

THE EFFECTS OF SIGN ON SPEECH SEGMENTATION IN INFANTS

ALMA ROSA ACOSTA

Speech Language Pathology Program

APPROVED:

\_\_\_\_\_  
Vannesa T. Mueller, Ph.D., CCC-SLP Chair

\_\_\_\_\_  
Patricia Lara Ph.D. CCC-SLP

\_\_\_\_\_  
Helen M. Hammond Ph.D.

\_\_\_\_\_  
Charles Ambler, Ph.D.  
Dean of the Graduate School

Copyright ©

by

Alma Rosa Acosta

2015

PREVIEW

## **Acknowledgements**

This project would not have been possible without the support of many people. I owe my deepest gratitude to my advisor, Dr. Vannesa Mueller, who has guided me throughout. Not only have you prepared me for the amazing yet professional developmental challenges that have accompanied this project, but you undoubtedly invested your time and trust into me with this major and exciting project. It has been a great honor to work with you in getting it published and has been a great privilege to develop a great working relationship, as you have been a constant source of knowledge and inspiration. Furthermore, it is with warmest appreciation to Amanda Sepulveda, Mar Bonilla, Gabriela Rodriquez, Callie Ortega, and to all that assisted with this project. It would not have been possible without you. And a special thank you to Amanda for constantly encouraging and supporting me but also for being my shoulder to lean on throughout my graduate academic journey.

I would also like to extend that gratitude to my committee members, Dr. Patricia Lara and Dr. Helen Hammond for agreeing to be on my committee. Your time, support and contribution are truly appreciated. I would also like to thank the entire graduate school faculty for providing me with a strong foundation to thrive and build my research upon. It has been a great honor and privilege to stand on the shoulders of giants. Special and tremendous warm thank you to my husband who has endured this long process with me. He has been a constant source of support and encouragement during the challenges of graduate school and life. I am truly thankful for having you in my life. And to my family but especially to my mother for instilling the importance of hard work and higher education, thank you for all of our understanding and support. Most of all thanks to God who continues to make the impossible possible. And finally, thanks to my entire 2015 cohort, we did it. I dedicate this paper to all of you.

PREVIEW

THE EFFECTS OF SIGN ON SPEECH SEGMENTATION IN INFANTS

by

ALMA ROSA ACOSTA, BS.

THESIS

Presented to the Faculty of the Graduate School of  
The University of Texas at El Paso  
in Partial Fulfillment  
of the Requirements  
for the Degree of

MASTER OF SCIENCE

Program in Speech-Language Pathology

THE UNIVERSITY OF TEXAS AT EL PASO  
May 2015

UMI Number: 1592781

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



UMI 1592781

Published by ProQuest LLC (2015). Copyright in the Dissertation held by the Author.

Microform Edition © ProQuest LLC.

All rights reserved. This work is protected against unauthorized copying under Title 17, United States Code



ProQuest LLC.  
789 East Eisenhower Parkway  
P.O. Box 1346  
Ann Arbor, MI 48106 - 1346

## Abstract

**Introduction:** The ability to extract words from fluent speech (speech segmentation), perhaps one of the greatest obscure achievements for the purpose of learning language, is dependent upon imperceptible endeavors. Remarkably, infants are active participants from the moment they are born, using auditory and visual information to assist them segmenting speech. As motivated parents attempt to use baby sign to bridge communication gaps, visual information in the form of baby sign may benefit children in extracting words from speech. To examine the effects of baby sign on speech segmentation, a systematic replication of the Hollich et al. (2005) study, a within-subject study, with sign as a visual cue was conducted on six-month-old infants.

**Purpose:** The purpose of this study was to determine whether baby sign has an influence on the ability to segment speech in typical developing hearing infants. **Methods:** Seventeen typical developing six-month-old infants were familiarized with nonsense words using a sign + face, sign only and face only condition. A head-turn preference procedure was used to assess their ability to extract unfamiliar nonsense words from fluent speech. **Results:** The results suggest that infants as early as six-months of age can use faces to facilitate speech segmentation. However, to effectively extract words from fluent speech with the use of baby sign, prior exposure is essential.

Key words: speech segmentation, baby sign, language development