Assistive Technology Partners
SCHOOL OF MEDICINE
UNIVERSITY OF COLORADO **ANSCHUTZ MEDICAL CAMPUS**

Adapting Musical Activities for Persons with Disabilities

Musical activities can be a fulfilling part of any person's day, and may enhance many important aspects of an individual's emotional, cognitive and social development. Yet, persons with disabilities may be excluded from participating in musical activities because they are thought to lack the necessary motor skills, cognition, or behavioral skills. Some people think they will "ruin" the performance, but adaptations can be made to enable almost any person to have a meaningful, educational and artistically fulfilling experience with music.

Every person is different, and there is no "one size fits all" adaptation, but here are some general principles to use when working with persons with disabilities in a musical context:

- Any role in the musical performance is better than no role. Starting the performance with a communication device "one, two, three, four" or being a page-turner can be satisfactory. Sound effects can also be performed, (also on an electronic communication device) and their use is sometimes very colorful and fun.
- Emphasize what the person *can* do (don't focus on their deficits).
- Music does not have to be difficult to be good. Some of the most moving and profound music is very simple. For example, the drone (a continuous low note) found in much traditional music is merely one note held for the entire song. Nearly everyone (even single switch users) can play this. Despite its simplicity, it is essential to the musical effect. Again, simplifying an individual's musical part should enable him/her to play it well and still support the overall performance.
- Sound making (whether "musical" in the traditional sense or just making cool noises) is fun and beneficial in many ways. There are some situations where it is important not to be "hung up" on traditional notions of musical quality. Pick a time and a place to focus on this. Uncontrolled noise can be OK sometimes!
- Be sure to use instruments that are not too difficult to play. Some instruments such as violins, French horns, and oboes take many years to master. Pursuit of skill on these instruments is a worthwhile goal, but think carefully about matching the user to the instrument.

- The original design (or traditional use) of instruments is not sacred. Altering or simplifying instruments by taking off some of the strings (with guitars), adding extensions to piano keys (i.e. Popsicle sticks), or making drum sticks fatter and easier to grip (with pipe insulation) can be very helpful.

Many individuals require adaptation to enhance their motor performance. This means that the potential musician lacks the muscular coordination to play an instrument with the proper timing. Here are some brief suggestions to overcome this barrier:

- Electronic keyboards are very good for persons with motor limitations. Popsicle sticks make great adaptations to increase the “target” size of the selected note. They can be temporarily attached with Velcro and color coded for additional clarification.
- Most keyboards have numerous sound choices, and this can be used to good advantage. Sounds such as “flute” are usually good because the sound rises and falls gradually. This characteristic makes the timing of the activation more forgiving. The overall output level is easily controlled as well.
- Some persons have difficulty holding an instrument while playing. Special “X” shaped straps distribute the weight of the instrument equally on both shoulders. Stands that hold the entire weight of the instrument are also available if needed. Drumsticks or mallets can be held in place with elastic wrist straps for persons with handgrip limitations.
- Chording devices such as the “E-Z Chord” enable persons with limited hand function to play chords (the left hand part) on a guitar. This strap-on device acts somewhat like an Autoharp in allowing multiple notes to be activated with one finger.

Adaptation in musical situations for persons with cognitive limitations is also important. For example, a person may have the physical skills to strike a note, but they forget to come in at the proper time or are unsure of *which* note to strike. Many easy-to-use adaptations are helpful in this area.

- Colored stickers can be placed on the piano keys, guitar fingerboard, or marimba key to indicate the correct note. Multiple colors can be used to indicate verse notes, chorus notes, etc.
- Some instruments such as pitched bells, or xylophones can be configured to have only the correct notes present at all. This instrument is referred to

as “diatonic,” and if properly chosen to match the music, will sound good no matter which note is played.
- Percussion instruments can be effective for persons with good motor skill. There is no demand to choose “correct” notes, and the person has to merely keep a steady beat. Shakers and tambourines work well because they are not very loud, and will not throw off the rest of the band even when the timing is errant.
- The musical conductor may choose to cue a performer (or performers) by pointing or signaling when to begin.

Some interesting technologies are available that use computers, too. Here are some highlights:
- “SuperSwitch” ensemble is a software package that enables a teacher or caregiver to program music that can be easily played from a computer with a commonly used programmable keyboard (the Intellikeys keyboard). This software simplifies the music and gives only the correct notes to be played. It is great fun if one has access to the software and a Macintosh computer.
- Many composition programs are available that allow a user to compose music on the screen very much in the same manner as one would use a word processor. This is wonderful for persons who “hear” music in their heads, but cannot physically perform music in real time due to mobility limitations. The software enables one to listen to the compositions, edit and print them with ease. “Cakewalk” and “Premier” are the two most commonly used programs of this type. The only drawback to these programs is that they require a great deal of mouse use. There is not yet available a software package for scanners or single switch users.
- One step further from the composing programs is “MIDI.” It stands for “Musical Instrument Digital Interface”. This enables the user to compose as in the other software, but it adds the additional benefit of applying actual recorded (sampled) sounds to the composed notes. These note values can be manipulated in many ways and will result in an actual piece of recorded music. While it is not the same as performing music in real time, this approach will give the user total control of the musical result.
- Educational materials that are designed for computer use are also common. Software can be purchased that conducts ear training workshops and other educational activities. Some products such as “imusic” teach songs on the guitar by showing the written music, a video of someone

playing it, a version in tablature (a graphic notation method) and a "virtual fingerboard" all at the same time. This multi-sensory approach is great for persons with learning challenges because the content can be explored in different ways.

Musical activities are an important tool for recreation and education. With simple adaptations, no person needs to be left out.

Vendors

Chordmakers, Inc.
P.O. Box 1593
McAlester, OK 74502.
Sells the E-Z Chord device

iSong
www.isong.com
has a list of educational titles that can be ordered online.

Slider guitar straps can be purchased by calling 1-800-237-7419. Most large guitar shops have them in stock or they can be special ordered.

Stewart MacDonald Guitar Shop Supply
21 N. Shafer St. Box 900
Athens, Ohio 45701
800/848-2273
carries everything necessary to adapt or customize a guitar.

Voyetra
5 Odell Plaza,
Yonkers, NY 10701-1406
www.voyetra.com
makes recording and composing software. Its Music Write Plus program is inexpensive and works well.

West Music
P.O. Box 5521, 1212 5th St.
Coralville, Iowa 52241
800/397-9378
www.westmusic.com
has one of the best catalogues of adaptive instruments and accessories.

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