

developed to perfect level. In two years this singing problem was broken off. By control children the posture, breathing, articulation and vocal sound could be developed to little better level. By two children the posture and articulation and posture and breathing could be developed to medium level in the second phase. One child's problems of posture, breathing, articulation and vocal sound were developed nothing (see Diagram 2).

6.3. Too airy, veiled singing voice

Reasons of this vocal problem: the vocal cords can't close complete and breathing air escapes audible.

There are following problems in posture, in breathing, in articulation, in singing and in vocal sound:

- shrunken posture;
- poor breathing support; high-breathing;
- small lips activity; poor mimic; poor articulation;
- too airy, veiled singing voice; little singing voice volume.

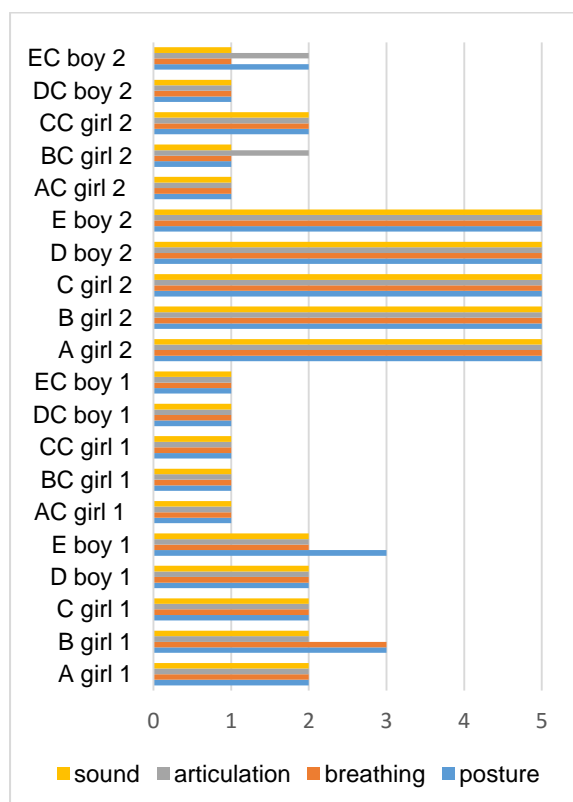


Diagram 3. Correction of airy, veiled singing voice

1 = wrong, 2 = little better, 3 = medium, 4 = good
5 = perfect

Correction of problems: straighten of body posture; body-posture activation; inhale with wondering; staccato exercises; sing with feeling of inhalation; sing with feeling of draw; mouth opening (long, narrow); chewing movements; articulation exercises; vocal exercises with following vowels: „i”, „e”, „ü” and the most conductive consonants: „b”, „d”, „g”, „r”; affected, dramatically singing; sing with different timbres; sing songs with more cheerful or more verve characters.

In the first phase of the research the posture, breathing, articulation and vocal sound of the experimental children were developed to little better level. By two children the posture and breathing were developed to medium level. The posture, breathing, articulation and vocal sound of control children were not developed in the first phase. In the second phase: the posture, breathing, articulation and vocal sound of the experimental children were developed to perfect level. In two years this singing problem was broken off. By control children the posture, breathing, articulation and vocal sound could be developed at best to little better level in the second phase. Two children's problems of posture, breathing, articulation and vocal sound were developed nothing. (see Diagram 3).

6.4. Skinny singing voice

Reasons of this vocal problem: mouth's inner space and resonance are less innervate.

There are following problems in posture, in breathing, in articulation, in singing and in vocal sound:

- phlegmatic body posture; not concentrated posture; poor body encouragement;
- high-breathing; poor breathing support;
- too small breath-movements; poor articulation; small and too wide mouth-opening;
- too infantile voice; little singing voice volume; sometimes too airy vocal sound; little singing voice register; singing without overtones, chip sound.

Correction of problems: body-posture activation; big hand movements; breathing intensification; midriff activation; staccato exercises; mouth opening softly and vertical; feeling of width in mouth and in throat; singing with feeling of gape; singing with inner smile; chewing movements; articulation exercises; affected singing and playing; vocal exercises with following vowels: „u”, „o”, „a” and the most conductive consonants: „b”, „d”, „g”, „m”, „n”, „r”; lilt singing with innervate characters.

In the first phase: the posture, breathing, articulation and vocal sound of the experimental children were developed to little better level. By two children the posture and breathing were developed to medium level. The posture, breathing, articulation

and sound of control children were not developed in the first phase. In the second phase: the posture, breathing, articulation and sound of the experimental children were developed to perfect level. In two years this singing problem was broken off. By control children the posture, breathing, articulation and vocal sound could be developed to little better level. By one children the posture and breathing could be developed to medium level in the second phase. One child's problems of posture, breathing, articulation and vocal sound were developed nothing (see Diagram 4).

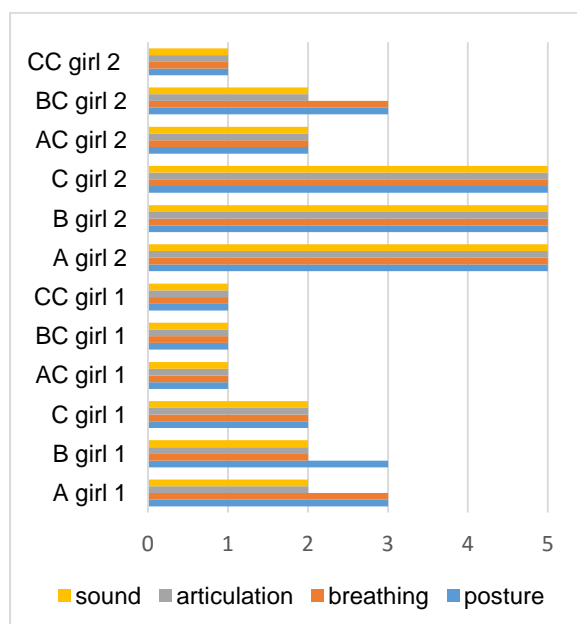


Diagram 4. Correction of skinny singing voice

1 = wrong, 2 = little better, 3 = medium, 4 = good
5 = perfect

7. Conclusions

The results highlight considerable diversity in actual singing achievement in different tasks and different test contexts. In two years, all singing problems were broken off. Healthy singing voice of children should be light, small, in the nature of head-voice, high-voice, shiny, sonorous, soaring, floaty, mobile, not veiled voice, not sophisticated, without pressing, not too loud, softly in low register.

Children's singing development is both varied and multifaceted, and this has considerable implications for teaching and assessing singing as well as other forms of music-making that depend on singing and singing quality in the years of school. A well-planned and efficiently executed exercises are essential for developing a good singing habit. Because the vocal cord is an extremely sensitive

organ, it needs special care and training in order to have good voice production.

8. References

- [1] Davidson, L. (1994). "Songsinging by young and old: a development approach to music", In: Aiello, R. (Ed.) *Musical perceptions*. Oxford University Press, New York, 99-130.
- [2] Davies, A. D. M. & Roberts, E. (1975). "The response of „monotones" to a programme of remedial training". *Journal of Research in Music Education*, 23, 227-239.
- [3] Dowling, W. J. (1999). "The development of music perception and cognition". In D. Deutsch (Ed), *The psychology of music* 2nd ed. San Diego, CA, Academic Press, 603-627.
- [4] Flowers, P. J., & Dunne-Sousa, D. (1990). "Pitch-pattern accuracy, tonality, and vocal range in preschool children's singing". *Journal of Research in Music Education*, 38, 102-114.
- [5] Fox, D. B (1990). "An analysis of the pitch characteristics of infant vocalizations". *Psychomusicology*, 9, 21-30.
- [6] Gembris, H. (2006). "The development of musical abilities". In Colwell, R (Ed): *MENC handbook of musical cognition*, Oxford University Press, New York.
- [7] Green, G. A. (1994). "Unison versus individual singing and elementary students' vocal pitch accuracy". *Journal of Research in Music Education*, 42, 105-114.
- [8] Hargreaves, D. J. (1986). *The developmental psychology of music*. Cambridge University Press, Cambridge.
- [9] Houlahan, M. and Ph. Tacka, (2008). *Kodály Today - A Cognitive Approach to Elementary Music Education*, Oxford University Press, New York.
- [10] Levinowitz, L. M. (1989). "Measuring singing voice development in the elementary general music classroom". *Journal of Research in Music Education*, 46, 35-47.
- [11] Metzler, F. (1962). "Strukturen kindlicher Melodik". *Psychologische Beiträge*, 7, 218-284.
- [12] Minkenberg, H. (1991). *Das Musikerleben von Kindern im Alter von fünf bis zehn Jahren*. Peter Lang, Frankfurt, Germany.
- [13] Moog, H.(1976). *The musical experience of the preschool child*. Schott, London.
- [14] Papousek, H. (1996). "Musicality in infancy research: Biological and cultural origins of early musicality". In I. Deliège & J. A. Sloboda (Eds), *Musical beginnings: Origins and development of musical competence*. Oxford University Press, Oxford, 37-55.

[15] Papousek, M. (1994). *Vom ersten Schrei zum ersten Wort. Anfänge der Sprachentwicklung in der vorsprachlichen Kommunikation*. Huber, Bern, Switzerland.

[16] Rutkowski, J. (1996). „The effectiveness of individual/small-group singing activities on kindergartners' use of singing voice and developmental music aptitude”. *Journal of Research in Music Education*, 44, 353-368.

[17] Shuter-Dyson, R., & Gabriel, C. (1981). *The psychology of musical ability*. Methuen, London.

[18] Stadler Elmer, S. (2002). *Kinder singen Lieder: Über den Prozess der Kultivierung des vokalen Ausdrucks*. Waxmann, Münster

[19] Stadler, S (2000). *Spiel und Nachahmung: Über die Entwicklung der elementaren musikalischen Aktivitäten*. Nepomuk, Aarau, Switzerland

[20] Welch, G. F. (1985). „A schema theory of how children learn to sing in tune”. *Psychology of music*, 13, 3-18.

[21] Welch, G. F., & White, P. (1994). „The developing voice Education and vocal efficiency – A physical perspective”. *Council for Research in Music Education, Bull. no. 119*, 146-156.

[22] Welch, G. F. (2001). „The importance of singing”. *Five to Seven*. 1 (6), 35-37.