

Benefits of Sound Field Amplification Systems



Sound field amplification is an effective means of enhancing the listening and learning environment for all students, including at-risk groups. The primary goals of sound field amplification are to improve the signal to noise ratio (i.e. the level of the teacher's voice compared to the level of the background noise) and ensure equal distribution of the teacher's voice throughout the classroom. The efficacy of sound field amplification has been documented in research studies spanning over 30 years. Research suggests benefits for both students and teachers. The research findings include:

Improvement in Academic Achievement

- Improved academic achievement (level and rate), especially for younger students
- Improved scores on standardized achievement tests in the areas of listening, language, reading and math
- Reduced referral rate for resource assistance and special education

Improvement in Speech Recognition Skills

- Improved speech (word and sentence) recognition, both in quiet and under degraded listening conditions in typical classrooms
- Improved scores in speech discrimination tasks and dictated spelling tests

Improvement in Student Attention, Behavior and Engagement

- Increased attention to verbal instruction and improved understanding
- Decreased need for clarification and reinstruction
- Decreased distractibility and increased on-task behavior
- Facilitated peer interaction, increased verbal involvement in classroom discussion, and promoted a more proactive and confident role in classroom discussion
- Improved ease of listening

Benefits for the Teacher

- Reduced teacher absenteeism due to vocal strain and fatigue
- Increased mobility for teachers, without compromising any students ability to hear
- Innovative uses of the technology to create more dynamic, engaging classrooms, e.g. stream audio from multimedia devices in the classroom

Documentation of Benefits for At-Risk Groups

- Minimal hearing loss
- Auditory Processing Disorders
- English Language Learners
- Aboriginal and First Nations Students
- Language and Learning Disorders
- Attention Deficit Hyperactivity Disorder