

MUSIC EDUCATION AND EMOTIONAL INVOLVEMENT – A PILOT STUDY

Final report for the

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1. Context of the research

Four years ago, the majority of the Swiss population voted for a new constitutional article settling the right of every child to access music education both at school and in leisure time. Proponents argued that music education and musical practice not only foster the intelligence, academic achievement and social development of children and adolescents, but also contribute to national identity and should thus be preserved. Strikingly, neither the more intrinsic value of music education and musical practice for the individual (e.g., link with positive characteristics and positive emotions), nor the conditions and factors necessary for them to contribute to the positive development of young human beings (e.g. positive institutions) were addressed in the political debate – possibly because scientific knowledge on these questions is missing.

2. State of research in the field

Aesthetic sensitivity and the human tendency to experience strong emotional responses to art, beauty and excellence have been studied since ancient times in the context of philosophy and religion. However, theorists concentrated mainly on characteristics of the objects that elicited these feelings, less on characteristics of those who appreciated them. The same tendency continued in the psychological approach to aesthetics that it considered to have started with Fechner's (1876) work. The main focus of research was on the objective features of different stimuli or objects of art. Little research examined individual differences in the perception of and reactions to beauty, until humanistic psychology - with its idea of an innate and powerful emotional response to beauty and excellence – brought in new perspectives on the question. Maslow (1964) studied individual differences in the degree to which people were open to *peak experiences* and to beauty. Costa and McCrae (1992) described *openness to aesthetics* as a “deep appreciation for art and beauty” (p. 17).

2.1. Models of the sensitivity to beauty and goodness

More recently, within the context of Positive Psychology, three multi-dimensional models of the sensitivity to the beautiful and to the good were proposed. *Appreciation of beauty and excellence* denotes the ability to ‘find, recognize, and take pleasure in the existence of goodness in the physical and social worlds’ (Haidt & Keltner, 2004, p. 537). According to Haidt and Keltner (2004), beauty is experienced as a response to goodness in the physical world - that is to the visual and auditory environment. Excellence, in turn, is experienced when faced with goodness in the social world: exceptional skills or talents of

other people, and displays of virtue or moral goodness. Therefore, *appreciation of beauty and excellence* means sensitivity to three different types of goodness, namely (a) physical beauty, (b) skills or talent, and (c) virtue or moral goodness.

Diessner, Solom, Frost, Parsons, and Davidson (2008) proposed another model, labelled *engagement with beauty*. In this model, the difference between goodness and beauty, especially the difference between moral goodness and beauty, is crucial and lies in the emotional involvement of the observer. An act of moral goodness may be cognitively experienced as such, even without emotional involvement; however, it becomes an act of moral beauty if the observer feels moved and elevated. The act is the same, but the subjective, emotional reaction is different. According to Diessner et al. (2008), this distinction between goodness and beauty, may also be applied to human made objects or nature. Engagement with beauty thus comprises sensitivity to artistic, moral, and natural beauty.

Both models assume sensitivity to beauty in the physical world is linked with sensitivity to goodness or excellence in the social world, and hypothesise a second-order factor of general sensitivity to beauty and goodness. To examine whether one or both of these models could be empirically confirmed, Güsewell and Ruch (2012a) conducted a structural equation modelling analysis. The resulting model, which integrates the two existing ones, was labelled *responsiveness to the good and beautiful*. It comprises a second-order factor of general sensitivity to beauty and goodness, and three distinct but related dimensions: responsiveness to nature and surroundings, responsiveness to artistic beauty, and responsiveness to non-aesthetic goodness.

2.2. Link between artistic activities and the sensitivity to beauty and goodness

Persons highly sensitive to beauty and goodness would be expected to engage in activities related to physical beauty or to non-aesthetic goodness. Empirical data support this idea within the art context. Riddle and Michel-Riddle (2007) studied male art therapists and art therapy students and established that their highest ranked character strengths were curiosity and appreciation of beauty and excellence. Diessner et al. (2008) found that art and music students scored significantly higher on engagement with artistic beauty than education and psychology majors. Eggimann and Schneider (2008) compared orchestra musicians with career officers and showed that the former scored significantly higher on appreciation of beauty and excellence than the latter. Güsewell and Ruch (2012a) evidenced that being in an artistic profession (e.g., musician, painter, or architect) correlated positively and significantly with appreciation of beauty and excellence and engagement with artistic beauty. Finally,

Güeswell and Ruch (2013) found that *responsiveness to the good and beautiful* was related to the degree of involvement in musical practice (i.e. professionals, amateurs, non-musicians). In their sample, two kinds of individuals high on *responsiveness to the good and beautiful* could be distinguished: those who displayed an overall, generally heightened sensitivity to all types of beauty and goodness (i.e. amateur musicians, soloists) and those who displayed a specific, standalone sensitivity to artistic goodness (i.e. music teachers and orchestra musicians). These results hinted at the idea that it is neither the musical occupation, nor professional training, which are crucial for a well-balanced *responsiveness* profile, but rather the recurrent, actual opportunity to express oneself through artistic activity.

2.3. Awe as a specific emotional response to beauty and goodness

Haidt and Keltner (2004) thought of appreciation as “a specific emotional responsiveness” (p. 539) and hypothesized each of the three kinds of goodness included in their model to elicit a specific emotion in the observer: beauty to elicit awe, skills or talent to raise admiration, virtue or moral goodness to arouse elevation. Awe, elevation, and admiration were conceived as belonging to the family of *self-transcendent* emotions and awe assumed to be the central member of this family. *Self-transcendent emotions* are elicited by the virtues and excellences of others and have in common that they “transcend self-interest” (Haidt & Morris, 2009, p. 287), an idea conforming to the postulate of many modern approaches to aesthetics (e.g., Kant) that an aesthetic attitude necessarily is uninterested¹.

Empirical researches on awe are not numerous. Shiota, Campos, and Keltner (2003) studied features of facial and upper-body displays of awe and described that displays of awe frequently included raised inner eyebrow, widened eyes, an open, slightly drop-jawed mouth, a slight forward jutting of the head, and visible inhalation. Smiling was only seldom part of the pose. Shiota, Keltner, and John (2006) used the newly developed DPES to investigate the relation between seven positive emotion dispositions and the Big Five. Data suggested that individual differences in awe-proneness actually do exist. Within the scope of a research about elicitors, appraisals, and effect on self-concept of awe, Shiota, Keltner, and Mossman (2007) asked 60 undergraduate students to describe a particular, recent event in which they had felt awe. In 27% of the cases, participants reported about being in nature, in 20% about exposure to music, in 10% about another’s accomplishment, in 20% about social situations

¹ Ortony, Clore and Collins’ (1988) family of the *appreciation emotions*, which comprises admiration and awe together with esteem and respect is very similar, whereas the family of the *other-praising emotions* (Haidt, 2003; Algoe & Haidt, 2009), which comprises gratitude, elevation and admiration is slightly different: gratitude is directed towards the self and thus not disinterested.

(mainly major life transitions for other persons, such as a marriage or a death), and in 20% about personal accomplishment. These findings suggested the relatively asocial nature of awe as compared to happiness that was elicited by social interactions in 66% of the cases. Asked about the emotions and thoughts associated with the awe-eliciting experience reported, participants mentioned awe, love, contentment, rapture, a sense of the smallness of the self, the feeling to be part of a greater whole, and some disengagement from awareness of the self (Shiota et al., 2007). Recent publications concerned the outcomes of awe, such as expanding the perception of time and enhancing well-being (Rudd, Aaker, & Vohs, 2012) or activating feelings of oneness with others in general and with friends in particular (Van Cappellen & Saroglou, 2011), the link with goose bumps (Schurtz, Blincoe, Smith, Powell, Combs, & Kim, 2012), and the role of awe in the therapeutic process (Weissblatt, 2011). Finally, a research by Bonner and Friedman (2011) attempted at clarifying the concept and the experience of awe by means of an interpretative phenomenological analysis of focus interviews.

2.4. Emotional involvement and music education

All models of the sensitivity to beauty and goodness highlight the importance of emotional engagement for beauty and goodness to be experienced. Whereas a number of studies have examined why music is important to adolescents (Arnett, 1995; Gantz, Gartenberg, Pearson, & Shiller, 1978; Larson, 1995; Larson, Kubey, & Coletti, 1989; North, Hargreaves, & O'Neill, 2000; Roe, 1985; Sun & Lull, 1986; Tarrant, North, & Hargreaves, 2002; Wells & Hakanen, 1991), and showed that among other effects music fulfills their emotional needs (North, Hargreaves, & O'Neill, 2000), little is known on emotional engagement in the context of art education as well as conditions and factors that facilitate such involvement.

A study by Campbell (2007) investigated the significance of music and music education to middle and high school adolescents. The participating adolescents were heavily invested in the emotional benefits of music; they considered it as a means of self-expression, emotional release and control, and as an acceptable way to vent their feelings or to cope with the challenges of adolescence. Asked about important factors for music classes they mentioned the teacher's love for music, passion, and competence; furthermore the instruments offered. However, in most cases, they reported on experiences of boredom, lack of challenge and lack of interest. Bakker (2005) could show that there exists a positive relationship between music teachers' flow (absorption, work enjoyment, and intrinsic work motivation) and the

experience of flow among their students. This finding is in line with emotional contagion theory (Hatfield et al., 1994), and one of the first demonstrations in field research that positive emotions may crossover from one person to another (Westman, 2001).

2.5. Aims of the research

Within the context of an increased questioning of the meaning and value of music education, the evidence of a link between the sensitivity to artistic and the sensitivity to other types of beauty, moral beauty in particular, is of interest, as such a link allows for the assumption that fostering the sensitivity to aesthetic beauty within the scope of music or art education may have an impact on the sensitivity to non-aesthetic beauty. However, this assumption pre-supposes that music education actually fosters the sensitivity to aesthetic beauty – which has not been empirically confirmed yet. This topic should be studied within the scope of a planned SNF project.

The present pilot-study is based on the recognition that all models of the sensitivity to beauty and goodness highlight the importance of emotional engagement for beauty and goodness to be experienced. This, in turn, raises the question whether or not different types of music lessons (i.e. school music and instrumental or vocal lessons) elicit such emotional involvement. The main aim therefore is to investigate whether or not pupils experience emotional involvement, and how they describe it, in particular if they mention one or other of the *self-transcendent emotions*. Furthermore, it will be of interest what conditions and factors seem to facilitate emotional involvement within the scope of formal music education. To answer these questions, two studies were conducted.

3. Study I

Instead of interviewing them, adolescents were invited to take part in an essay-writing contest. The idea behind this approach was that the description by participants of what is relevant to them in music lessons would thus not be gleaned from research questions created by adults, but rather capture the complex reality of adolescents' experiences with music in formal educational contexts.

3.1. Methods

Data collection and participants. Adolescents attending compulsory secondary school (Harmos 9 – 11) or college (up to the baccalaureate) in the Vaud canton were contacted through their school music teachers and invited to take part in the essay-writing contest. Forty-three adolescents (26 girls and 17 boys) aged 12 to 18 created an account on the

homepage of the contest (Fig. 1) and submitted their contributions, together with a few socio-demographic indications (e.g. age, sex, and grade) and their email address (in case they would be among the awardees) between June and November 2016.



Fig. 1. The Homepage of the essay-writing contest

A jury consisting of professional musicians and music teachers, as well as journalists evaluated the texts and decided on the awards. Sponsors (Fig. 2) offered prizes - concert and cinema tickets or vouchers for books -.



Fig. 2. The sponsors of the text-writing contest

Data analysis. The essays were content analyzed with HyperResearch taking a directed approach. Initial coding categories were derived from the research questions, namely: (a) which activities, situations, musical contents, persons, or relationships do adolescents describe in their texts; (b) which of these activities, situations, musical contents, persons, or relationships are experienced as relevant and why; (c) by what feelings or emotions are these activities, situations, musical contents, persons, or relationships accompanied? Any text passage that did not fit within one of the initial coding categories was assigned a new code, thus extending and refining the coding scheme.

3.2. Results

Participants addressed seven main topics in their texts: the importance of classmates and teachers, the aspects they like best or do not like about music classes, emotions and feelings linked with music classes, the meaning of music in their lives, and general thoughts on school music classes. Figure 3 displays the main topics together with associated key concepts or ideas.

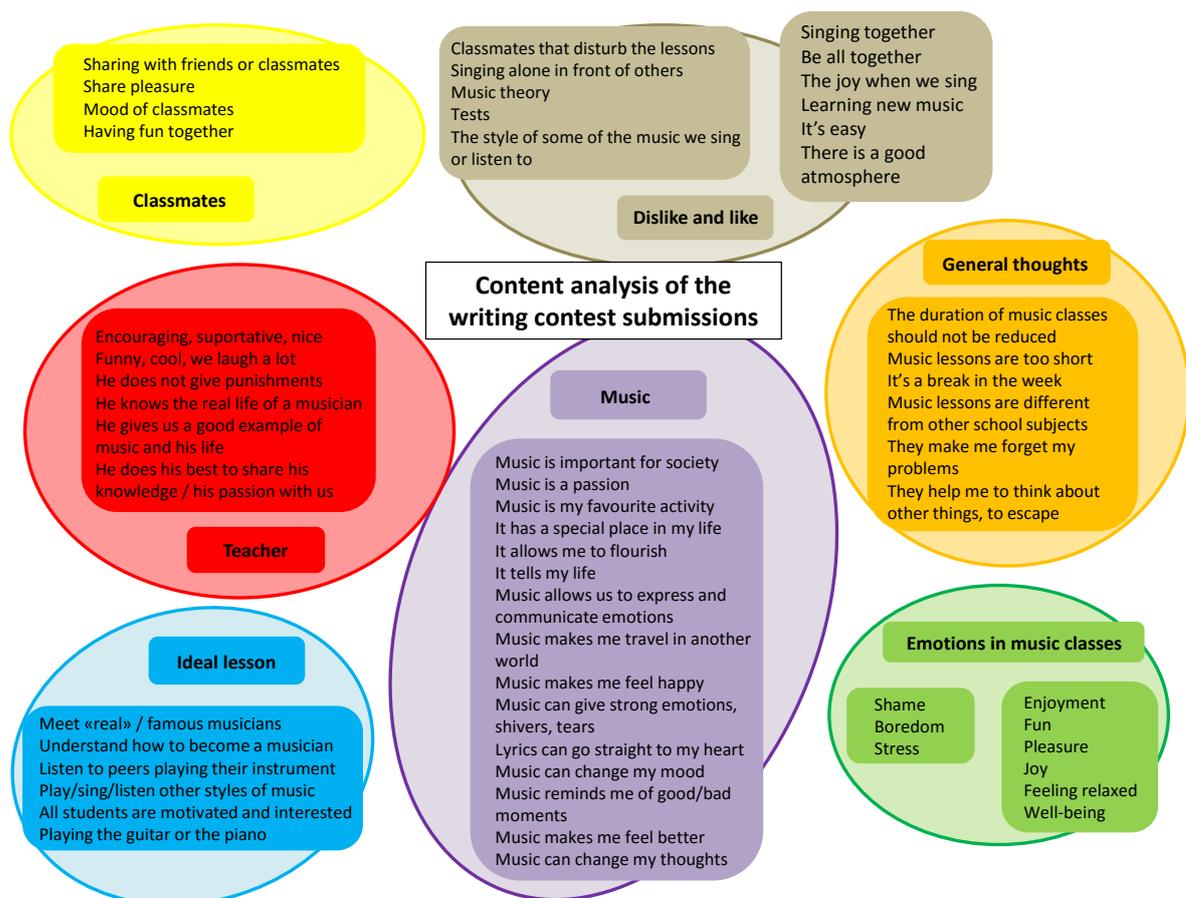


Fig. 3. Content analysis of the writing contest submissions

The mood of classmates, the sharing of musical experiences, joint singing, and having fun together are mentioned as important sources of pleasure, enjoyment and emotional commitment that is deeply felt for some of the young authors. Collective musical experiences and collective flow thus seem to be crucial factors for emotional involvement in music classes. Teachers, in turn, are perceived as competent, encouraging, supportive, nice, or even cool. Those who know the “real life of a musician” and who share their passion for music with pupils are portrayed as fascinating. Music plays a big part in the lives of most participants: they describe it as a passion or favourite activity that has a special place in their lives. Music allows them to flourish, and to experience, express or communicate emotions; it makes them travel in another world, goes straight to their hear or under their skin, gives them strong emotions, possibly associated with shivers or tears, may change their mood or their thoughts, and helps them feel better. Whereas the meaning and impact of music are depicted in detail, the vocabulary used to convey emotional experiences or involvement in school music lessons is rather simple: on the positive side, we find enjoyment, fun, pleasure, joy, together with feelings of relaxation and well-being, on the negative side boredom and shame, sometimes associated with feelings of stress. Positive emotions and feelings are associated with singing together, being all-together, having fun together, and the overall good atmosphere in music classes, whereas negative feelings are associated with classmates that disturb the lessons (stress), singing alone in front of others (shame), or music theory and the style of some of the music worked through (boredom). Some of the writing contest participants describe what would be an ideal music lessons for them. They mention the possibility to be in contact with the reality of a music life and to meet “real” or even famous musicians. Furthermore, they would love to listen to peers playing their instrument, or to have the opportunity to play themselves instruments such as the piano or the guitar (and not the recorder or the xylophone). These and similar statements hint at participants’ desire for authentic, in-depth musical experiences.

4. Study II

The research plan foresaw the collection and analysis 200 contributions from young people. However, much less adolescents took part in the contest, despite an extended submission deadline, extra advertisement on Facebook, or flyers in various non-school youth venues. A variety of possible explanations could account for the unexpectedly small number of participants: the fact that writing is not amongst the most popular recreational activities of many teenagers or that the topic of the contest was perceived as too closely connected to

school. Possibly also the fact that a number of (mainly younger) pupils seemed to hold neither an email account, nor to be used to write on a computer and thus felt uncomfortable with the required online submission.

As these (or possibly other) factors not only lead to a small number of participants but entailed the risk of a sampling bias (i.e. only adolescents from educated families or feeling concerned by music classes taking part), we decided to complement the data collected so far with a questionnaire survey that would include entire classes from various schools and grades.

4.1. Methods

Participants. A sample of $N = 237$ adolescents (133 girls, 104 boys) aged 12 to 18 ($M = 13.93$) filled in the questionnaire. Out of them, 24.5 % indicated attending music lessons outside school, 38.4 % playing an instrument, and 16.9 % improvising – at least occasionally. Asked about their average hours of music listening a day, 33.3 % indicated listening less than one hour, 43.5 % 1- 3 hours, 13.9 % 3-6 hours, and 9.3 % more than 6 hours. Although 53.2 % are of the opinion that listening music helps them to concentrate, only 21.9 % actually listen music while doing their homework, putatively because parents also have a say in this.

Materials and procedure. Music teachers from four different secondary schools of the cantons of Vaud and Geneva were contacted in spring 2017 and asked if they would be ready to participate in the questionnaire survey with one or several of their classes. Four teachers showed interest and were provided with all documents and information needed. The questionnaire (Appendix 1) comprised four different sections. The first section concerned socio-demographics (i.e. age, sex, school grade), extra-curricular musical activities (i.e. taking music lessons, playing one or several instruments, improvising), and everyday music listening (i.e. favorite music styles, hours of music listening a day, music listening while doing homework). The second section addressed psychological functions of music in adolescence (i.e. different areas of psychological goals or functions that are central to adolescent development and mental health and can be supported by musical activity) as described in Laiho (2004), construction and strengthening of identity, emotional regulation, management of interpersonal relationships, and agency (i.e. feeling of control, competency, achievement, and self-esteem). This section consisted of nine items on 5-point rating scales (from *I strongly disagree* to *I totally agree*) derived either from the Music Use Questionnaire (MUSE; Chin & Rickard, 2012), or from the writing contest submissions. The third section concerned adolescents' subjective well-being at school. It comprised eight items on 5-point rating scales (from *I strongly disagree* to *I totally agree*) that referred to three of the six scales of the

Student Well-being Questionnaire (SWBQ; Hascher, 2007), namely positive attitudes towards school, positive academic self-concept, and enjoyment in school. The fourth section, finally, covered the main ideas expressed by the writing contest participants with regard to school music classes. It comprised 14 items on 5-point rating scales (from *I strongly disagree* to *I totally agree*) that took the exact wordings of the young authors. Students filled in the paper-pencil survey as part of a music lesson. Teachers were advised to plan on 20-30 minutes for the completion of the questionnaires, depending on the age, grade and command of French of their pupils. Students did not indicate their names on the questionnaires and put them in an envelope in order to ensure anonymity and confidentiality. Those who wanted to enter the prize draw for 6x2 tickets for the Paléo Festival Nyon 2017 provided a mobile phone number. Partially completed or unreadable questionnaires were sorted out. All other questionnaires were included into the data analysis.

4.2. Results

Exploratory factor analysis. A principal components analysis was computed for the 14 items of the fourth section of the questionnaire (i.e. the questions concerning school music lessons). Three Eigenvalues exceeded unity and the scree test suggested the extraction of three factors (eigenvalues: 5.16, 1.40, 1.08; total variance explained: 54.51). These factors were rotated to the Varimax criterion and the resulting solution examined. As can be seen from Table 1, the loadings on the main factor range between .57 and .83 (Median = .72) and none of the three scales demonstrates double-loadings. The first factor is loaded by six items that concern emotional experiences during music classes (e.g. I sometimes have shivers, the music we study goes right to my heart, I feel emotions when we sing in class) plus one that addresses the fact that music lessons are too short. We therefore labeled it *emotional engagement*. Three items relating to the atmosphere during music classes and one item relating to teachers' commitment (i.e. you can tell our teacher loves teaching music) load the second factor that was therefore labeled *teacher & atmosphere*. The third factor consists of three questions on music lessons as a school subject (i.e. music is a subject like any other, I feel bored, I feel competent) and was therefore named *school subject*.

Two other Varimax rotated principal component analyses were computed. The first for the eight well-being at school items. Two factors were extracted (eigenvalues: 3.14, 1.17; total variance explained: 53.96), the first comprised four items that addressed the perceived usefulness or interest of school (i.e. I like to go to school, school is a waste of time, I like what we learn at school, school is boring) and was labeled *liking*. The second was loaded by

four items that touched two fundamental *psychological needs*, namely the feeling of competence and the sense of belonging. The last factor analysis included the nine items addressing psychological functions of music in adolescence. Again, two factors were extracted (Eigenvalues: 3.75, .91; total variance explained: 51.74). Seven items loaded on the first. They were about emotional involvement (e.g. music can change my mood, music can give me very strong emotions), physical involvement (i.e. when I listen music, I sway to the rhythm), and the importance of music (i.e. I could not live without music). The corresponding factor was named *involvement*. The last two items concerned the deliberate choice of music according to the current mood, and the fact that shared musical taste promotes a feeling of belonging. They hint at the *use* of music for mood regulation or identity construction.

Table 4. Varimax rotated three-factor solution for the music class questions (principal component analysis).

	factors			<i>h</i> ²
	emotional involvement	teacher & atmosphere	school subject	
eigenvalue	5.16	1.40	1.08	
variance explained	36.83	9.97	7.71	
Il m'arrive d'avoir des frissons pendant les cours de musique	.65	-.03	.26	.50
Les cours de musique permettent de s'évader, de penser à autre chose	.70	.33	.17	.63
Les cours de musique sont trop courts	.57	.44	.40	.67
Parfois, la musique que nous écoutons ou travaillons en classe me touche en plein cœur	.77	.20	.15	.65
Les paroles des chansons que nous apprenons en classe racontent ma vie et mes sentiments	.78	.03	-.19	.65
Je ressens des émotions quand nous chantons en classe	.83	.04	.01	.69
C'est un moment où l'on s'évade du monde en stress	.72	.36	.03	.64
Les cours de musique sont amusants	.27	.74	.00	.62
Les cours de musique sont des moments de détente, une pause dans la journée	.40	.51	.12	.43
Ça se voit que notre professeur aime enseigner la musique	.06	.57	-.17	.36
Il y a une bonne ambiance dans les cours de musique	-.06	.61	.11	.39
Je suis capable de réussir aussi bien que la plupart de mes camarades aux tests de musique	.19	.30	.40	.28
Je m'ennuie pendant les cours de musique.	-.36	-.44	-.49	.56
Les cours de musique sont des cours comme tous les autres	.07	.22	-.72	.58

Note. N = 237. **Bold** indicates the highest factor loadings of the scales.

Descriptive statistics and scale intercorrelations. In a next step, mean scores, standard deviations skewness and kurtosis were computed for all subscales of the questionnaire. Table 2 shows that skewness and kurtosis indicate normal distribution of most scales, except for emotional involvement, well-being, and atmosphere that are left skewed. The means of emotional involvement in music (3.47), of perceived competence at school (3.71), and of teacher & atmosphere (3.71) are clearly above the midpoints of the scales (3), whereas emotional engagement in music classes (2.25) lies clearly below. Adolescents seem to engage deeply in music they listen or play out of school (e.g. music evokes strong emotions in them, changes their mood, allows them to express their feelings, or helps them to overcome difficult moments in life), whereas the musical activities and the music pieces or styles approached at school seem to elicit considerably less emotional engagement. Nonetheless, the atmosphere of school music classes and the music teachers are highly valued and rated positively.

Table 2. Descriptive statistics, reliabilities, correlations with age and sex, of the subscales of the music questionnaire.

	Descriptive statistics				Demographics	
	<i>M</i>	<i>SD</i>	<i>S</i>	<i>K</i>	Age	Sex
Relation to music						
Music use	3.06	1.11	-.27	-.68	.15*	.10
Involvement	3.47	.93	-.60	-.28	.19**	.37***
School well-being						
Liking	2.92	.84	-.20	-.19	.14*	.08
Psychological needs	3.71	.77	-.52	-.20	-.02	-.07
School music classes						
Emotional engagement	2.25	.94	.49	-.68	.23***	.17**
Teacher and atmosphere	3.71	.76	-.76	.43	.12	.07
Music as school subject	3.30	.67	.10	.14	-.03	-.01

Note. N = 237 (men = 104, women = 133). *S* = skewness, *K* = kurtosis, Sex (1 = male; 2 = female).

* $p < .05$. ** $p < .01$. *** $p < .001$.

Correlations with demographics are generally small; only the correlations between emotional engagement in music and age (.19) respectively sex (.37), as well as between emotional engagement in music classes and age (.23) respectively sex (.17) are statistically significant. This indicates that young women tend to feel (and to describe themselves) as more involved in music, and more engaged in music classes than young man. The correlation with

age should be interpreted with caution as all participants aged 16 and more played an instrument out of school and attended music classes as their specialist subject.

In a next step, the three music lessons factors were correlated with socio-demographics, school well-being and music use. Table 3 displays these correlations. As can be seen, emotional involvement in music classes correlates significantly with all other variables or scales, except for well-being. The highest correlation is with emotional engagement (.46), which makes sense. It is lower but still highly significant with instrumental practice (.27), liking of school (.24), and music lessons outside school (.22), indicating that adolescents who not only listen to music, but play an instrument, and adolescents who see school as useful are emotionally more involved in music lessons than their peers who do not.

Table 3. Correlations of socio-demographics, relation to music, school well-being and subjective experience of music classes (factor scores)

	factors		
	emotional engagement	teacher & atmosphere	school subject
Socio-demographics			
Gender	.15*	.10	.10
Music lessons outside school	.22***	.08	.25***
Instrumental practice	.27***	.10	.25***
Improvisation	.15*	-.01	.22***
Hours of music listening a day	.20**	-.08	.07
Relation to music			
Use of music	.21**	-.03	-.05
Involvement	.46***	.18**	.14*
School well-being			
Liking	.24***	.20**	.11
Psychological needs	-.05	.22***	.12

Note. N = 237 (male = 104, female = 133).

*p < .05. **p < .01. ***p < .001.

Teacher and atmosphere, in turn, correlates significantly with psychological needs (.22), liking (.20), and involvement in music (.18), and thus seems to be unrelated to non-school musical activities. Finally, experiencing music classes as different from other school subjects and feeling competent is mainly linked with extra-scholar instrumental practice (.25), no

matter whether or not such practice takes place within our outside formal tuition, and to a lesser extent with involvement in music (.14).

5. Summary

The main objective of the present pilot-study was to investigate whether or not pupils report on emotional involvement during school music classes, and how they describe it, in particular if they mention one or other of the *self-transcendent emotions*. A further objective of the study was to explore conditions and factors that seem to facilitate emotional involvement within the scope of formal music education. Two studies were undertaken to answer these questions: the first one, qualitative, to explore students' experience and capture the way they describe it, the second one, quantitative, to check if the views thus expressed are consistent with the ones of a larger and more representative sample of adolescents.

By far the majority of the writing contest participants describe music classes as moments of enjoyment, joy, fun, or pleasure, sometimes accompanied by feelings of relaxation or well-being; only a few adolescents report on boredom or stress. Experiences of social flow (Walker, 2010), the overall good atmosphere in class and teachers' endeavors to share their passion for music with students seem to play a more important role for subjective emotional experience, whether positive or negative, than the musical pieces or styles studied in class. The data do not support the idea that music lessons might favor the experience of self-transcendent emotions (i.e. awe, elevation, admiration) and could thus foster the sensitivity to beauty and goodness: none of these emotions or of the typically associated bodily changes or reactions (e.g. shivers, goose bumps, lump in the throat) appear in adolescents' texts.

The questionnaire, in turn, confirms the fact that most adolescents rate their music teacher and the atmosphere in music classes positively. Not surprisingly and in line with the literature, it evidences the important role music has in adolescents' lives, particularly with regard to emotion and mood regulation. Furthermore, data show that involvement in music strongly correlates with engagement in music lessons, a finding that makes sense but for which empirical evidence was lacking so far (at least to our knowledge). Data also show that there is a statistically highly significant link between extra-scholar music activities and emotional engagement in music lessons, respectively experiencing music lessons as a special school subject.

The present research gave valuable first insight into the conditions and factors that elicit and foster emotional involvement in the context of music education, and into the way that adolescents describe such involvement. It furthermore allowed for the development and initial

validation of a short questionnaire that captures adolescents relation to music, well-being at school and experience of school music lessons.

6. Outputs

- Presentation at the International Positive Psychology Association's Fifth World Congress on Positive Psychology, July 13 - 16, 2017, Montréal, Québec, Canada.
- Academic paper submitted for publication in the *International Journal of Research in Music Education* (the support of the Stiftung Suzanne und Hans Biäsch zur Förderung der Angewandten Psychologie is mentioned in the acknowledgements).
- Professional contribution in the Schweizer Musikzeitung (the Swiss music education magazine) planned.
- Follow-up study in preparation.

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Appendix. Questionnaire

Dans ce questionnaire, il y a des questions sur

- toi et ton rapport à la musique
- l'école en général
- les cours de musique à l'école

Il n'y a pas de « bonnes » ou de « mauvaises » réponses. Réponds en indiquant ce qui te semble correspondre au mieux à ton vécu.

Tu peux demander de l'aide à ton professeur si tu ne comprends pas quelque chose ou si tu n'es pas sûr(e) de la façon de répondre à une question.

Tes réponses seront combinées à celles d'autres élèves ; aucun élève particulier ne pourra être identifié. Tes réponses resteront donc strictement confidentielles.

A propos de toi

Tu es	<input type="checkbox"/> une fille	<input type="checkbox"/> un garçon
Ton âge	<input type="checkbox"/> moins de 13 ans	<input type="checkbox"/> 13-14 ans
	<input type="checkbox"/> 15-16 ans	<input type="checkbox"/> 17-19 ans
Ton degré scolaire	secondaire I	<input type="checkbox"/> voie générale 9-11VG
		<input type="checkbox"/> voie pré-gymnasiale 9-11 VG
	secondaire II	<input type="checkbox"/> école de maturité

... et de ton rapport à la musique

Est-ce que tu suis des cours de musique en dehors de l'école ?	<input type="checkbox"/> oui	<input type="checkbox"/> non
Si oui, quel genre de cours ?		
Est-ce que tu joues d'un ou de plusieurs instrument(s) ?	<input type="checkbox"/> oui	<input type="checkbox"/> non
Si oui, lequel/lesquels ?		
Si oui, est-ce que tu improvises sur ton instrument/tes instruments ?	<input type="checkbox"/> oui	<input type="checkbox"/> non
Quel style de musique écoutes-tu ?		
.....		
.....		
Combien de temps en moyenne écoutes-tu de la musique par jour ?	<input type="checkbox"/> 0-1 h	<input type="checkbox"/> 1-3 h
	<input type="checkbox"/> 3-6 h	<input type="checkbox"/> plus

Est-ce qu'il t'arrive d'écouter de la musique en faisant tes devoirs ? oui non

Si oui, est-ce que la musique te permet d'être mieux concentré ? oui non

Dans quelle mesure es-tu d'accord ou non avec les affirmations suivantes ?

	pas du tout d'accord			tout à fait d'accord	
Je choisis la musique que j'écoute en fonction de mon humeur.	<input type="checkbox"/>				
Je me sens plus proche de mes amis lorsque nous aimons le même genre de musique.	<input type="checkbox"/>				
La musique peut me donner des émotions très fortes.	<input type="checkbox"/>				
Quand j'écoute de la musique, j'ai envie de danser ou de bouger en rythme.	<input type="checkbox"/>				
La musique me fait du bien quand je me sens triste ou énervé.	<input type="checkbox"/>				
La musique me fait voyager dans un autre monde.	<input type="checkbox"/>				
Quand je chante, je peux exprimer mes sentiments.	<input type="checkbox"/>				
La musique peut changer mon humeur.	<input type="checkbox"/>				
Je pourrais bien vivre sans musique.	<input type="checkbox"/>				

A propos de l'école

Dans quelle mesure es-tu d'accord ou non avec les affirmations suivantes ?

	pas du tout d'accord			tout à fait d'accord	
J'aime aller à l'école	<input type="checkbox"/>				
Je perds mon temps à l'école.	<input type="checkbox"/>				
J'aime ce que nous apprenons à l'école.	<input type="checkbox"/>				
Je me sens bien à l'école.	<input type="checkbox"/>				
Je n'ai aucune peine à suivre à l'école.	<input type="checkbox"/>				
Je suis capable de réussir aussi bien que la plupart de mes camarades de classe.	<input type="checkbox"/>				
L'école est ennuyeuse.	<input type="checkbox"/>				
J'adore passer du temps avec ma classe.	<input type="checkbox"/>				

A propos des cours de musique à l'école

Dans quelle mesure es-tu d'accord ou non avec les affirmations suivantes ?

	pas du tout d'accord			tout à fait d'accord	
Les cours de musique sont des cours comme tous les autres.	<input type="checkbox"/>				
Il m'arrive d'avoir des frissons pendant les cours de musique.	<input type="checkbox"/>				
Je m'ennuie pendant les cours de musique.	<input type="checkbox"/>				
Les cours de musique permettent de s'évader, de penser à autre chose.	<input type="checkbox"/>				
Ça se voit que notre professeur aime enseigner la musique.	<input type="checkbox"/>				
Il y a une bonne ambiance dans les cours de musique.	<input type="checkbox"/>				
Je suis capable de réussir aussi bien que la plupart de mes camarades aux tests de musique.	<input type="checkbox"/>				
Les cours de musique sont trop courts.	<input type="checkbox"/>				
Parfois, la musique que nous écoutons ou travaillons en classe me touche en plein cœur.	<input type="checkbox"/>				
Les cours de musique sont amusants.	<input type="checkbox"/>				
Les paroles des chansons que nous apprenons en classe racontent ma vie et mes sentiments.	<input type="checkbox"/>				
Les cours de musique sont des moments de détente, une pause dans la journée.	<input type="checkbox"/>				
Je ressens des émotions quand nous chantons en classe.	<input type="checkbox"/>				
C'est un moment où l'on s'évade du monde en stress.	<input type="checkbox"/>				

!! Merci beaucoup d'avoir répondu à ce questionnaire !!

Si tu souhaites participer au tirage au sort de 6x2 billets pour la Paléo 2017, indique un numéro de portable ou une adresse e-mail dans l'espace ci-dessous : nous pourrons ainsi te joindre si tu fais partie des heureux gagnants 😊