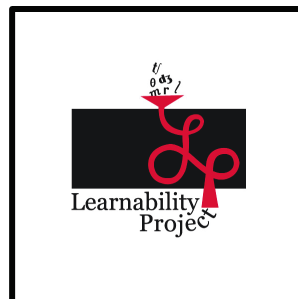




# INDIANA UNIVERSITY BLOOMINGTON

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## Gierut / Learnability Project



The Learnability Project was founded in 1985 by Judith A. Gierut, Professor Emerita of Speech and Hearing Sciences, Indiana University. Through funding from the National Institutes of Health, the project served as a test site in evaluation of the efficacy of clinical treatment for preschool children with functional (nonorganic) phonological disorders. Children who enrolled contributed longitudinal descriptive phonological samples for linguistic analysis. They also received clinical treatment, designed as single-subject experiments, to establish the optimal teaching conditions to promote phonological learning. Experimental studies were based on the triangulation of theoretical models of linguistics, psycholinguistics, and speech-language pathology, with the aim of bridging theory with application and science with best practices. The Gierut / Learnability Project collections accord with the data-sharing plan of the National Institutes of Health and are intended for broad use by scientists, clinicians, and students interested in language and learning.

### Content Statement

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# A Letter From the Director of the Learnability Project

To: Friends of the scientific and clinical communities, families, and students

From: Judith A. Gierut, Ph.D., CCC-SLP, Professor Emerita of Speech and Hearing Sciences

Date: July, 2015

After 30 years of research, activities of the Learnability Project are coming to a close. We have taken great delight in the challenges of clinical research and have enjoyed many rewards in the process.

Our work on treatment efficacy for phonological disorders has come a long way, beginning in the 1980's with linguistic descriptions of children's sound systems and the observation that the developing phonologies have much the same structure and richness of fully developed languages, despite children's errors in production. In the 1990's, our focus was on applications of markedness in the selection of target sounds for clinical treatment. To our surprise, we discovered that teaching more complex sounds led to cascades in learning with greater overall generalization. At that same time, we explored innovations in minimal pair treatment, again finding that treatment of two erred sounds, which differed widely on phonetic grounds, led to greater learning. In the next decade (from 2000-2010), we formed tighter connections between linguistic and psycholinguistic models by looking beyond the sound as the unit of clinical treatment. Our work on syllables identified operating principles for choosing target clusters as best matched to a child's phonology. Our related work on properties of words showed that the stimuli used in treatment were just as important as the treated sound because some words of the language promote greater learning than others. At the close, our capstone research set the foundation for meta-analyses of single-subject studies of phonological treatment. In that work, we defined benchmarks for interpretation and evaluation of treatment efficacy for phonological disorders. We outlined a programmatic research plan to encourage continued research on clinical treatment so as to fulfill the promise of improved treatment efficacy for the population. Toward that end, the data from our research has been archived in IUScholarWorks for you to explore new questions about the population, phonology, learning, and clinical treatment.

We could never have achieved these milestones without generous funding from the National Institutes of Health to Indiana University through DC00433, RR7031K, DC00076, and DC001694 (PI: Gierut). We are especially grateful to Dr. Judith Cooper, Director of Scientific Programs, National Institute on Deafness and Other Communication Disorders, for her guidance, support, and friendship.

Our work benefited greatly from the input of our students. We have had the privilege of working with the most talented and dedicated young people and are proud to have had a hand in their training. We consider our alums family, with a clan of over 100 students who have served as research assistants to the project.

There are many, many others to thank for the success of the Learnability Project. Our liaison with the Monroe County Community School Corporation facilitated recruitment of children to the project. We thank the principals, teachers, and especially Kathleen Hugo for paving the way.

The families who enrolled their children deserve thanks for their commitment and faithful attendance. Finally, the children have been a source of great delight and are the ultimate reason for our research. We thank them for helping to advance science and practice.

For more information, visit the [Gierut / Learnability Project](#) at IUScholarWorks.