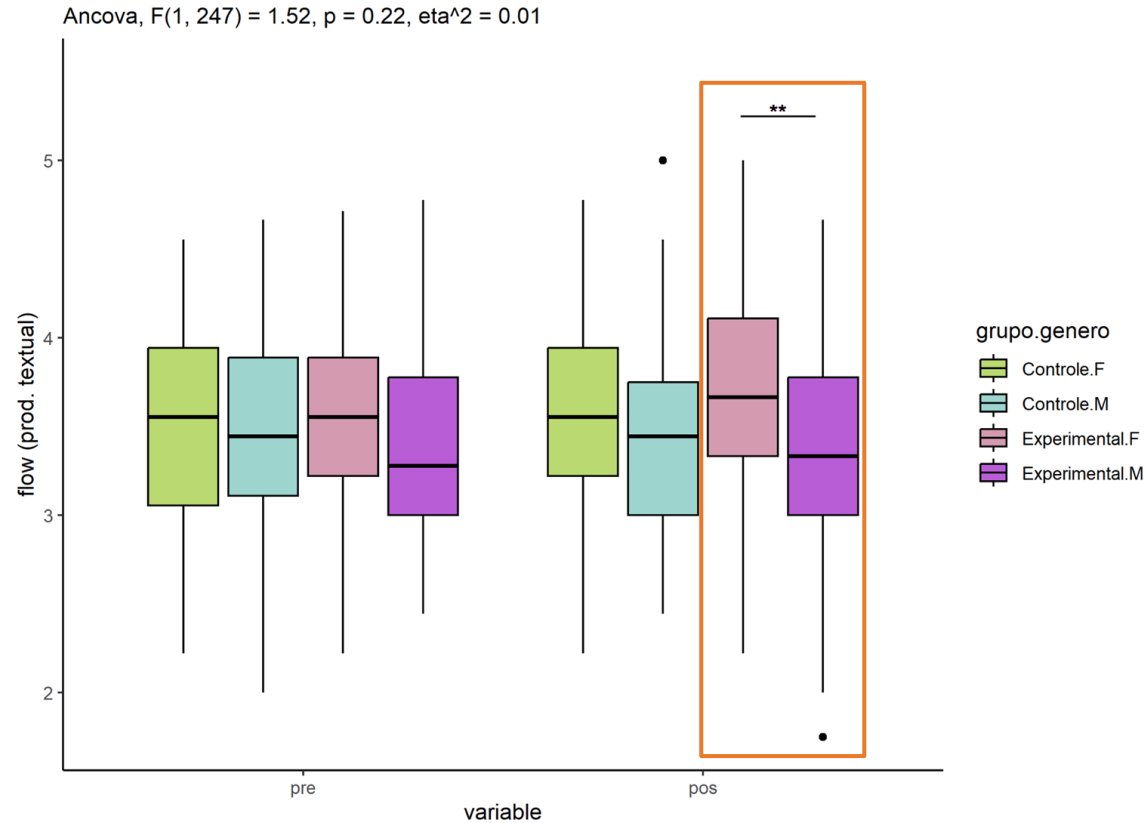
Grupo	n	M	SE
Control	122	3.413	0.045
Experimental	131	3.541	0.043

Ancova, $F(1, 250) = 4.24$, $p = 0.04$, $\eta^2 = 0.02$



pwc: Emmeans test; p.adjust: Bonferroni

Well-being in Text Production Activities



pwc: Emmeans test; p.adjust: Bonferroni

Main Takeaways – Literacy Outcomes

- The WordGen intervention (during the study duration) was the only one that had an effect on **vocabulary learning**.
- There was no effect on **reading** skills learning.
 - **Short duration** (to cause significant effect).
 - Women participants in the **traditional teaching mode** had higher reading scores than men.
 - The difference in reading test scores between men and women is larger in **rural areas**.
 - WordGen **minimizes the difference** between men and women in acquiring reading skills.

Main Takeaways – Well-being and Engagement

The WordGen intervention significantly improves participants' well-being (flow state) in debate activities, regardless of gender or rural background.

Women who participated in WordGen were significantly more engaged than men in text production (writing) and reading activities.

The WordGen intervention significantly improves the engagement of participants from rural areas in text production (writing) and math problem-solving activities.

Main Takeaways – Well-being and Engagement

- Other observations (that should be considered in our observed effects):
 - Girls from rural areas show higher levels of well-being (flow state) than boys in debate activities and text production (writing) and reading.
 - Boys from urban areas are more engaged than boys from rural areas in debate and reading activities.



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