



# Early Childhood Music Newsletter

## Early Childhood Music Special Research Interest Group

In collaboration with The Music Education Research Council of the Music Educators National Conference

Issued at the School of Music, University of Oregon

Eugene, OR 97403-1225

Prepared by Mary Lou Van Rysselberghe

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Newsletter No. 19



IN THIS ISSUE of your newsletter:

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- Article: *The Mozart Effect: Music & Spatial Reasoning* by **John Flohr & Kris Chesky**
- CODA from **Susan Tarnowski** in Scotland

We continue to be interested in your research with young children and music. Letters, articles, book reviews, and comments are most welcome in future issues. Please send them to: Mary Lou Van Rysselberghe, School of Music, 1225 University of Oregon, Eugene, OR 97403-1225 by May 31, 1995, for consideration in our Summer Newsletter. You may wish to use the Research Collaborative form included in this issue. Contact by phone (503) 346-3769 or FAX (503) 346-5669.

### NOTE FROM THE CO-CHAIR

*Diane Persellin*

This is an exciting time to be an early childhood music educator and researcher. Recently early childhood music has been receiving greater attention in the popular press, such as **USA Today** and **Dateline**. Parents and early childhood educators have read with great interest the recent study regarding "the Mozart effect" on young children's spatial processing abilities. This increased attention to quality and quantity of music experiences for young children is inspiring, but leaves many questions unanswered. In this newsletter, I have asked John Flohr and Kris Chesky to discuss this research on "the Mozart effect" for us. This is your newsletter so, of course, your comments on this or other areas of interest are welcome.

SRIG Co chair, **Danette Littleton**, and I want to draw your attention to the call for papers for both the early childhood research session as well as the general poster session at the 1996 MENC conference to be held in Kansas City. Conference plans are beginning to be made. Have you been putting off completing a study? Now is a good time to consider writing it up in order to share it with other educators and researchers who are interested in quality music experiences for young children. We look forward to hearing from you.

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### *The Mozart Effect: Music and Spatial Reasoning*

John W. Flohr, Texas Woman's University

Kris S. Chesky, University of North Texas

Music seems to have the power to enhance some kinds of higher brain function in college age students and preschoolers. A

University of California at Irvine research team reported its findings last August to the American Psychological Association meetings in Los Angeles (Rauscher, et.al. 1994). The "causal" link between music and spatial reasoning ability is based on the theories of Gordon Shaw and Leng (1991). Their theory posits the idea that music, chess, and spatial imaging generate similar "maps" that facilitate higher brain functioning. Performance in music, chess, and object assembly tasks requires the formation of a mental representation of something which is eventually realized. Training in one task may produce positive effects in another.

National media attention was drawn to the research following the APA meeting and the publication of a one-page summary in a British journal *Nature* (October 1993) about what the research team called "the Mozart effect." In this study college students listened to a recording of Mozart's sonata for two pianos in D Major, K. 488, for ten minutes. Those subjects that listened to Mozart scored higher on a spatial reasoning task than a control group sitting in silence for ten minutes. All music did not have the same effect. Subjects listening to monotonous repeating harmonies of Phillip Glass or British "trance" music did not improve significantly.

Rauscher and her team reported to the APA a study for college students and a preschool study. Thirty-three preschool children (aged 3 years - 4 years, 9 months) participated in an eight month study. The study was based on a 1993 pilot study with ten three-year-old children. Music training consisted of weekly 10-15 minute private electronic keyboard lessons (taught by professional piano instructors), daily 30-minute group singing sessions (taught by a professional vocal instructor) and an opportunity to practice the piano. A five-task testing instrument was used to assess the children's spatial reasoning abilities on three occasions: as a pretest, four months into the study, and at eight months. The only task that showed a difference was the Object Assembly task: the child arranged pieces of a puzzle to form a meaningful whole.

The children who received eight months of music lessons scored significantly higher on the Object Assembly task than the group of children enrolled in the same preschools who did not receive music training. The Object Assembly task "was the only task given which required the child to form a mental image, and then orient physical objects to reproduce that image" (Rauscher, et.al. 1994, p. 19). Apparently, the cortical pattern development facilitated by the eight months of music training helped to increase scores on the Object Assembly task. Most of the improvement in test scores occurred during the pretest to four-month time period.

The widely publicized results, however, leave the reader without important information about the variability of the data. A

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problem with the data reported in the *Nature* study was discerned by an English reader. He noticed that the study "lacks a graphical or text indication of the distribution of the observed results about the mean...the difference in the means between the two conditions is eight, the standard deviation must be very small for the 'population' mean estimates not to overlap—certainly less than eight. But IQ-related properties generally are more variable than this" (McLachlan, 1993). McLachlan points out that there is a need for variability, as well as central tendency, to be indicated in comparisons. The standard deviations were also left out of the paper presented to the American Psychology Association (Rauscher, et al. 1994).

Another research team in Texas sought to replicate the college aged study (Flohr, et al. 1995). The test that was used in California was unavailable until further publication of their findings. A computerized spatial ability test measuring response speed, visualization time, and ability to visualize three-dimensional objects was used to replace their spatial folding test. One hundred sixty college aged students from three Texas universities participated in a study to replicate the study by Rauscher, et al. The difference between the studies was the dependent measure (the spatial ability test) and the variable of whole-body music vibrotactile stimulation using the MVT TM. The treatment conditions (Mozart, Mozart with vibrotactile stimulation, silence, heavy metal music) did not yield significant differences between groups. There was, however, a significant improvement in all groups from the pretest to the posttest with greater differences in the music listening groups. These findings are similar to the Rauscher, et al. findings and support the theory of Shaw and Leng. However, findings from an ANOVA indicated no statistical significance among the treatment groups. The standard deviations of the groups were very large (e.g., Mozart listening group pretest error mean = 26.15, s.d. = 31.07). The large amount of variability supports the argument by McLachlan. Further analysis of the data is considering gender, music training, preference, amount of vibrotactile stimulation, and pretest score ability. More research is needed on "the Mozart effect." Hopefully, researchers in music and psychology will continue to demonstrate the many positive effects of music for preschool children.

#### References:

- Flohr, J.W., Flohr, C.M., Persellin, D. & Chesky, K.S. (1995). Changes in spatial pattern ability following music listening and music vibration. Paper presented at the Texas Music Educators Association Convention, San Antonio, Texas.
- Leng, X. & Shaw, G.L. (1991). Toward a neural theory of higher brain function using music as a window. *Concepts in Neuroscience*, 2, 229-258.
- McLachlan, J.C. (1993). Music and spatial task performance. *Nature*, 366, 520.
- Rauscher, R. H., Shaw, G.L. & Ky, K.N. (1993). Music and spatial task performance. *Nature*, 365, 611.
- Rauscher, R. H., Shaw, G.L., Levine, L.J., Ky, K.N., & Wright, E.L. (1994). Music and spatial task performance: a causal relationship. Paper presented at the American Psychological Association 102nd Annual Convention, Los Angeles, California.

## ANNOUNCEMENTS OF COMING EVENTS

- February 16, 1995:** Conference: Music & Young Children, offered at Northwest Regional MENC Conference, Spokane, WA (See Division News for registration contact.)
- March 11, 1995:** Conference: Music for the Young Child, sponsored by the California Music Education Association in Pasadena, CA. Contact Rachel Nardo for further details. (See Division News for her address.)
- March 23 - 26, 1995:** Organization of American Kodaly Educators conference. Minneapolis, MN. Marcelyn Smale, Music Dept. PAC 238, St. Cloud State University, St. Cloud, MN
- March 31-April 2, 1995:** Eastern Regional MENC Conference in Rochester, NY. (See Division News for details.)
- April 1, 1995:** Call for proposals for MENC Conference in Kansas City.
- April 27-29, 1995:** Pennsylvania Music Educators Association State Conference in Monroeville (Pittsburgh), PA.
- May, 1995:** Third colloquium for Teachers of Elementary Music Methods: Mountain Lake, VA. Watch for announcement.
- Summer, 1995:** Regional conventions sponsored by The Early Childhood Music Association in Billings, MN, Dallas, TX, Toronto, Ontario, & Williamsburg, KY. A midwest site to be announced. These conventions focus on information, strategies, and curriculum related to early childhood music/movement education, ages birth to eight years. Contact: Karen Hornyak, ECMA Office, 2110 17th Ave. Greeley, CO 80631
- April, 1996:** MENC conference in Kansas City, Missouri
- July, 1996:** ISME Commission Early Childhood Music Education in Winchester, England
- July-August, 1996:** ISME General Conference, Amsterdam, Holland.

## CALLS FOR MANUSCRIPTS AND PROPOSALS

Journal: *Early Childhood Connections*

The Foundation for Music-Based Learning announces the publication of a new journal: *Early Childhood Connections*. The journal is an interdisciplinary publication that aims to stimulate discussion and application regarding the music, movement, and language development of young children. Published quarterly, it will present current research, pedagogical viewpoints, and diverse approaches to educational reform with respect to young children. Manuscripts are currently welcomed. For further guidance regarding submissions, contact Martha Hallquist, Editor: (303) 356-5355. Annual subscription rate is \$30.

*MENC Conference Session  
Early Childhood Music SRIG*

The Early Childhood Music Special Research Interest Group invites all researchers working with young children and music to submit a proposal to present their research at the April, 1996 MENC National Biennial In-Service Conference in Kansas City, Missouri. Topics may include any aspect of research dealing with the music education of preschoolers. The statement of purpose, method, and results should be included. Collaborative investiga-



## —DIVISION NEWS—

### —Central Division—

Lois Schleuter  
Dept. of Music  
University of Toledo  
Toledo, OH 43606-3390

Early childhood music education in Ohio will be receiving added attention as the state moves from K-12 certification to birth -age 21.

Lois would like to hear from those of you who offer a specialized early childhood course for either music education majors or non-majors. Send her your syllabus.

Toledo, Ohio's inner city schools are implementing a grant supporting arts-based education for K-3. Five public schools, school district administrators, and faculty from the University of Toledo are cooperatively planning and implementing the program. Lois is serving as evaluator for the program.

### —Northwest Division—

Mary Lou Van Rysselberghe  
School of Music  
1225 University of Oregon  
Eugene, OR 97403

An exciting full day seminar, "Music and Young Children," will be presented at the MENC Northwest Conference February 16, 1995, in Spokane, WA. Interested participants should call MENC (1-800-535-0930) to register. Come join us!

### —Southwest Division—

Rachel Nardo  
Pasadena Area Community College  
1570 E. Colorado Blvd.  
Pasadena, CA 91106-2003

The California Preschool Study is currently underway in an effort to determine the status of music in preschools and the musical preparation of teachers delivering instruction. Its sampling includes 9800 students in 500 schools. The MENC National Standards are being used as criteria for this study. Re-

sults will be compiled by July 1.

"Music for the Young Child" is planned as a day of varied sessions sponsored by the CMEA March 11th (see Coming Events for details). Kay Edwards, clinician from the University of North Carolina, will be featured in the presentation, "Indian Music for Young Children." Please contact Rachel Nardo for further information.

### —Northeast Division—

Joanne Rutkowski  
The Pennsylvania State University  
School of Music  
University Park, PA 16802-1901

Sessions relevant to early childhood will be presented at the Eastern Regional MENC Conference, March 31-April 2, 1995 in Rochester, NY. They are the following:

**Mary Ellen Junda, Joanne Rutkowski, Martha Snell Miller, Ellen Effman:** "Learning to Sing: From Research to Practice"

**Kenneth K. Guilmartin:** "Music Together—Developmentally Appropriate Practices & Materials for Early Childhood Music & Movement"

**Jill Hannagan:** "Steady Beat & Young Children: The Fun, the Fascination, & the Facts"

**Kenneth K. Gilmartin:** "The Earlier the Better? Developmentally Appropriate Music Instruction in Early Childhood"

**Donna Brink Fox:** "Music in Early Childhood: It's About Time"

An article relevant to early childhood was recently published in the *Pennsylvania Music Educators Association Bulletin of Research in Music Education*, Fall 1994, Volume 19. (Available from Joanne Rutkowski, Editor; see address above; check for \$7.50 payable to "PMEA".)

**Joanne Rutkowski and Martha Snell Miller:** "The longitudinal effectiveness of individual/small group singing activities on children's use of singing voice and developmental music aptitude."

tions are encouraged. Interested researchers should send or FAX a one-page proposal to Diane Persellin, Trinity University, Music Department, 715 Stadium Drive, San Antonio, TX 78212-7200. FAX: (210) 736-8512. *Deadline: April 1, 1995.*

### *MENC Research Session*

Researchers are also invited to submit reports of excellent research for consideration as presentations at MENC's general research session during its conference in Kansas City, Missouri, April 17-20, 1996. Participants chosen will be required to prepare a poster describing their research and to be available during the session to discuss their work with interested music educators. The complete call for papers in the Winter issue of JRME provides specific details. Four copies of a full report beginning with its ab-

stract summarizing the research should be sent to Patricia Flowers, School of Music, 110 Weigel Hall, Ohio State University, Columbus, OH 43210-1170. *Deadline: September 1, 1995.*

### CODA

*Susan M. Tarnowski*

I write my CODA for this newsletter from my office in Dalkeith, Scotland, where I currently administer my university's study abroad program. It is a time for balancing budgets, working with cleaning and kitchen supply vendors, expanding my vita by dealing with the 300 year-old manor house in which we all live, take classes, eat and sleep, and sharing the joy of exploring a new world with my 63 college students. It is *not* a time of reflective

thinking about research and practice in music education.

However, I find that one of my greatest joys is listening to those students who are involved in student teaching experiences in the schools or volunteering their time in *after school* programs and preschool *toy libraries*. I find that, after all, it is impossible to stop the flow of research and practice ideas: "Could we use the model of the *toy library* and develop a preschool music library filled with instruments, tapes and cassette players, microphones, and other materials to draw musical responses from children? What would our educational goals be? What should be in this library? Who might supply and staff such a library so that it could be visited by children during the week?" "How do teaching methods and teachers' attitudes vary by country? How do these methods and attitudes affect the creative musical behaviors of children? How well do student teachers function in a school environment that is very different culturally from that in which they were prepared to work? How can teacher educators best prepare our future music educators for the distinct cultures both of the world and within our own country?"

As I think about the endless number of questions to be asked and the number of questions we attempt to explore in a systematic manner, I am aware that this more passive questioning stage is

part of the research process. Ideas need incubation time, and once one has become an habitual "asker-of-questions," it is possible to pursue research at some stage no matter what one's daily life situation becomes.

I am also reminded that to follow a research question through to some logical ending point requires time and commitment as well as an understanding of research methods. We are not always at a stage in which we can accomplish all of the parts of a research project by ourselves. Working as part of a research partnership or team can lend support to our work and provide another viewpoint to our ideas.

The SRIG can play an essential part in the lives of music education researchers. Through it we can make connections with like-minded people who can serve as sounding boards for our ideas, provide support and inspiration throughout our research projects, and supply a forum within which to discuss our work, our findings, and our recommendations.

As we continue or expand our active participation in the work of the Early Childhood Music SRIG, we discover that within its structure we may find the support for our own commitment to the music education of young children. ♦

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### EARLY CHILDHOOD RESEARCH COLLABORATIVE

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Bitnet or internet address (if available) \_\_\_\_\_

Research topic(s) or area(s) of interest \_\_\_\_\_

Please return to Mary Lou Van Rysselberghe before May 31, 1995 (Summer Newsletter)

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