

BACKGROUND

AUTISM SPECTRUM DISORDER: Range of symptoms characterized by repetitive behaviors and challenges with social skills and speech

MUSIC THERAPY: Yields improvements in language and social abilities in children with autism¹

TEACHER EDUCATION: Lack of standard education requirements for teachers in special education nationwide

VOICES TOGETHER (VT): Music therapy program based in central NC. Combines educational techniques and music to empower people with mental disabilities

TEACHER TOOLBOX (VT³): Program training teachers in both the theory behind the VT intervention and the music tools necessary to incorporate VT into their classrooms

SUBJECTS: 9 Special Education elementary classrooms in Alamance County Schools
Control: VT Program n = 4 weekly music therapy sessions with a professional Voices Together music therapist
Experimental: VT³ n = 5 teachers underwent Teacher Toolbox training to learn how to implement music therapy methods into their classrooms daily

EXPERIMENTAL DESIGN

TEACHER MEASURES: gauge teacher experience prior and throughout Toolbox training

Teacher practices survey: background demographics and prior knowledge on teacher practices

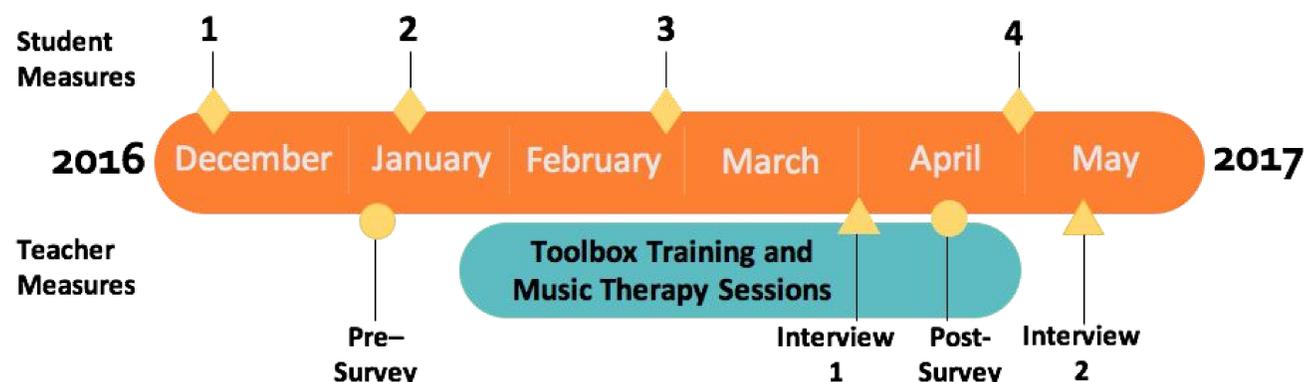
Mid-Program Interviews: in-person interview regarding VT³ training and student improvements

Post-Training Survey: effectiveness of training on knowledge of teaching strategies

STUDENT MEASURES: track improvements in language and social abilities throughout program

PDDBI: behavioral inventory tool completed by the teacher for each student

Probes: behavioral activity that measures social and language ability



RESEARCH QUESTION

Is implementing Voices Together music therapy through the Teacher Toolbox an effective intervention in elementary schools?

PARTICIPANTS

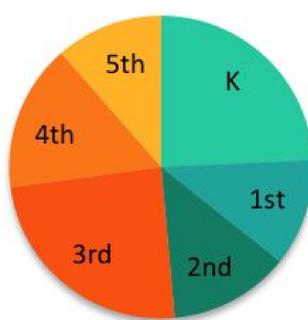
STUDENTS n = 70

Male: **81%** Female: **19%**

Baseline Language Level²: **3 / 5**

Language level of neurotypical 2 y.o.

Student Grade Distribution

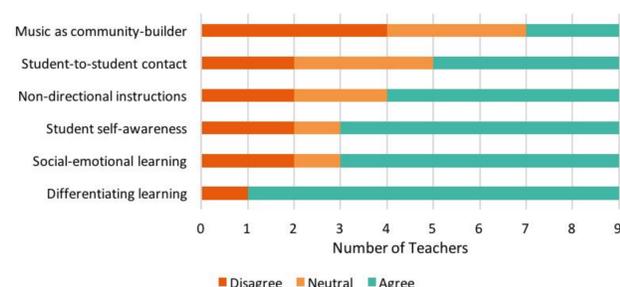


TEACHERS n = 9

55.5% have degree in Special Education

88.9% have taken 2+ courses in Autism Spectrum Disorder

Pre-Training Knowledge of Teaching Strategies



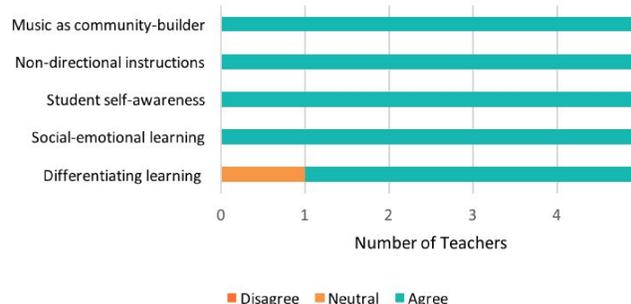
RESULTS

Mid-Program Interviews showed that 100% of the teachers...

- Implemented VT³ into their classrooms on a daily basis
- Reported positive experiences with learning and implementing non-directive approaches
- Observed improved social behavior in students

Post-Training Surveys showed great improvement in the teachers' knowledge of Teacher Toolbox strategies

Effectiveness of Training on Teaching Strategies



CONCLUSION / NEXT STEPS

Preliminary data shows positive reactions to VT³ training

FUTURE DIRECTIONS

Analyze baseline data, post PDDBI, and student probe data for students in VT³ classrooms to quantify program efficacy

Adapt VT³ program accordingly

IMPLICATIONS

Provide special education teachers with a cost-effective and relatively simple way to improve student outcomes without the need of a music therapist

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REFERENCES

1. Kim, J., Wigram, T., & Gold, C. (2009). Emotional, motivational and interpersonal responsiveness of children with autism in improvisational music therapy. *Autism, 13*(4), 389-409. doi:10.1177/1362361309105660
2. Tager-Flusberg, H., Rogers, S., Cooper, J., Landa, R., Lord, C., Paul, R., Rice, M., Stoel-Gammon, C., Wetherby, A., & Yoder, P. (2009). Defining spoken language benchmarks and selecting measures of expressive language development for young children with autism spectrum disorders. *Journal of Speech, Language, and Hearing Research, 52*(3), 643-652.