



# Creating Effective and Efficient Research Teams

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Seminar Session Number 1926

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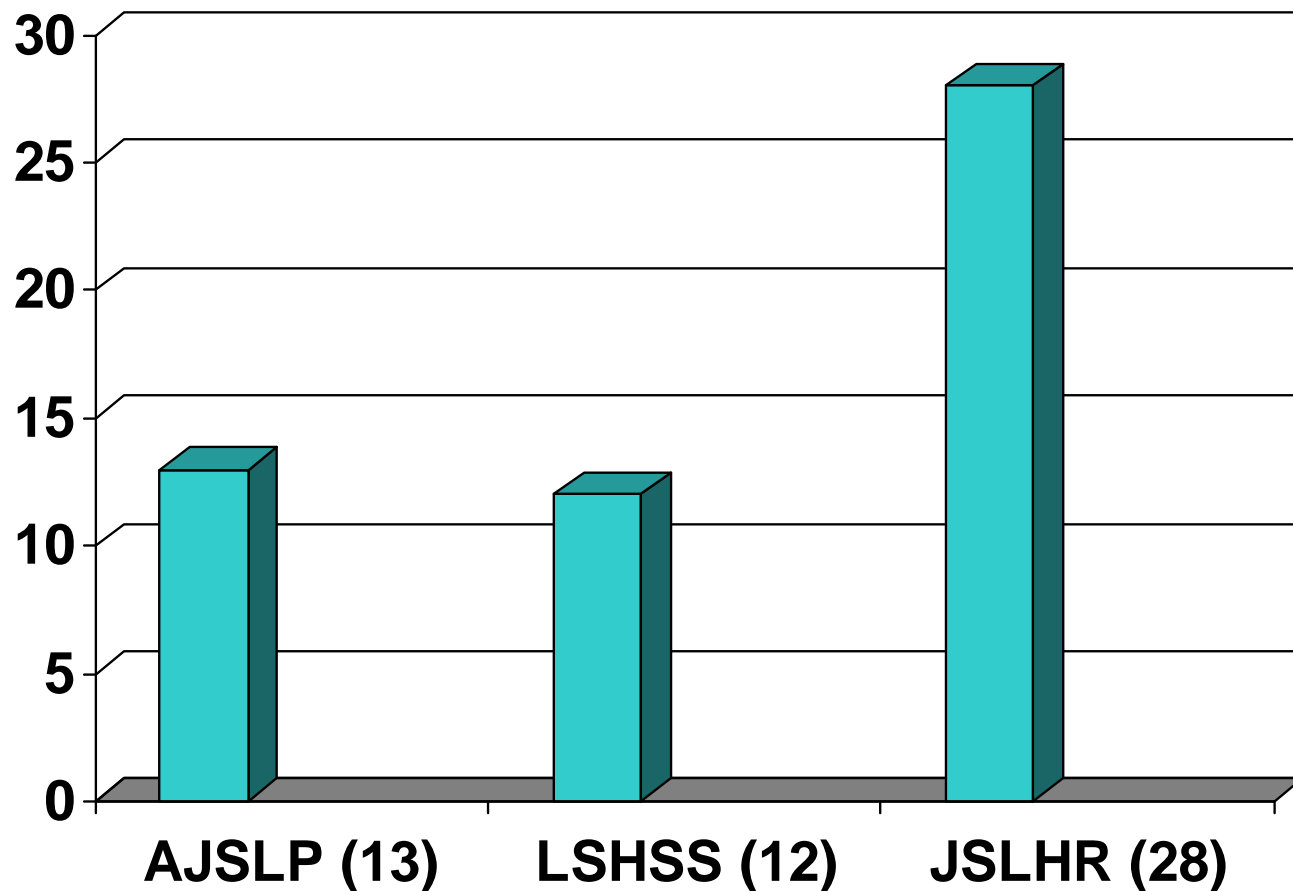
# The Problem

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- Well-designed diagnostic and treatment studies are needed for evidence-based practice (EBP).
- “ASHA journals historically have published far fewer treatment studies relative to other types of research.” (Justice, 2008, p. 210)
- Bahr found this to be true when researching new parent book and article for *Communication Disorders Quarterly* (both, in press).

# Group-Design Treatment Studies in ASHA Journals 1997-2006 (Justice et al., 2008)

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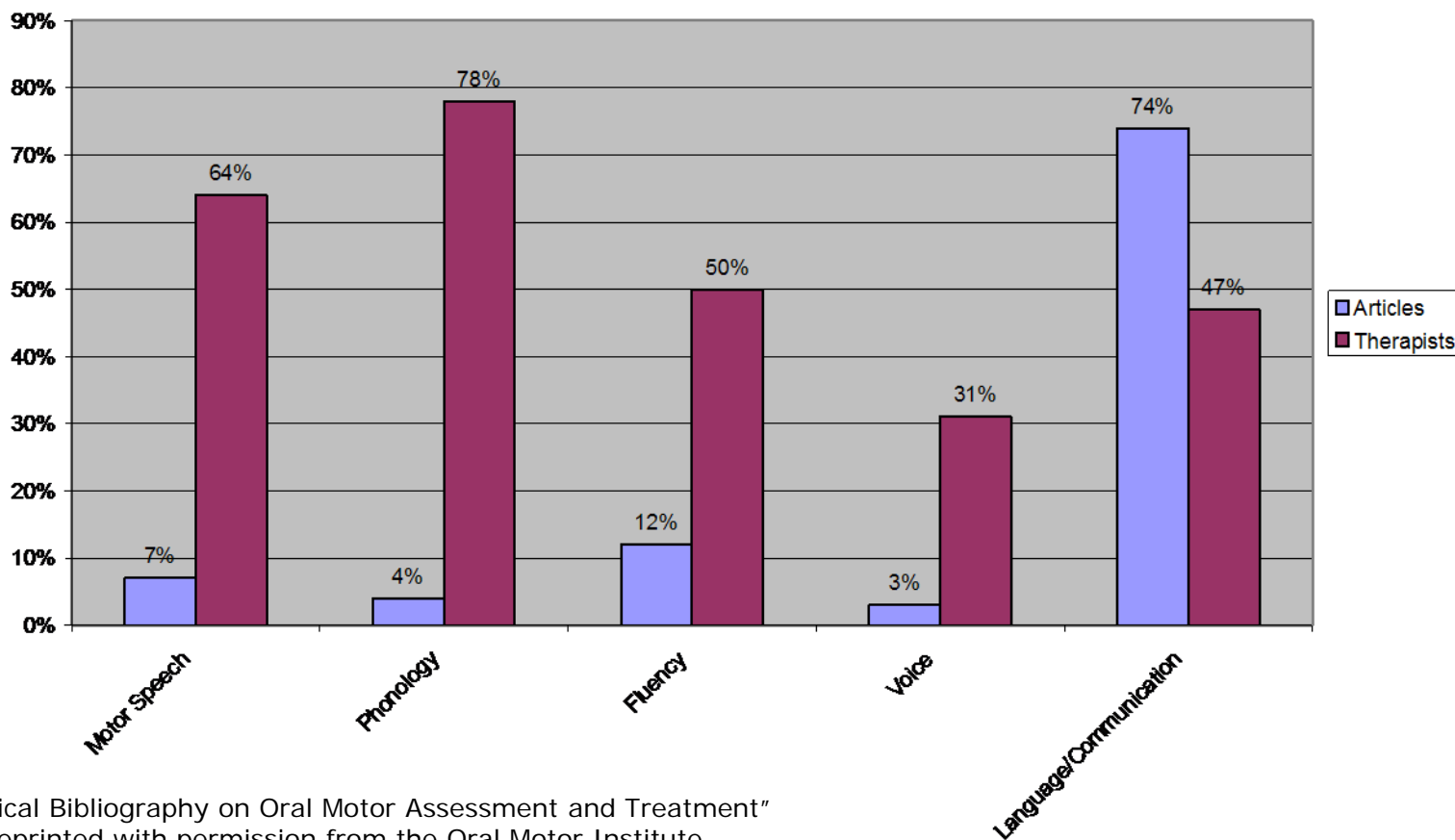
## Justice, Nye, Schwarz, McGinty, & Rivera (2008) found:

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- Approximately 1 group-design treatment study per year in *AJSLP* (13) and *LSHSS* (12).
- Almost 3 group-design treatment studies per year in *JSLHR* (28).
- The treatment studies covered a wide range of topics and were not uniform in quality.

# Research in *AJSLP* 2004-2007 (N=117) Compared to 2008 SLP Practice Patterns from ASHA (Bahr, 2008)

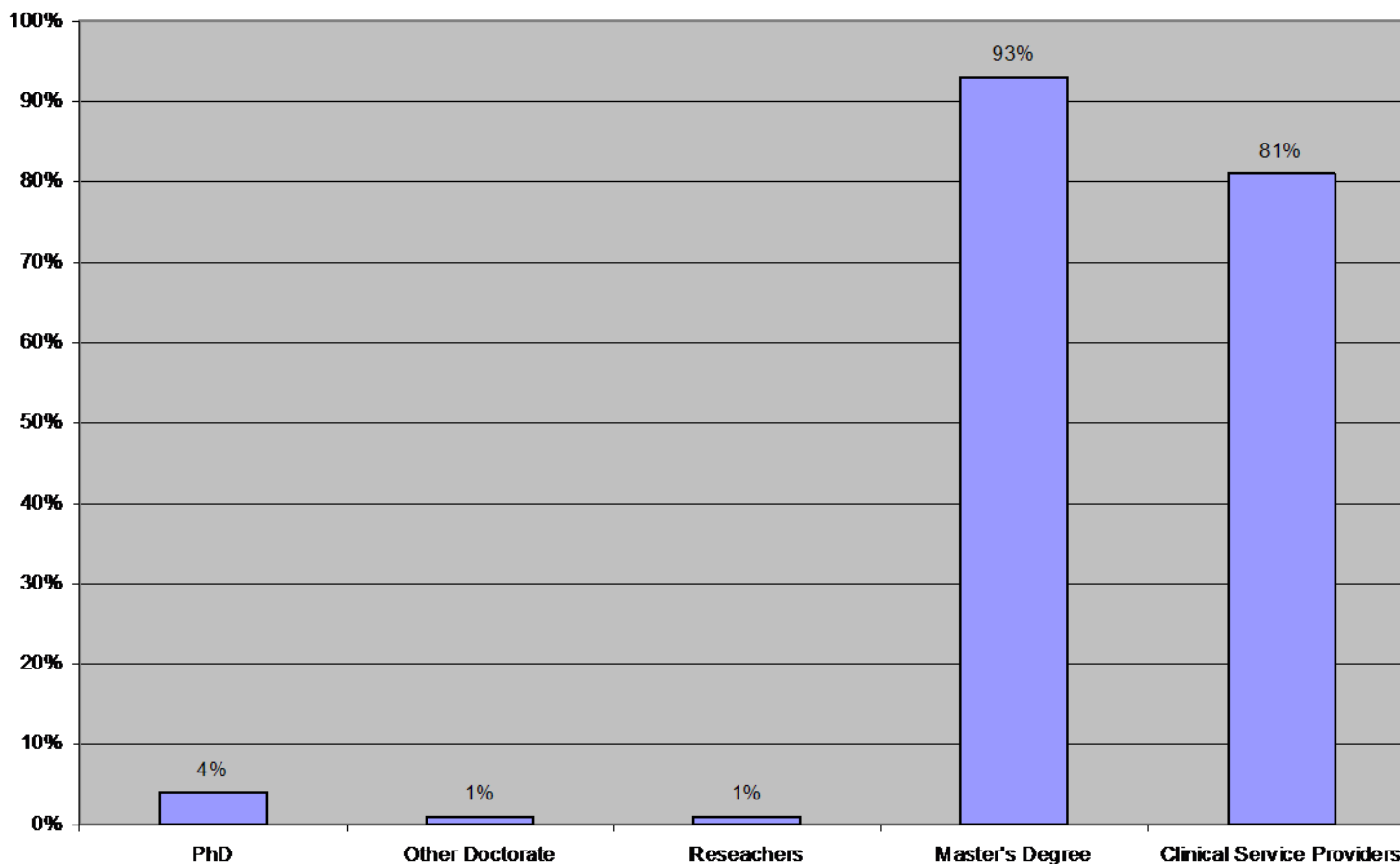
Percentage of Articles in *AJSLP* vs. Percentage of Therapists in Treatment Areas



Source: "A Topical Bibliography on Oral Motor Assessment and Treatment" (Bahr, 2008). Reprinted with permission from the Oral Motor Institute ([www.oralmotorinstitute.org](http://www.oralmotorinstitute.org)).

# Need for Researchers in SLP Profession (Bahr, 2008)

ASHA Membership, Year-end 2006



Source: "A Topical Bibliography on Oral Motor Assessment and Treatment" (Bahr, 2008). Reprinted with permission from the Oral Motor Institute ([www.oralmotorinstitute.org](http://www.oralmotorinstitute.org)).

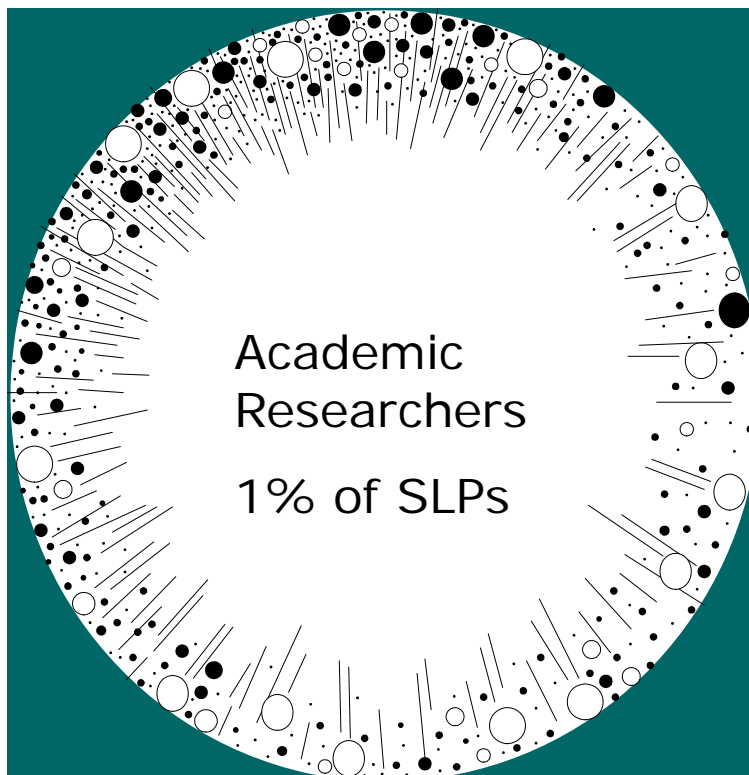
# Trends and Implications

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- *AJSLP* research did not match SLP practice patterns.
- ASHA (2006) membership data indicated only one percent of the membership considered themselves researchers.
- Doctoral level SLPs appeared to conduct most of the published, peer-reviewed SLP research literature.
- Master level SLPs appeared to provide most of the clinical service.
- The discrepancy between the roles of academic researchers and clinicians may be a foundational problem in conducting and utilizing adequate and appropriate research for evidence-based practice.

# There Appear to be Two Different Worlds/Spheres in the SLP Profession

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# The Solution

## A New Research Paradigm/Model to:

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- effectively and efficiently expand the number of academic and clinician researchers and subsequent studies in the field.
- better match research with areas of practice in which SLPs are engaged.
- promote group-design and other properly designed treatment studies to better meet the standards of evidence-based practice.
- ultimately create greater cohesion in the profession.



# ASHA's Strategic Pathway to Excellence Supports this Model and Includes:

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- “advancing communication science” as a part of the mission;
- “scientifically based, professional practice” as a strategic theme;
- “increased research commitment” as part of its strategic objectives;
- members “actively engaged in generating research and using evidence in clinical decision-making.” (ASHA, n.d.)

# Academic-Clinician Researcher Model Supports ASHA's Mission:

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- The researcher has access to an active caseload of clients for potential study participants, helping to ensure continued *generation* of research.
- The clinician becomes more involved and invested in the research process, helping to ensure *use* of study evidence in practice.
- The clinician learns about the research process and may become more interested in it, potentially leading to pursuit of further research training.

# Bland, Seaquist, Pacala, Center, Finstad (2002)

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- High research productivity is strongly associated with:
  - 8 **individual** characteristics
  - 15 **institutional** characteristics
  - 4 **leadership** characteristics

# Bland, Center, Finstad, Risbey, & Staples (2005)

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- Testing of model via regression analysis of survey data from 2000
  - 465 faculty at University of Minnesota Medical School—Twin Cities

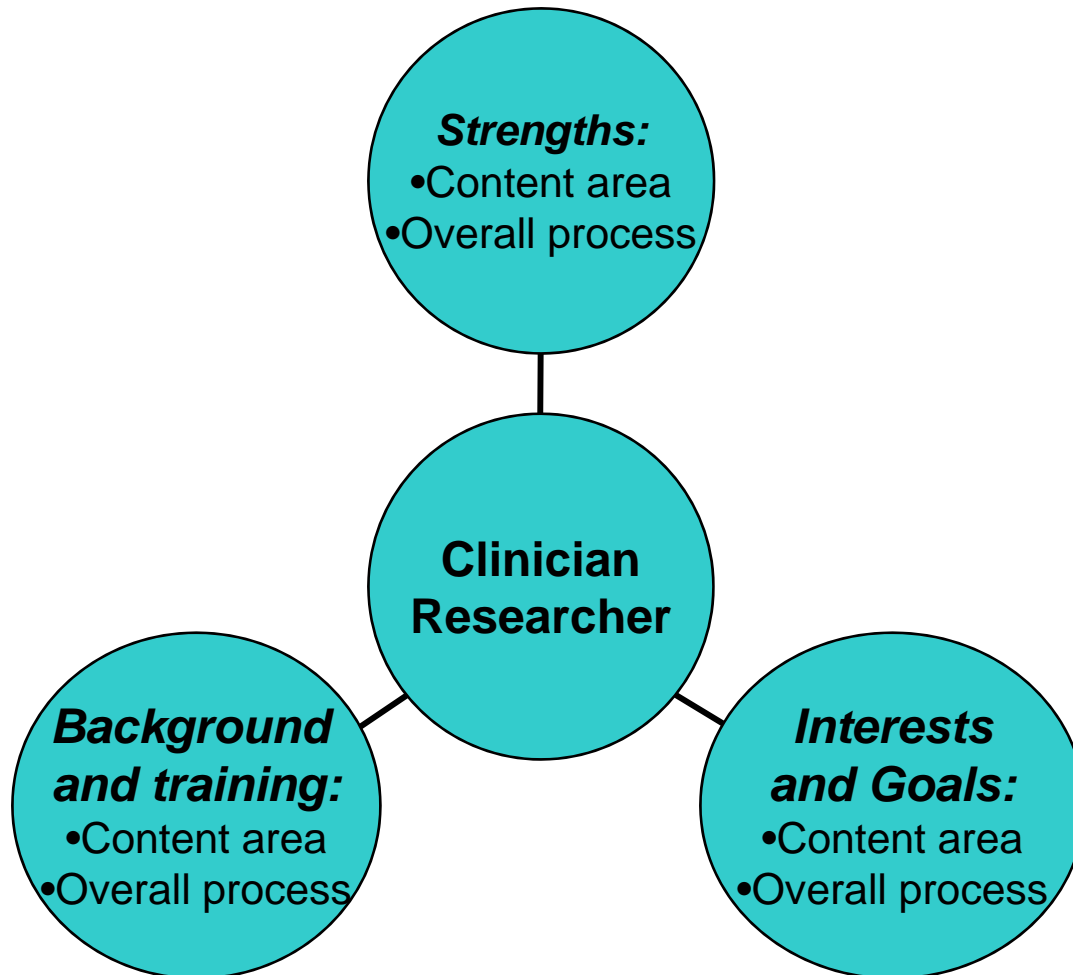
# Bland, Center, Finstad, Risbey, & Staples (2005)

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- Findings
  - Characteristics within model confirmed for high research productivity
    - Faculty productivity influenced by individual and institutional characteristics
    - Group (department) productivity influenced by institutional and leadership characteristics
    - Overall is an “...interplay of individual and institutional characteristics, supplemented by effective leadership...” (p. 225)

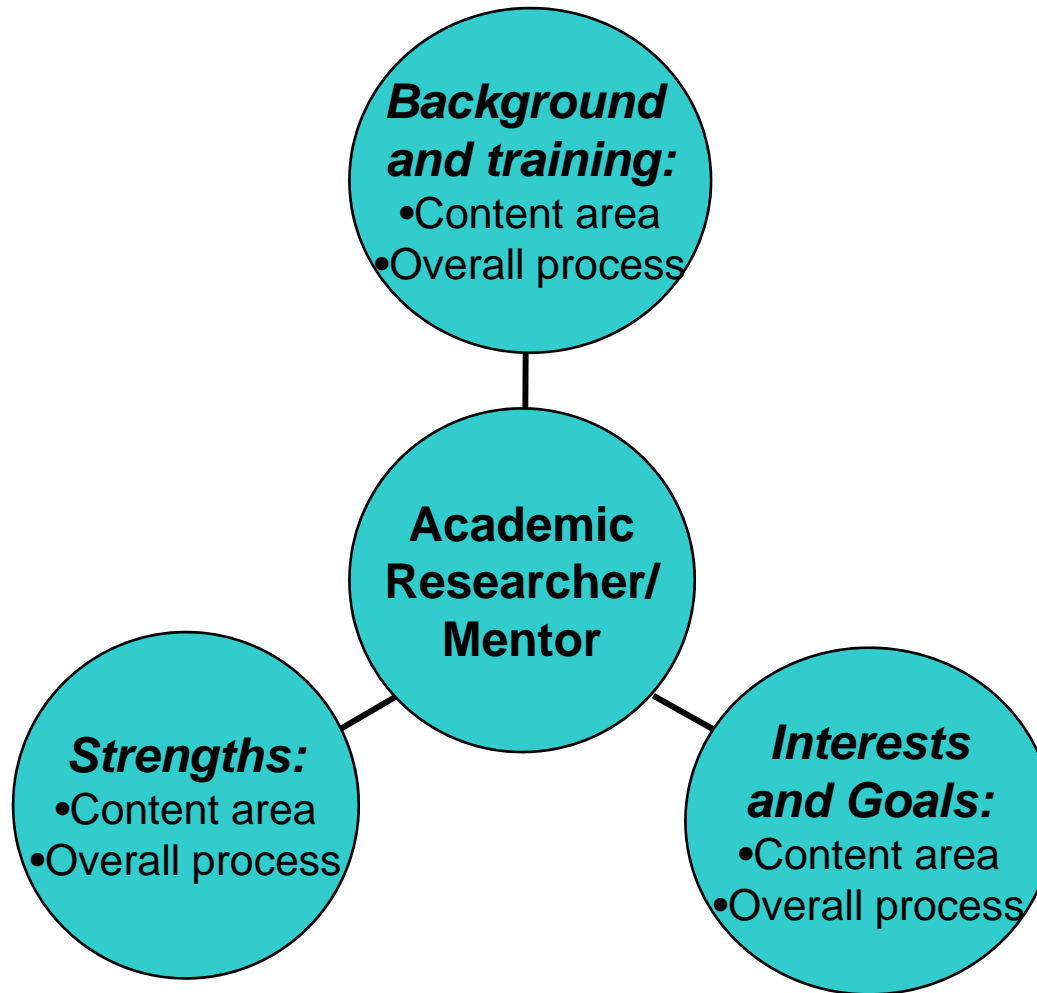
# Closing the Gap to Support EBP (Creating Clinician Researchers)

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# Closing the Gap to Support EBP (Academic Researcher/Mentor)

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# The Worlds/Spheres Join Forces

## Outcome: Improved Research in SLP

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# Examples Group-Design Treatment Studies Using Clinician-Academic Researcher Model

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- Gillam, R. B., Loeb, D. F., Hoffman, L. M., Bohman, T., Champlin, C. A., Thibodeau, L., Widen, J., Brandel, J., & Friel-Patti, S. (2008). The efficacy of Fast ForWord language intervention in school-age children with language impairment: A randomized controlled trial. *Journal of Speech, Language, and Hearing Research, 51*, 97-119. (216 subjects, treatment delivered or supervised by certified/licensed SLPs)
- Major, E. M., & Bernhardt, B. H. (1998, Oct.-Dec.). Metaphonological skills of children with phonological disorders before and after phonological and metaphonological intervention. *International Journal of Language and Communication Disorders, 33*(4), 413-444. (19 subjects, conducted by community SLPs, overseen by academic researchers)

# Other Examples of Clinician-Academic Researcher Collaboration

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- Kumin, L., Von Hagel, K. C., & Bahr, D. C. (2001, Sept./Dec.). An Effective Oral Motor Protocol for Infants and Toddlers with Low Muscle Tone, *Infant-Toddler Intervention*, 11(3-4), 181-200. (4 subjects)
- Spielman, J., Ramig, L. O., Mahler, L., Halpern, A., & Gavin, W. J. (2007, May). Effects of an Extended Version of the Lee Silverman Voice Treatment on Voice and Speech in Parkinson's Disease, *American Journal of Speech-Language Pathology*, 16, 95-107. (12 subjects)
- Skelton, S. L., & Taps, J. (2008, Nov.). Concurrent treatment in speech-improvement class: A motor-skill-based treatment for speech-sound disorders. Seminar presented at the annual meeting of the American Speech-Language-Hearing Association, Chicago, IL. (15 experimental, 12 control subjects, San Diego Unified School District)

# Examples of Group-Design Diagnostic Studies

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- Kumin, L., & Bahr, D. C. (1999, June). Patterns of Feeding, Eating, and Drinking in Young Children with Down Syndrome with Oral Motor Concerns, *Down Syndrome Quarterly*, 4(2), 1-8. (30 subjects)
- Shriberg, L. D., Austin, D., Lewis, B., McSweeney, J. L., & Wilson, D. L. (1997). The speech disorders classification system (SDCS): Extensions and lifespan reference data. *Journal of Speech, Language, and Hearing Research*, 40, 723-740. (836 subjects, "collaborative research in several states," p. 726)

# Project Example from Scaler Scott and Reardon-Reeves

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## **ASDs and disfluencies: Helping SLPs in the schools with identification and treatment**

- Step One: survey data regarding prevalence
  - Researcher role: oversee design, needs
  - Clinician role: administer surveys
- Step Two: analysis of speech patterns
  - Clinician role: collect samples
  - Researcher role: analyze samples

# Project Example from Scaler Scott and Reardon-Reeves

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## **ASDs and disfluencies: Helping SLPs in the schools with identification and treatment**

- Step Three: training of school SLPs for identification and treatment
  - Researcher and clinician
    - Development of training based upon data

# Project Example from Scaler Scott and Reardon-Reeves

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## **ASDs and disfluencies: Helping SLPs in the schools with identification and treatment**

- Step Four: training of school SLPs for identification and treatment (new district)
  - Survey SLPs regarding identification and treatment
    - Researcher: develop surveys (pre and post training)
    - Clinician: administer pre-training survey

# Project Example from Scaler Scott and Reardon-Reeves

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## **ASDs and disfluencies: Helping SLPs in the schools with identification and treatment**

- Step Five: training of school SLPs for identification and treatment
  - Researcher and clinician: run training
- Step Six: gather and analyze post-training results
  - Clinician: re-administer surveys
  - Researcher: analyze results



# Project Proposals from Bahr and Scaler Scott

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- Comparison of feeding, vocal, and mouth development in typically developing breastfed vs. bottle fed infants (Bahr, et al.) **Potential Collaborators:** Suzanne Evans Morris, PhD, SLP, NDT; Catherine Watson Genna, BS, IBCLC; Debra Jervay-Pendergrass, PhD, CCC-SLP, NDT; Nina Ayd Johanson, MS, CCC-SLP; Peg Merrill, BS, IBCLC, RLC; Lisa M. Sandora, MA, CCC-SLP, IBCLC.
- The identification of childhood apraxia of speech (CAS) in young children with ASD (Scaler Scott, & Bahr)

# Possible Roadblocks (based upon Bland et al. model, 2002, 2005)

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- Individual
  - Gaps in knowledge and background between academic researchers and clinicians
  - Barriers to maintaining the relationship until study completion (e.g., job changes)
- Institutional/Leadership
  - Time Allocation for collaboration when both academic researchers and clinicians already have full schedules
  - Funding

# Partnership, Training, and Coordination Can Decrease Roadblocks by:

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- Individual--Institutional
  - Helping SLPs with active caseloads learn how to become involved in publishable, peer-reviewed, evidence-based research.
  - Matching academic researchers with SLPs who have active caseloads, corresponding with research interests.
  - Matching strengths in areas of promotion, administrative, follow through.

# Partnership, Training, and Coordination Can Decrease Roadblocks by:

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- Institutional/Leadership
  - Educating academic and clinician researchers re: funding opportunities.
  - Educating administrators re. value of diagnostic and treatment research to their specific programs.



# Clinician Needs

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- Academic researchers and appropriate others (e.g., ASHA) willing to train clinicians who want to participate in research projects
- Academic researchers willing to participate in projects with clinicians
- Academic researchers who have projects that are a “good fit” for the clinician and the clinician’s caseload
- Administrative support
- Funding



# Academic Researcher Needs

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- Clinicians who can commit to projects for a set period of time
- Clinicians interested in and willing to learn about peer-reviewed, evidence-based academic publication
- Clinicians (with caseloads) who are a “good fit” for the project
- Funding



# Value of Model/Paradigm

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- Improved relationships between clinicians and academic researchers
- Clinicians and academic researchers learning something new and interesting from one another
- The critical need for group-design and other well-designed research in the field of SLP can be fulfilled
- Improved cohesion in the field of SLP



# Task Force for Academic-Clinician Research Collaboration

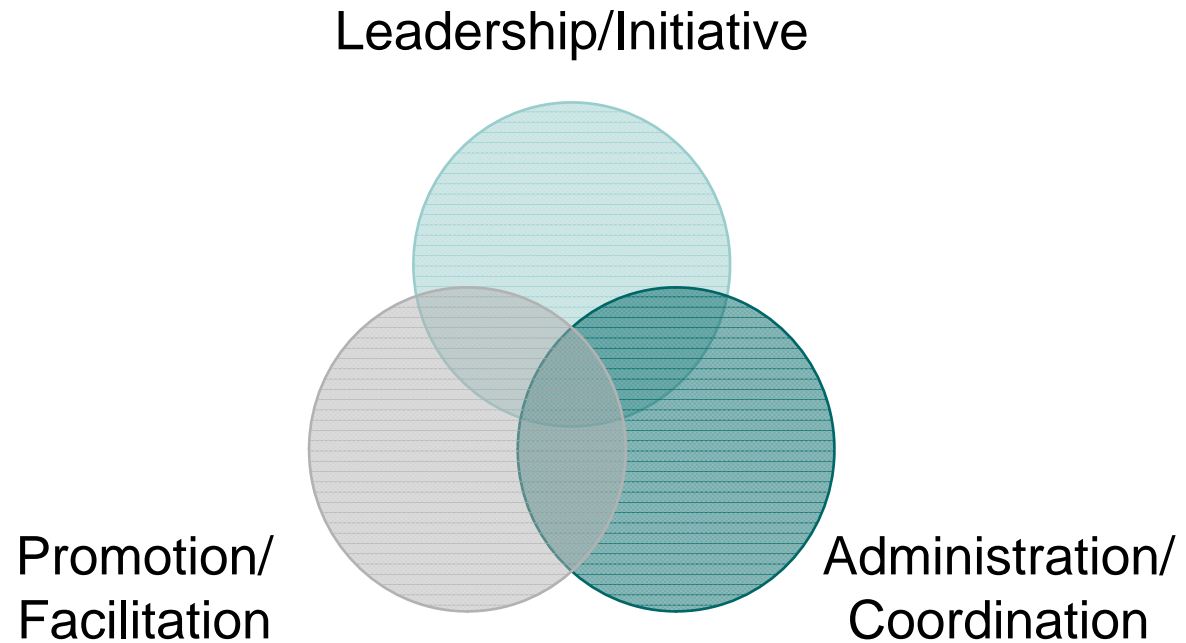
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- Objective 1: To increase clinician-researcher partnerships leading to the production of well-designed research studies
- Objective 2: To decrease roadblocks to clinician-researcher partnerships



# The Next Steps

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# Could a website/study group be the answer?

(e.g., International Cluttering Association, Oral Motor Institute)

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- To conduct interviews/focus groups/surveys and investigate the roadblocks to coordinated clinician/academic researcher collaboration
- To gather a list of clinicians and academic researchers who have similar interests and are a “good fit” for needed research projects
- To provide information for clinicians who want to learn about doing effective, publishable, peer-reviewed, evidence-based research
- To increase the number of group-design treatment studies in SLP
- To investigate and provide information regarding funding opportunities

# Thoughts

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- “In the measurement world, you set a goal and strive for it. In the universe of possibility, you set the context and let life unfold” (Zander & Zander, 2002).
- If you always do what you’ve done, you’ll always get what you’ve got (Bahr, today).

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