

Led by Tim Brady, the [Digital Content Initiative \(DCI\)](#) recently commissioned a research document in order to give academic and scientific support to their arguments as to the value of “specialized” music. This document includes an analysis and bibliography of a wide range of studies that have been published on the importance and benefits of music and creativity. **CNMN members are welcome to freely use this document, and these arguments, when helping to support the cause of creative new music in Canada.**

The Benefits of Musical Creation: Improving Education and Encouraging Innovation

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Discussion

A number of recent studies (see Bibliography below) have demonstrated the value and benefits which can be generated by initiatives supporting musical creation. These positive effects can be perceived in at least three domains: cognitive, social and ethical. For each of these, the contributions of musical creativity extend far beyond the realm of music.

1. The benefits of musical creativity in the cognitive domain: an adjuvant to the development of knowledge and skills

A number of studies conducted in the field of cognitive musicology have brought to light the role of learning and practising music in the acquisition of spatial-temporal skills (**Hetland 2000**).

More generally, a number of studies have demonstrated that students who are regularly exposed to creative music, through listening or playing, attained higher-than-average results in all spheres of activity (**Johnson and Memmot 2006**). Other papers revealed a higher level of aptitude for learning foreign languages or a more effective acquisition of vocabulary in foreign languages (**Bygrave 1995**) in students who practise music regularly. At the primary, secondary and post-secondary levels, this routine practice also encourages the capacity for concentration and memorization (**Schellenberg 2004**).

In the fields of education and scientific research and in the working world, listening, studying and practising music also promotes inventiveness and creativity (**Boulez and Connes 2011**). Such findings can be explained by the different types of skills required by listening exercises (particularly through the linking of our faculties of imagination and reason) and by musical practice (coordination, listening to others). In short, exposure to creative music allows individuals to learn how to learn. A number of studies have reported on this function of creative music, which is capable of nurturing in turn the imagination and creativity of those either listening to it or practising it (**Csikszentmihalyi 1996, Levitin 2006, Sacks 2007, Lehrer 2012**).

Jazz improvisation and free improvisation are of particular interest from this point of view as they allow students to develop a number of specific skills: negotiating with suggestions coming from other musicians and reacting real-time to unexpected situations. It is not just by chance that this model of improvisation has attracted the attention of businesses concerned with developing the abilities of their employees to manage unexpected situations (**Canone 2010**).

The benefits of musical creativity therefore touch upon not only individual development, but also the interpersonal domain. It is here that the social importance of musical creativity intervenes.

2. The benefits of creative music in the social domain: encouraging socialization

Different projects combining research and concrete action have demonstrated the importance of music in fostering relationships between individuals and between communities.

Creative music brings people together, motivating them and inciting high standards and a spirit of competition, thereby encouraging socialization by stimulating team spirit and team building. (www.childrensmusicworkshop.com).

The example of the Association for the Advancement of Creative Musicians, founded in Chicago in 1965 and pioneer of numerous pedagogical projects, shows furthermore that musical practice allows many young people from underprivileged neighbourhoods to be reintegrated into society and gives them the desire to accomplish new and innovative projects (**Lewis 2009**, <http://aacmchicago.org>). Other projects have brought to light the importance of music in overcoming the isolation experienced by the elderly in retirement homes. (www.weka.fr)

On a larger scale, musical creation projects have proved themselves to be equally beneficial for bringing together cultures which are *a priori* heterogeneous and creating dialogues between them. Convincing results to this effect were obtained in the context of the project "Improvisation, Community and Social Practice" carried out at the University of Guelph (<http://www.improvcommunity.ca>)

Creative music is therefore of definitive importance in helping an individual to find his place in a group. Hence, it is also a factor in the well-being of each individual and thus of interest from an ethical standpoint.

3. The benefits of musical creativity in the ethical domain: promoting the well-being and fulfillment of each individual

From a philosophical point of view, the significance of creative music consists in offering the individual an area of freedom in which, to paraphrase Kant, his or her faculties can be freely exercised, outside of the constraints of utility and efficiency imposed by society or required by the school system where he or she is growing up (**Jauss 2007**). The benefit of this free and impartial contemplation might seem paradoxical in light of the arguments put forth up to this point. However, it is much less so if we consider that this space of freedom allows each of us to develop a deeper curiosity and relationship to the world and consequently to stimulate our own creativity, no matter our sphere of activity (**Barenboim 2008**). As the theory of expectation recently developed in the field of psychology by David Huron has shown, based on the example of creative music, music

stimulates emotions as well as positive desires which can be transposed into the everyday life of each individual (**Huron 2008**).

A vehicle for free contemplation and joy, music is, lastly, a factor in our physical well-being - physiological and psychological. For a couple of decades now, music therapy has proven this, not only with respect to curing cases of mental imbalance or dementia (**Bunt and Hoskyns 2002**), but also with respect to eliminating a number of less evident but more widespread conditions. In the battle against stress and anxiety, it can thus prove to be more efficient than certain medications. Furthermore, music plays a role in the balance of our immune system (**Chanda and Levitin, 2013**).

Concluding this general overview of the literature, it appears that creative music is an activity which should be encouraged through practising, listening and studying. A factor in our well-being, it can also prove to be particularly useful in improving relationships between individuals and between communities. Lastly, it constitutes an effective and decisive tool in the process of knowledge acquisition, in skill development and in encouraging an appetite for innovation, as well as for individual and collective creativity.

Bibliography (last updated December 2014)

Books and Articles

Aldridge, D., (ed.), *Music therapy in palliative care: new voices*. London and Philadelphia, Jessica Kingsley Publishers, 1998.

Bamford, A., *The Wow Factor, Global Research Compendium on the Impact of the Arts in Education* (2nd edition), Waxmann Verlag, Berlin, 2009.

Barenboim, Daniel, *La musique éveille le temps*, Paris Fayard, 2008.

Bolduc, J., "Musique et habiletés cognitives au pré-scolaire", *Recherche en éducation musicale*, vol. 27, 2009, p. 1-16.

Boulez, P., Connes, A., "La créativité en musique et en mathématiques", conférence enregistrée à l'IRCAM lors du colloque *Mathematics and Computation in Music*, juin 2011.

Bunt, Leslie and Hoskyns, Sarah (ed.), *The Handbook of Music Therapy*, New York, Routledge, 2002.

Butzlaff, R., "Can Music be used to Teach Reading?", *The Journal of Aesthetic Education*, n°34, 2000, p. 167-178.

Bygrave, P., "Development of Receptive Vocabulary Skills Through Exposure to Music", *Bulletin of the Council for Research in Music Education*, n°127, 1995, p. 28-34.

Canone, Clément (dir.), *Improviser, de l'art à l'action. Numéro spécial de la revue Tracés*, n°18, ENS éditions, 2010. <http://traces.revues.org/4496>

Catterall, J., *The Arts and Achievement in At-Risk Youth: Findings from Four Longitudinal Studies*. Washington, DC, National Endowment for the Arts, 2012.

Catterall, J., "The Arts and the Transfer of Learning", in R. Deasy (ed.), *Critical Links: Learning in the Arts and Student Achievement and Social Development*, Washington, AEP, 2002.

Csikszentmihalyi, Mihaly, *Creativity. Flow and the Psychology of Discovery and Invention*, New York, Harper, 1996.

Cutietta, R., "Does Orchestra Education in Schools Make a Difference?", *General Music Today*, n°11, 1998, p. 17-20.

Denac, O., Sicherl-Kafol, B., "Creative Expression Through Contemporary Musical Language", *Social Sciences and Cultural Studies. Language, Public Opinion, Education and Welfare*, 2009, p. 348-354.

Elliott, D. J., *Music Matters: A New Philosophy of Music Education*, New York, Oxford University Press, 1995.

- Fogel, H. (2007). The Importance of Music Education. Artsjournal.com/ontherecord.
- Gouzouasis, P., Guhn, M., and Kishow, N., *The relationship between achievement and participation in music and achievement in core grade twelve academic subjects*, The University of British Columbia, Department of Curriculum Studies.
- Guth, P. (2009). The Importance of Music Education, <http://education.more4kids.info>.
- Henkjan, Honing, *Musical Cognition. A Science of Listening*, New Brunswick, Transaction Publishers, 2011.
- Helmrich, B. H., "Window of opportunity? Adolescence, music and algebra", *Journal of Adolescent Research*, 25 (4), 2010.
- Hetland, L., "Learning to Make Music Enhances Spatial Reasoning", *Journal of Aesthetic Education*, 34, 2000, p. 179-238.
- Hilliard, R. E., "The effect of music therapy sessions on compassion fatigue and team building of professional hospice caregivers", *The Arts in Psychotherapy*, 33 (5), 2005, p. 395-401.
- Hodges, D., and O'Connell, D., *The Impact of Music Education on Academic Achievement*, University of North Carolina, Greensboro, 2005.
- Huron, David, *Sweet Anticipation: Music and the Psychology of Expectation*, Cambridge, MIT Press, 2008.
- Israel, D, *Staying in School*, New York, The Center for Arts Education, 2009.
- Jauss, Hans Robert, *Petite apologie de l'expérience esthétique*, Paris, Allia, 2007.
- Johnson, C. M. and Memmott, J. E., "Examination of relationships between participation in school music programs of differing quality and standardized test results", *Journal of Research in Music Education*, 54 (4), 2006, p. 293.
- Lee, M. (ed.), *Rehabilitation, music and human well-being*, Saint Louis, MMB Music, 1989.
- Lehrer, Jonah, *Imagine: How Creativity Works*, New York, Houghton Mifflin Harcourt, 2012.
- Levitin, Daniel, *This is Your Brain on Music*, Westminister, Penguin, 2006.
- Lewis, George, *A Power Stronger Than Itself. The AACM and American Experimental Music*, Chicago, The University of Chicago Press, 2008.
- Liske, K., *Philosophy of Music Education. A Statement of Educational Philosophy and Professional Purpose*, Oshkosh, University Press of Wisconsin, 2008.

Mitchell, L. A., and MacDonald, R. A. R., "An experimental investigation of the effects of preferred and relaxing music listening on pain perception », *Journal of Music Therapy*, 43 (4), 2006, p. 295-316.

Moussard, A., Rochette, F., and Bigand, E., "La musique comme outil de stimulation cognitive", *L'Année psychologique* n°112, vol. 3, 2012, p. 499-542.

Patel, A., *Music, Language and the Brain*. Oxford University Press, New York, 2008.

Peretz, I., "A quoi sert la musique ?", *Le temps stratégique*, vol. 92, 2000.

Petitto, L. A., *Arts Education, the Brain and Language. In the Arts and Cognition Monograph: The Dana Consortium Report on Arts and Cognition*, New York, Dana Press, 2008, p. 93-104.

President's Committee on the Arts and the Humanities, *Reinvesting in Arts Education: Winning America's Future Through Creative Schools*, Washington, DC, 2011.

Rauscher, F., *Can Music Instruction Affect Children's Cognitive Development ?*, ERIC Document Reproduction Service, 2003.

Sacks, Oliver, *Musicophilia. Tales of Music and the Brain*, New York, Knopf, 2007.

Schellenberg, E. G., " Music Lessons Enhance IQ", *Psychological Science*, 15 (8), 2004, p. 511-514.

Scripp, L., "An Overview of Research on Music and Learning", in Deasy, R. (ed.), *Critical Links: Learning in the Arts and Student Achievement and Social Development*, Washington, AEP, 2002.

Shields, C., "Music education and mentoring as intervention for at-risk urban adolescents: Their self-perceptions, opinions, and attitudes", *Journal of Research in Music Education*, 49 (3), 2001, p. 273-286.

Thompson, W. F., *Music. Thought and Feeling. Understanding the Psychology of Music*, New York, Oxford University Press, 2014.

Tommasini, A., "Classical Music Takes Center Stage at the White House", *The New York Times*, 2009.

Trevarthen, C., and Malloch, S., "The dance of well-being: defining the musical therapeutic effect", *Nordic Journal of Music Therapy*, 9 (2), 2000, p. 3-17.

Tyson, F., *Psychiatric music therapy: Origins and development*, New York, Creative Arts Rehabilitation Center, 1981.

U.S. Department of Education "Arts Education in Public Elementary and Secondary Schools 1999-2000 & 2009-2010", 2011.

Ruppert, S., *Critical Evidence: How the Arts Benefit Student Achievement*, Washington, AEP & National Assembly of State Arts Agencies (NASAA), 2005.

Ruppert, S., *Making a Case for the Arts: How and Why the Arts are Critical to Student Achievement and Better Schools*, Washington, AEP, 2006.

Ruppert, S., *Within Our Power: The Progress, Plight and Promise of Arts Education for Every Child*, New Jersey, The New Jersey Arts Education Census Project, 2007.

Internet Sites with Resources

- <http://www.childrensmusicworkshop.com>
- <http://www.ed.gov>
- <http://littlekidsrock.org>
- <http://menc.org>
- <http://nammfoundation.org>
- <http://nces.ed.gov/nationsreportcard>
- <http://supportmusic.com>
- <http://www.improvcommunity.ca>
- weka.fr
- <http://aacmchicago.org>

Projects and Programs Built Around the Same Topic (or a Similar Topic)

- President's Committee on the Arts and the Humanities, *Reinvesting in Arts Education: Winning America's Future Through Creative Schools*, Washington, DC, May 2011.
- Gouzouasis, P., Guhn, M., & Kishow, N., *The relationship between achievement and participation in music and achievement in core grade twelve academic subjects*, The University of British Columbia.
- *Keeping the Promise. Arts Education for Every Child: The Distance Travelled – The Journey Remaining*, New Jersey Arts Education Census Project, 2011.