

TESTING THE EFFICACY OF A COGNATE CURRICULUM

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What are cognates?

- Words with similar spelling and meaning in two languages

Edifice- Edificio

Jocose-Jocosó

Contagious-Contagioso

Tranquil-Tranquilo

Impetuous-Impetuoso

Invincible-Invencible

Amorous-Amoroso

Extravagant-Extravagante

Profound-Profundo

Infirm-Enfermo

Amicable-Amigable

Empirical and Theoretical Background:

- ❑ **Considerable previous work (García, 1991; Nagy, 1997; National Reading Panel, 2000; Verhoeven, 1990) suggests that one major determinant of poor reading comprehension, for Latino children and for other lagging readers, is low vocabulary.**
- ❑ **Lack of knowledge of the middle and lower frequency 'academic' words encountered in middle and secondary school texts impedes comprehension of those texts, which in turn impedes the natural process of learning new word meanings from exposure during reading (Stanovich, 1986).**

Continued...

- One strategy believed to be successful in promoting the rapid acquisition of vocabulary by ELLs involves teaching children about the morphological structure of words.
- Researchers believe that it is beneficial for ELLs if instruction on the structural analysis of words includes making students aware of the cross-linguistic morphological relationships between words in their two languages (García & Nagy, 1993; Nagy, García, Durgunoglu, & Hancin-Bhatt, 1993; Jiménez et al., 1996; Nation 2001).

Continued

- This involves making students aware of words that are cognates (words that are spelt alike and have similar meanings in two languages), and making them aware of similarities between derivational morphemes in the two languages (e.g, *motivación-motivation*).
- This study of 4th graders aimed to explore the utility of this type of instructional strategy

Questions guiding our work

- Is there transfer of knowledge about word meanings for English words that have cognate status in Spanish?
- ▣ Is performance on cognates and non-cognates differentially predicted by Spanish & English composite constructs that include measures of orthographic knowledge, breadth of vocabulary knowledge, and derivational morphology knowledge?

Research Question Intervention Study

- Can an intervention developed to teach cognate awareness to Spanish/English bilingual 3rd and 5th graders improve their learning of English words that have cognate status in Spanish?
- Does the cognate recognition strategy transfer to other cognates that have not been instructed?

Subjects

- 130 (122 completed program) 3rd grade Spanish-speaking students
- 128 (105 completed program) 5th grade Spanish-speaking students
- All designated as English Language Learners
- Three public schools in Miami that offered Spanish maintenance for 45 minutes 3 times a week (2 schools implemented at each grade level)
- Majority within each school were Latino/a
- Schools had obtained grades of at least B

Measures

English

Pre & Post-intervention

- Cognate Awareness Test (48 items)
- Extract the Base (28 items)
- WLPB Passage Comprehension

Pre-intervention Only

- WLPB Letter-word ID
- WLPB Picture-Word Vocabulary
- WLPB Listening Comprehension

Post-intervention Only

- SVT Cognate Comprehension (24 items)

Spanish

Pre-intervention Only

- Extract the Base (28 items)
- WLPB Picture-Word Vocabulary
- WLPB Letter-word ID
- WLPB Listening Comprehension
- WLPB Passage Comprehension

Researcher Developed Measures : Cognate Awareness Test

- The cognate awareness test was developed to measure students' awareness of Spanish cognates as a source of information for inferring meanings of unknown English words.**
- Particularly, the test was used to find out if Native Spanish Speaking children recognize the meaning of English words better if these words have a corresponding sound or spelling in Spanish**

Researcher Developed Measures : Cognate Awareness Test

- Example: **edifice**

- building

- committee

- island

- Congress

- The test consisted of a set of multiple choice items that asked students to select one of four definitions provided for the word.

Cognates Awareness Test:

Item Characteristics

High Spanish Frequency & Low English Frequency	Low English Frequency
25. converse <input type="checkbox"/> speak with someone <input type="checkbox"/> fight with someone <input type="checkbox"/> include someone <input type="checkbox"/> leave out someone	26. jest <input type="checkbox"/> defend <input type="checkbox"/> bend <input type="checkbox"/> joke <input type="checkbox"/> observe

Cognate Intervention

- 3 units on *Exploration*: Antarctica, Coral Reefs, & Space
- General lesson on cognates and learning to recognize them on basis of phonology, orthography, and shared meaning.
- Target words consisted of cognates or noncognates
- Units open with a theme-related video and biography of an explorer.
- Pre-teaching of target words using translation equivalents, child-friendly definitions, and extension activities such as those suggested by Beck and colleagues.
- Words then presented in informational texts with comprehension questions inserted at critical points within the text. All reading conducted as group and orally by the teacher

**Instructed
cognates**

permanent

conduct

accumulation

miniscule

consists

potent

isolated

expand

occupies

rituals

**not instructed
cognates**

pensive

obligated

adorn

tranquil

impede

detain

augment

edifice

terminus

profundity

pallid

castigate

anterior

**Instructed
noncognates**

feasible

sway

prey

shallow

source

environment

bound

thrive

replenished

rough

**not instructed
noncognates**

allot

strife

discard

pun

drought

jest

haul

gritty

brittle

snug

feasibility

clutch

leery

Compare Spelling (highlight the differences)

<u>Spanish Cognate</u>	<u>English Cognate</u>
<u>astronautas</u>	__[astronauts]__
<u>momento</u>	__[moment]__
<u>planeta</u>	__[planet]__
<u>fotografia</u>	__[photograph]__

Compare Sound

Astronaut / Astronauta			
Sounds completely different	Sounds slightly different	Sounds similar	Sounds exactly alike
1	2	3	4

Moment / Momento			
Sounds completely different	Sounds slightly different	Sounds similar	Sounds exactly alike
1	2	3	4

Planet / Planeta			
Sounds completely different	Sounds slightly different	Sounds similar	Sounds exactly alike
1	2	3	4

Photograph / Fotografía			
Sounds completely different	Sounds slightly different	Sounds similar	Sounds exactly alike
1	2	3	4

Pre-Teaching Vocabulary

Barrier (barrera)

Direct students' attention to the word barrier in English on the overhead. Ask students what the Spanish cognate for the word barrier is. After eliciting responses give them the word in Spanish (barrera).

Here are some examples that will give you some clues to help you figure out what the word *barrera* means:

- No pudimos entrar a la calle porque el árbol caído creo una barrera que no nos dejaba pasar.
-
- Mi vecino puso una cerca de madera para crear una barrera entre su casa y la mía.

Who can describe what *barrera* means in these examples?

After students provide definitions say, “Barrera quiere decir algo que no permite el paso.” then go back to the overhead to validate elicited responses.

Pre-Teaching Vocabulary Cont.

Now, I'm going to give you some examples of barrier in English.

To keep the rainwater away from the house, we used sand bags to create a barrier.

To protect the president, the policemen created a barrier between him and the crowd.

Who can describe what barrier means in these examples?

After students provide definitions say, “Barrier means something that blocks the way.” Then quickly go back to the overhead to validate elicited responses.

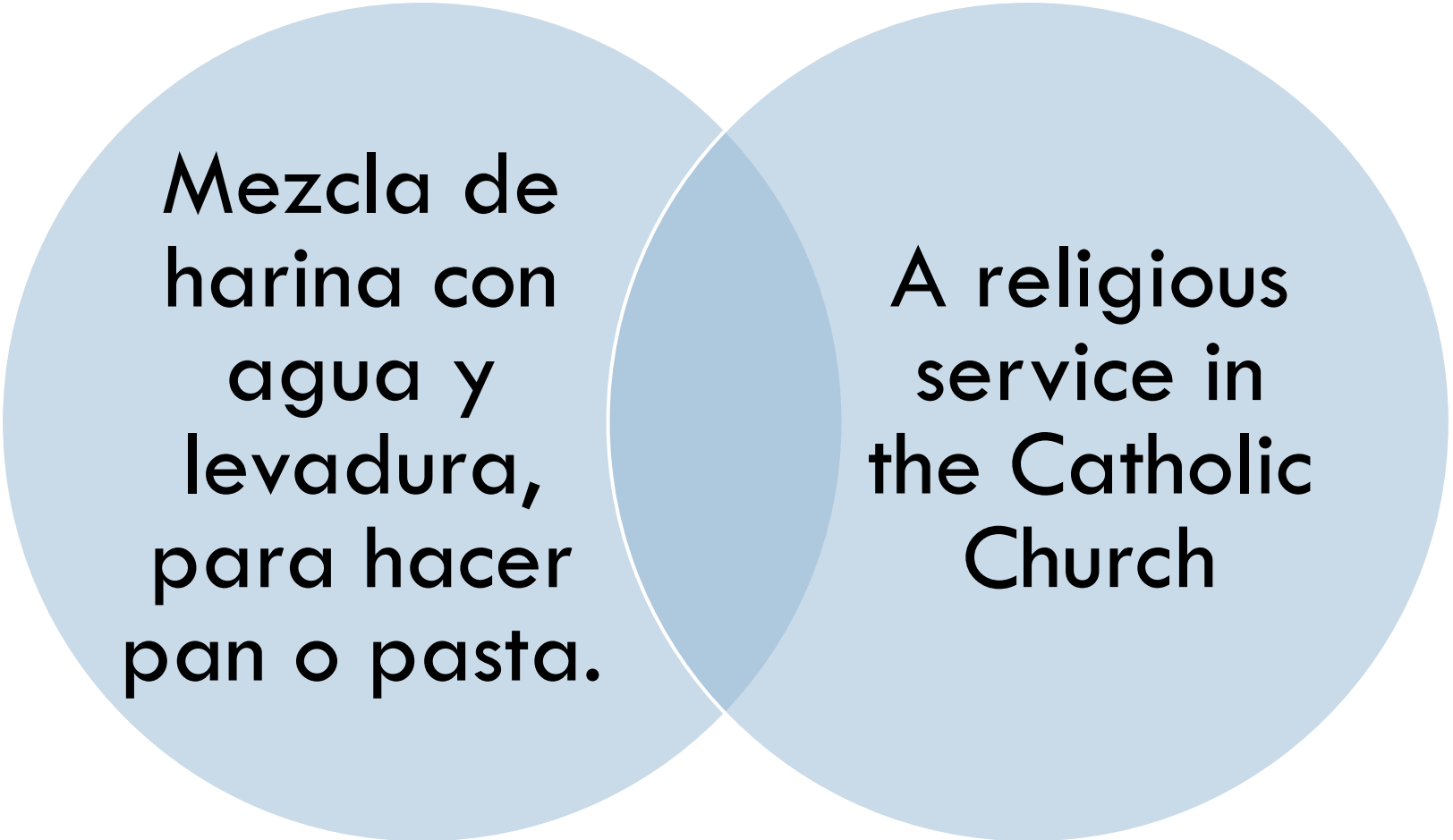
Meaning Making Activity

If you wanted to stop your brother or sister from entering your room what kinds of barriers could you put in front of the door.

For example, I would put a chair as a barrier in front of my door.

Repeat, Restate, & Elaborate Language (RRE) Use the following sequence: when a student responds to a question or elicits a response, carefully repeat the student's response for the class emphasizing the use of the pertinent vocabulary word. Next, try to restate the response in different words in an attempt to model more sophisticated language. Finally, elaborate upon the student's ideas in order to extend the meaning.

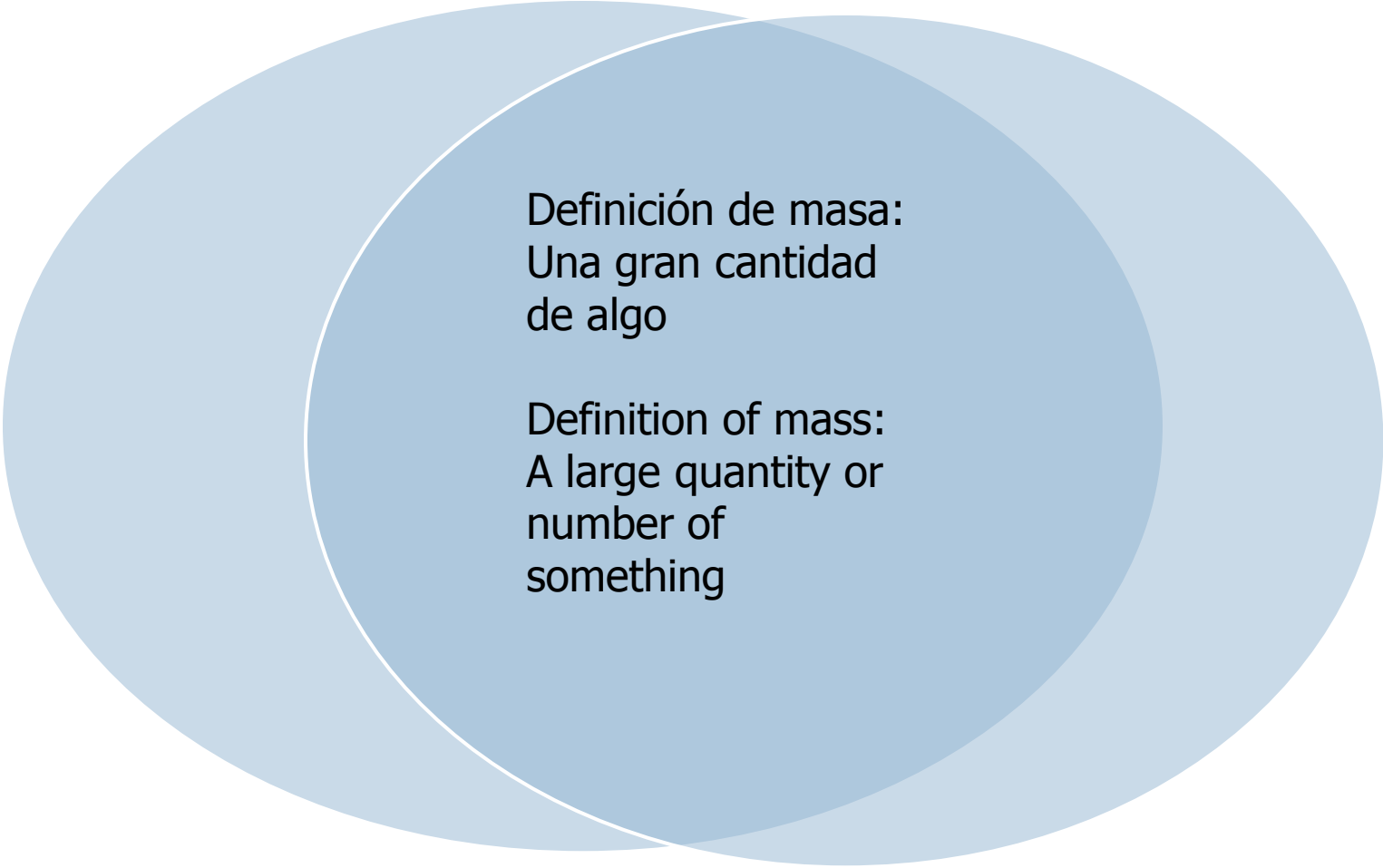
Multiple Meanings (Mass-Masa)



Mezcla de
harina con
agua y
levadura,
para hacer
pan o pasta.

A religious
service in
the Catholic
Church

Multiple Meanings



Definición de masa:
Una gran cantidad
de algo

Definition of mass:
A large quantity or
number of
something

Relate to the Venn Diagram

Last Sunday, my family and I went to church for Easter **mass**.

La **masa** de gente formaba una barrera que no permitía que pasara la ambulancia.

Después de preparar la **masa** del pan la horneamos por 30 minutos.

We couldn't get out of the house because there was a **mass** of snow blocking the exit.

Design 3rd & 5th grade Study

- Recruited all 3rd and 5th grade Spanish speaking ELLs in a school to participate in an after school program and provided free transportation to any family needing it.
- Cognate intervention vs. FCAT Preparation course (*Preparing Students for the FCAT: Thematic, Standards-Based Instruction Grades 4-5* published by Carson Dellosa)
- 4 treatment & 4 control classrooms in each school.
- Stratified random assignment of students to conditions on the basis of WLPB measures in Spanish and English.

Delivery of Treatment and Control Curricula

- 6 weeks (24 lessons)
- Small groups of 8-10 students
- Delivered by school teachers who received 8 hours of training in 4 sessions. (2 pre-treatment and 2 during treatment)
- One hour after-school 4 times a week

Hypotheses:

- Positive effect of cognate instruction
 - ▣ Treatment > Control on instructed cognates
 - ▣ Treatment > Control on non-instructed cognates
 - ▣ Treatment > Control on instructed noncognates
 - ▣ Treatment=Control on non-instructed noncognates
- Effect of word type favoring cognates
- Effect of English Word Knowledge (EWK) and Spanish Word Knowledge (SWK). EWK and SWK are composite of WLPB Letter-Word ID; Picture-Word ID; Extract the Base
- Interaction of Rx with SWK & EWK
 - ▣ SWK should not predict to noncognates

Summary

- Obtained positive effect for treatment on instructed cognates and noncognates
- No strong evidence of transfer of cognate recognition strategy to uninstructed cognates
- Spanish Word Knowledge (SWK) predicts to cognates only



Center for Applied Linguistics

Acquiring Literacy in English

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Improvement**

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