

Impact of Direct Prefix, Suffix and Syllable Instruction on Low Advanced ELL Learners

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Teaching Context

The teaching context for this study was a transition class at the Adult Education Center – Columbia Heights/Fridley, which is part of the Metro North Adult Basic Education Consortium. The Transition class was designed for ELL learners who scored between 222 and 235 on CASAS (low advanced), with an Oral BEST score of at least 58. The learners were CASAS tested at the end of every quarter. Along with learners moving up from the ELL program, there was open enrollment so new learners could start in class at any time. Transition learners who scored over 235 were put on a waiting list to move on to the ABE program where they could begin to prepare for the GED.

The Transition class served as a bridge between ELL, which had group-focused classes, and ABE, which was individual study. In Transition approximately half the time was spent in groups: Conversation, Writing, Reading, and Resources. The other half was individual study where learners had time to do homework or work in an area of their choosing. This also gave them an opportunity to practice prioritizing their time and to work on study skills.

The class met five days a week, from 8:30 to 12:30. There were usually around 25 learners enrolled with a daily attendance between 10 and 15. Learners attended from one to five days a week depending on job schedules, day care and transportation.

Learners came from many different countries with Ethiopia, Mexico and Ecuador having the largest representation. Most of the learners had not finished high school in their countries and many of them had goals of attending technical or community college after they received their GED.

The Problem

The range of education in learners' first languages varied from approximately three years of instruction to college graduation. There were usually three to five learners with less than six years of instruction in the transition class. They typically had some basic decoding skills, but had difficulty with reading multi-syllable words. While attendance varied with this sub-group, as it did with the rest of the class, they consistently did not make progress on CASAS tests. They arrived in Transition with CASAS scores between 222-224 and their post-test scores usually stayed the same or went down. It seemed they had transferred every bit of reading knowledge from their first language, and had nothing left to help them with higher-level reading.

Reflection on the learners' lack of progress on post-test scores indicated a relationship of their word analysis skills, specifically their ability to work with syllables, to comprehension skills. For example, do low skills in affixes and syllabication correlate with low comprehension ability?

Research Question

What happens to low advanced ELL learners reading comprehension as measured by CASAS and word analysis skills when I provide direct instruction in affixes and syllabication?

To carry out the study learning activities were provided in word analysis skills. Instructional time was from 10:00 to 10:40 Tuesday through Friday. Lessons consisted of prefix and suffix exercises from adult education texts cited in the Reference section, and part-by-part decoding instruction and syllable type instruction as described in *The Adult Reading Toolkit* (ART) by LDA of Minnesota. Authentic materials were also used, such as short newspaper articles to find and decode multi-syllable words. See Appendix A for a sample lesson plan.

Data Collection

Data collected for this study included:

- CASAS pre- and post-test scores
Learners currently in Transition were CASAS tested mid quarter, which was the start of the study, as a pre-test. New learners were CASAS tested at registration, when they enrolled in the school. Because the study overlapped our quarter system two learners started in the study with CASAS scores several weeks old (See shaded scores in Table 1.)
- Brigance Diagnostic Inventory of Essential Skills: Word Analysis – Suffixes and Prefixes
This is an individual oral assessment of learners’ pronunciation of prefixes and suffixes. It was administered when the learners started in the study and at the end.
- Brigance Diagnostic Inventory of Essential Skills: Word Analysis – Syllabication Concepts
This is a paper and pencil test of writing one, two and three syllable words by syllables. It was administered when the learners started in the study and at the end.
- Word Analysis Survey – created by the teacher, Appendix B
Learners were surveyed at the beginning and end of the study on their knowledge of prefixes, suffixes and syllables (what they are and how they are used) and how confident they are in dividing a word by syllables.
- Attendance during the 40-minute sessions.
- Notes of observations during the 40-minute sessions.

All learners in my class were pre-tested at the beginning of the study in February and also those who entered class through early April with the exception of three learners who did not want to participate. All who participated signed a release of information. Of the 34 learners who agreed to participate, 14 completed pre- and post CASAS Tests and were considered participants for data analysis. Most of them also completed the Brigance Diagnostic Inventories and the Word Analysis Survey. Learners who moved up from the ELL class with a CASAS score several weeks old when they started my class (shaded scores on Table 3) and did not complete post assessment of the Brigance Diagnostic inventories were considered non-participants. Non-participants also included learners who did not have a post CASAS score. There were a variety of reasons learners did not complete the study: switched to an evening class because of work schedules, transferred to another school site for a class on becoming a Child Development Assistant or Certified Nursing Assistant, dropped out of school because they found work, had health problems, lacked child care, and other unknown reasons.

Data Analysis

In Table 1, Participants' CASAS and Brigance Scores, Attendance, Country of Origin and Years of Education were analyzed:

- Comparison of participants' CASAS pre- and post-test scores
- Comparison of the number of participants' wrong answers in the Brigance Diagnostic Inventory of Essential Skills: Word Analysis – Suffixes and Prefixes from the beginning and the end of the study
- Comparison of the number of participants' wrong answers in the Brigance Diagnostic Inventory of Essential Skills: Word Analysis – Syllabication Concepts from the beginning and the end of the study
- Total hours of attendance for participants in the 40-minute study sessions
- List of participants' Country of Origin and Years of Education in the Native Country.

In Table 2, Word Analysis Skills Survey Results were analyzed:

- Comparison of the learner's pre- and post-study answers on the Word Analysis Survey.

Findings

- 1) Of the 14 who completed the study, 11 increased their CASAS Reading scores and one remained the same. Two learners' scores went down on their posttest. The mean CASAS score increased from a pre-test 228.93 to 232.5 on post testing. The median CASAS increased from a pre-test 229.5 to 232.5 on post testing. The standard deviation went from 3.38 pre-test to 5.64 post-test.
- 2) On the Brigance Diagnostic Inventory of Essential Skills: Word Analysis – Suffixes and Prefixes all learners had fewer errors on the post assessment. This inventory assessed their pronunciation of common prefixes and suffixes. The mean number of errors decreased from 19.3 to 10.5 on post testing. The median number of errors decreased from 16 to 9 on post testing. The standard deviation dropped from 10.02 at pre-test to 6.3 at post-test.
- 3) On the Brigance Diagnostic Inventory of Essential Skills: Word Analysis – Syllabication 7 of the 11 learners who completed both a pre and post inventory made fewer errors. Two learners increased their number of errors and 2 stayed the same. The mean number of errors decreased from 11.18 to 6.73 on post testing. The median number of errors decreased from 11 to 6 on post testing, and the standard deviation decreased from 5.69 to 4.07 on post testing.
- 4) In the post-study Word Analysis Survey more learners attempted to answer the questions, and more of them had correct answers and correct examples. Learners who self-reported confidence levels on the post-survey generally reported their confidence level increased, although Learner L reported a drop in confidence with a lower number of errors on the post Brigance Diagnostic Inventory.
- 5) There does not appear to be a correlation between hours of attendance and improvement on post tests. For example, Learner I spent 6 hours in the study and increased her CASAS score by 8 points, and lowered her errors on the Brigance suffix and prefix inventory by 17, while Learner M spent 22 hours in the study and increased her CASAS score by only 4 points. Her errors went down on the suffix and prefix inventory, but increased on the syllable inventory.

Conclusions

In response to the research question stated earlier, CASAS scores measuring reading comprehension and Brigance scores measuring word analysis generally went up in this class. Based on this limited study, a conclusion can be drawn that direct instruction in affixes and syllabication improves word analysis skills, but without a control group it is inconclusive whether it correlates with improved CASAS scores.

Feedback from learners indicates that direct prefix, suffix and syllable instruction is important and it needs to be included in daily reading lessons. As one learner said on the survey when asked if studying prefixes, suffixes and syllables had helped him read better, “Yes, of course, because knowing the meaning of affixes give me an idea of the word meaning, so I keep reading.” Keeping them reading, rather than looking up every word they aren’t sure of or giving up in frustration, keeps them working, attending class and learning.

There were numerous moments at the beginning of the study when “AHA!” moments were observed, when the light bulb went on for a learner. Many learners had an idea of syllables, but did not have any idea how to divide words, or that knowing how to divide syllables could help them pronounce new words. Finding multi-syllable words in an authentic reading passage became a game: who could find them, or most of them, and then see if there were clues in the prefixes and suffixes as to the meaning of the word.

This research question was based, in part, on a subgroup of learners who had less than six years of education in their native language, and who were not able to make progress in my class. The study was not limited to this group because of the small number of learners. During the course of the study all of them left the class because of jobs or transfer to another program. This information was learned either after they had left or, in one case, as she was walking out the door, so post-test data on any of them was not possible to attain. Anecdotally, they said the instruction was helping them, but there is no data to back that up.

A very unscientific gut feeling persists that understanding prefixes, suffixes and syllables did make a difference in the learners’ CASAS scores because it seemed to make a difference in their confidence when they took the post-test.

Next Steps

This research study was a separate, stand-alone section of the class. My next step is to integrate these lessons into the whole curriculum. For example, I need to include finding prefixes and suffixes as part of pre-teaching vocabulary. I need to be asking questions about the words learners ask me about: “Does it have a suffix? What part of speech is it? What does the prefix mean? Read the sentence again. How does the prefix help you understand?”

Dividing words into syllables is part of reading; it is also something that can be incorporated into pronunciation help whenever it comes up. Incorporating questions about syllables (and prefixes and suffixes) into my instruction will model for the learners what they can do when they are working on their own.

References

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- Comprehensive Adult Student Assessment System (CASAS) Life Skills Reading Test*, Foundation for Educational Achievement, Inc. 1998
- Gill, Nancy, *Vocabulary Boosters Level I*, David S. Lake Publishers, 1985
- Gill, Nancy, *Vocabulary Boosters Level II*, David S. Lake Publishers, 1985
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- The Adult Reading Toolkit: A Research Based Resource for Adult Literacy*, LDA Minnesota, Edition 2, 2004

Table 1 – Participants’ CASAS and Brigance Scores, Attendance, Country of Origin and Years of Education									
	Pre	Post	Pre	Post	Pre	Post	Total	Country	Yrs. of
	CASAS	CASAS	B/P&S	B/P&S	B/S	B/S	hours	of Origin	Native Ctry
Mean	228.93	232.50	19.30	10.5	11.18	6.73	10.48		
Median	229.50	232.50	16.00	9	11	6	10.50		
S.D.	3.38	5.64	10.02	6.3	5.69	4.07			
Participants									
A	227	222	37	20	9	10	10.67	Ethiopia	11
B	224	228	17	11	15	1	3.33	Ecuador	7
C	233	234					12.00	Somalia	12
D	222	226	39	27	19	18	5.33	El Salvador	
E	235	231	17	7	7	7	9.33	Mexico	16
F	229	236					14.00	Ethiopia	12
G	226	228	9	3	23	8	6.67	Ethiopia	
H	228	228					16.67	Ethiopia	9
I	230	238	32	15	1	1	6.00	Vietnam	11
J	230	236			8	5	6.67	Ecuador	14
K	234	238	14	11	19	13	9.33	Morocco	12
L	230	247	7	3	11	2	13.33	Mexico	9
M	234	238	6	2	0	3	22.00	Laos	12
N	223	225	15	6	11	6	11.33	Ecuador	6

Table 3 – Non-participants CASAS and Brigrance Scores, Survey and Attendance,									
	Pre	Post	Total	Pre	Post	Pre	Post	Pre	Post
	casas	casas	hours	B/O	B/O	B/S	B/S	survey	survey
O	221	233	11.33	21	no	12	no	no	no
P	221	224	9.33	34	no	11	no	✓	no
Q	225	232	2.67	5	no	10	no	✓	no
R	224	225	10.00	35	no	3	no	✓	no
S	222		4.67	no	no	8	no	✓	no
T	233	no	1.33	16	no	23	no	no	no
U	226	no	3.33	19	no	8	no	✓	no
V	228	no	2.00	no	no	no	no	✓	no
W	233	no	2.00	25	no	13	no	no	no
X	236		2.67	no	no	10	no	no	no
Y	224	no	1.33	14	no	21	no	✓	no
Z	234	no	2.00	no	no	7	no	✓	no
OO	232		8.67	no	no	14	no	no	no
PP	221	no	1.33	38	no	21	no	✓	no
QQ	239	no	2.00	25	no	12	no	✓	no
RR	242	no	3.33	16	no	12	no	✓	no
SS	236	no	2.00	no	no	7	no	✓	no
TT	225	no	2.00	9	no	1	no	no	no
UU	232	no	0.67	no	no	no	no	no	no
VV	235	no	4.67	no	no	no	no	✓	no

Appendix A

Sample Lesson Plan

Purpose: Identify multi-syllable words and analyze them for meaning

Materials: Copies of a short newspaper article

1. Students work in pairs to find and underline all the 3 or 4 syllable words in the article.
2. The words are listed on the board and the class divides them by syllables. The class checks stress, types of syllables and pronunciation.
3. Learners identify any prefixes and suffixes in the words and which words are new for them.
4. Using their knowledge of prefixes and suffixes and the context of the reading, learners try to guess the meanings of the new words.
5. The class reviews the words and their meanings.

Appendix B

Word Analysis Skills II

Name _____

Date _____

1. What is a syllable?

2. Why is knowing how to divide a word into syllables useful?

3. What rules do you know about how to divide a word into syllables?

4. How confident are you in dividing a word into syllables?
 very confident
 somewhat confident
 neutral
 not confident
 not confident at all

5. a. What is a prefix?

b. Write 2 words that have prefixes.

6. a. What is a suffix?

b. Write 2 words that have suffixes.

7. Has studying prefixes, suffixes and syllables helped you read better? Why or why not?