



# Summarizing the new insight of grit – and ways to support it through positive music education

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## ABSTRACT

This review article summarizes new insights on grit. It visualizes the role of fortitude (resilience) in an optimal kind of a learning process, where the student has intrinsic motivation to learn, and the environment supports grit[1]. This study advances the theory of positive education that is “for both skills and happiness”[2]. The data were collected by mixed methods from two Finnish comprehensive schools in the capital city area: music class students (2017, N=79, ages 9–11 and 2020, N=70, ages 10–14) and their teachers and a regular class as a control group (N=26) to enable comparisons. The research questions were: 1) what elements supported children’s grit to study music? 2) How musical grit, musical flourishing, self-efficacy, general flourishing and feel of flow correlated? 3) How could “musical grit” be modeled? The research process was deductive–inductive and produced the grit model of trust, hope and love that adopts the definition of grit as *perseverance and passion for long-term goals*[3], but zooms in deeper to both of those concepts. Perseverance can be understood to be a result of “Received love” and “Trust.” Passion gets ignited and maintained by “Hope” and “Shared love and flourishing.” The new model also builds a picture of two “grit mindsets”: perseverance gets support from the “growth mindset”[4] and passion from the “becoming me mindset”[1]. Students in music classes were measured as having higher perseverance. They experienced more musical flourishing compared to the control group. The duration of extracurricular playing studies correlated with musical flourishing, which further correlated with self-efficacy, general flourishing and the prevalence of flow experiences. Long-term music studies built communal type of resilience [5] that seemed to offer beneficial transfer-effects to music classes’ all schoolwork.

**Keywords:** grit; positive education; flow; flourishing; trust; hope; mindset.

## INTRODUCTION

It is typical to study grit among top performers [12]. The Finnish school system received much positive attention after their world-best Program for International Student Assessment (PISA) results in 2003 [6]. This study investigated music classes, which have always represented excellence among the classes of Finnish schools, even if their entrance tests measure solely musicality [7]. Studies show music classes real zest for learning, good atmosphere, and the high self-appreciation and positive learning attitude of the students [8,9]. According to the study of Eerola and Eerola extended music studies also enhance school-well-being [10].

Musicality doesn’t belong to the list of character strengths, but this study [1] showed that music class learning functioned like a strengths-based well-being intervention [11], which built “musical flourishing”, music-based well-being.

Students who studied in these classes came from supportive families that loved music. In the music class concerts, parents’ pride was evident. Still, this study started with the assumption that great home support probably was not the only secret behind music classes’ success.

### Detecting the elements that support grit at school

The study sought explanations for music classes’ excellence, e.g., from the system, the “culture of grit”, that Duckworth mentions as a possible catalyst of grit [12].

Those beneficial structures that were seen as supporting the old tradition were: 1) Many music lessons, 3–4 every week, that prepared children for regular group performances – as a choir, band, or class orchestra. This tradition also encouraged children to study some instrument as their extracurricular hobby.

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2) Studying all school subjects together in the same small class for seven years. (This system enabled, e.g., preparing for school musicals. Especially in the elementary school grades, the music class teacher could easily integrate music, acting, dancing, and making costumes and sets to other school subjects, if needed.) 3) High-class music education offered by teachers who had great enthusiasm to organize and lead the creative artistic process.

### Deepening the theory of grit

The classical definition of grit is “perseverance and passion for long-term goals” [3]. Our study zoomed deeper in to those two concepts by trying to detect those psychological and systemic features that support children’s capacity to maintain their focus and joy in promoting their personal long-term goals and dreams. Both music class schools in this investigation were situated in somewhat disadvantaged suburbs. As part of this research, the children of a comprehensive multicultural school were offered accessible, voluntary instrument lessons from 2016 to 2022.

That brought about a revival of playing as a hobby. The other school that was investigated followed the old music class traditions and class orchestra system, in which all children already played as a hobby during their music class years.

In May 2017 four music classes (3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> and a second 5<sup>th</sup>), a total of 79 children from two schools, answered a self-made survey that measured children’s autonomous motivation to learn music and those features in their lives that might be beneficial in their learning to play [13]. Every child was also evaluated by their music class teacher [14]. From that data, a correlation table with nine variables was produced. The variable “musical grit” was constructed as a combination of quite different types of propositions, which together produced a high value of Cronbach’s alpha. Not all items were solely about grit in learning music; they also considered children’s general grit and self-control [14]. Grit and self-control are different concepts, but various studies have shown their strong correlation [15]. This study made a choice to formulate the new concept of musical grit such that it also included self-control, which is essential e.g. for learning to play an instrument [16].

Table 1. Correlations (Pearson) of musical grit and other variables [1, 14].

Variable	Alpha	Mean	S.D.	1	2	3	4	5	6	7	8
1. Musical grit	.78	3.92	.58								
2. Trust - child’s self-perceived musical ability	.79	4.11	.72	.49***							
3. Teacher’s perception of child’s musical ability	.86	4.19	.73	.35**	.16						
4. Received love: Home support	.54	3.62	.57	.42***	.40***	.39***					
5. Shared love: Social motivation to music	.80	4.05	.90	.64***	.53***	.08	.16				
6. Child’s own will to continue with music studies	one question	3.88	1.24	.53***	.50***	.00	.11	.83***			
7. Hope: Having musical dreams	one question	4.10	1.16	.37***	.39***	-.07	.21	.60***	.58***		
8. Child’s perception of the teacher’s supportiveness	one question	4.60	.69	.48***	.60***	.16	.45***	.44***	.32**	.27*	
9. Screen time (reversed)	one question	3.42	.99	.35**	.06	.22*	.34**	.00	.00	.03	-.13

n=67–68 Child’s perception of the teacher’s supportiveness; n=76–79 other questions. \*p < .05, \*\*p < .01, \*\*\*p < .001.

### Supportive elements for perseverance and passion

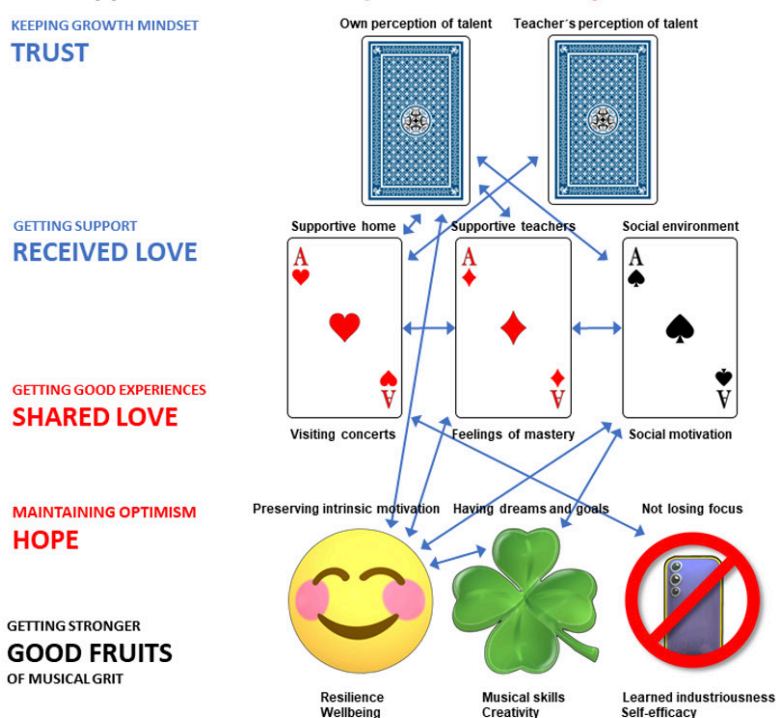


Figure 1. The interrelatedness of the essential components of developing talent and supporting perseverance and passion. The arrows show statistically significant correlations [1, 14].

Table 1 was used to make a “pre-model” of musical grit as a phenomenon. The analysis of all data, quantitative and qualitative (including children’s and teachers’ writings and interviews), led to formulating a new model: The grit model of trust, hope and love (THL). This model is based on Duckworth’s definition of grit as passion and perseverance for long-term goals, but offers a new insight and an educational aspect by zooming in deeper to both the passion and the perseverance sides of grit (Figure 2) [1].

**Perseverance = Trust + Received love**

Based on the data, the new model claims that perseverance could be understood as a result of the combination of Trust and Received Love. Received love as a component of the model refers to all that support a child needs for reaching a long-term goal: psychological support (like encouragement), education, and all material and economic support. The child cannot learn to play without an instrument. Children also need adults’ help to create beneficial practice habits. This happens in a natural way if there is some system that builds clear structures and requires commitment. In education, the easiest way to build commitment is a curriculum that offers well-structured studies with time and space for regular practicing. Received love also means getting inspiration; in the case of music, e.g. opportunities to hear impressive concerts and see musical role models. Received love supports both the perseverance and the passion sides of grit. It also includes values that people adopt from their own families, friends, and educators and the whole surrounding society. Received love enables Trust that a person will get all the help and support that are important for approaching their own goal or dream. Trust refers also to believing in person’s own capacities (competence) to reach the long-term goal.

**Passion = Hope + Shared love & flourishing**

Based on the data, the new model claims that passion can be understood as a combination of Hope and Shared love and flourishing. Both qualitative and quantitative data of this study revealed children’s shared interest in and passion for

music, art and interpretation. Children also had many different goals and dreams (hopes) related to music [14]. That built a very positive starting point for the learning process.

The definition of grit also includes having a long-term goal [3]. The component Shared love and flourishing (Figure 2) represents those rewards of psychological well-being, which people either experience or hope to experience, when they manage to accomplish a long-term dream or goal. Shared love here refers to a situation in which the artist both shares the artistic interpretation (or other results of the gritty work) with the grateful audience – and also gets their own enjoyment of it [17].

All parts of the THL model are though connected, also the circle of Trust overlaps with love (Figure 2). The study of Von Culin et al., showed that pursuing engagement (flow) was more associated with perseverance than passion (=the consistency of interest) [18].

**Modifying the PERMA-V model to better display musical flourishing**

Both qualitative and quantitative data were used to understand further the positive musical experiences reported by children. These results were summarized to “the model of positive music education and grit” (see FJME), which includes the same components as the THL model (Figure 1) but zooms in deeper to the various experiences of flourishing in a music educational context [1,14]. Children’s writings and interviews indicated that music-caused well-being experiences should include more dimensions than the classical PERMA model does [19]. The dimensions of musical flourishing detected by the study were summarized as follows:

- Emotions and compassion (Positive emotions)
- Engagement and flow (Engagement)
- Relationships and relatedness (Positive relationships)
- Meaning and aesthetic experiences (Meaning)
- Accomplishment and self-expression (Accomplishment)
- Mind-body connection and health (Vitality)

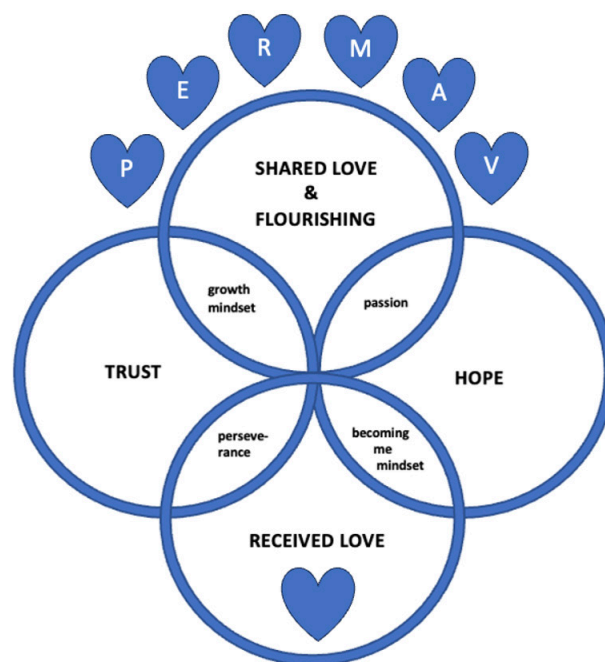


Figure 2. The grit model of trust, hope and love with PERMA-V addition [1, 19].

## Detecting the two “Grit Mindsets”

### Growth mindset – Maintaining Trust to reach the goal (Shared love and flourishing)

This study understands growth mindset simply as maintaining trust in a person’s own ability to make progress, learn new things, and approach a long-term goal. Growth mindset [4] can be analyzed as belonging more to the perseverance side of grit.

This study noticed that musical grit correlated with self-perceived musical ability (Table 1). Children’s writings and interviews revealed that finding some dissonance between their own feeling of competence and the challenges of their own long-term goals (and maintaining a growth mindset) could lead to the following:

Taking the power of inner fortitude into use – finding flow – and solving the problem [21]. The original article that is referenced here developed a “flow and fortitude version” of the THL model that illustrates with arrows the role of *sisu*, or inner fortitude, in a situation where someone has found intrinsic power to step slightly into their own discomfort zone (Figure 3) [1]. Flow experience can be understood to kindle happiness and enhance the growth of individuals – and even the evolution of mankind [20,21]. According to our study, demanding, self-chosen long-term goals – e.g., learning to play an instrument and perform musically – frequently offered the children in music classes situations in which they met music-related challenges. They got familiar with “taking extra mental resources into use, so that the challenge or adversity could be met” [1]. However, these challenges very often led to the flow and musical flourishing that followed successful group performances.

Using coping strategies and resilience – finding optimism from a positive type of explanatory style [22,23]. Our article displayed and analyzed these strategies in detail [1]. It could be interpreted that music class studies (from 3<sup>rd</sup> to 9<sup>th</sup> class) offered a supportive community for the students in them.

That might explain the children’s high musical grit and tendency to show optimism and persist through their challenges in learning music. Also, the study of Nogaj perceived music students’ high socio-emotional skills. In stressful situations. Music students could exhibit significantly more often task-oriented coping strategies [24].

Fine-tuning their goals and showing adaptability to the situation [25]. If the person has already used various coping strategies, but there still seems to be too big gap between realism and their own Trust, this study understands that fine-tuning the goal – based on increased self-knowledge – also expresses grit. The *authentic* type of grit makes people thrive and inspires others and differs from *stubborn*, *selfie* and *faux* grit [26].

The fortitude and flow version of the THL model (Figure 3) displays the value of acquiring realistic but positive self-knowledge through a gritty process that also nurtures the development of socio-emotional competence [27, 28]. In many cases, some fine-tuning of the long-term goal (based on increased self-knowledge) helps a person to maintain grit. This fine-tuning – showing adaptability to the situation – doesn’t always have to mean choosing some path that is easier, but rather modifying the goal so that it is more compatible with a person’s special strengths and character strengths [25]. (For example, in football some are more successful in the role of goalkeepers and less successful as defenders.) Even small adaptations of the long-term goal or dream can greatly strengthen Trust – and build a more realistic path to success (Shared love and flourishing). Lahti understands that the inner fortitude, *sisu*, should function as a gentle power [29]. Very long-term processes nurture self-knowledge and socio-emotional competence [27, 30]. Those help people to focus their time and energy on such long-term goals that enable Shared love and flourishing and a healthy balance between eudaimonic and hedonic well-being [31].

**Rejecting perseverance:** Giving up and choosing a totally different long-term goal.

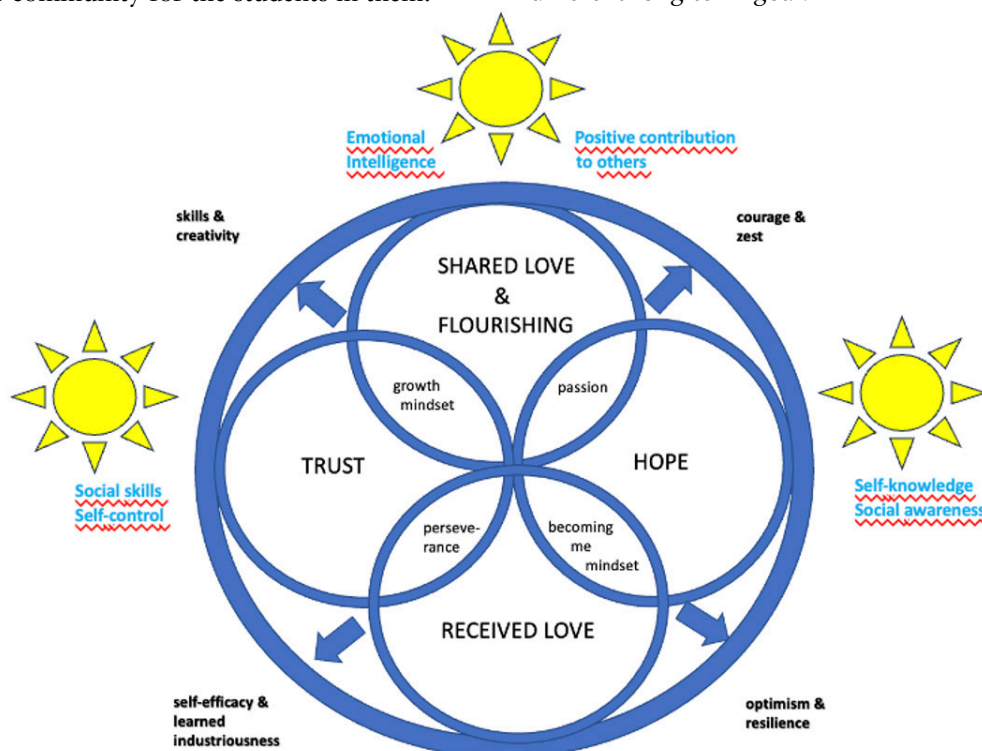


Figure 3. The fortitude and flow version of the THL model [1] with emotional intelligence addition [30].

**Becoming me mindset – following a person’s own authentic Hope that grows from Received love**

This study created a new concept becoming me mindset [1]. It is situated between Received love and Hope in the THL model (Table 1). Children adopt their values from their early environment [32]. The component of Hope represents a person’s own authentic goal choices and passions. Many studies show that long-term goals also mold identity [33,34]. As teenagers, many people start to recognize their own and autonomic needs and hopes. Becoming me mindset displays a situation in which a person feels that their own and autonomic choices of long-term goals support building their own identity. Becoming me mindset can be analyzed as belonging more to the passion side of grit that is much about autonomy and hopes.

Becoming me mindset supports grit and refers to a situation in which a person feels that working hard in the direction of their own dream or goal also carries them to the direction of their “better version” or authentic self. Becoming me mindset could definitely be detected from teenagers’ interviews [1]. On the other hand, if someone feels that their own long-term goal or dream doesn’t (or will no more) offer enough rewarding experiences related to some other goal, and the feeling of passion wanes, this process can lead to next steps:

Fine-tuning the goal a bit, so that it better reflects the person’s own renewed values and style. If the interests change, the goal can also change, e.g., some children started to focus more on the pop/jazz genre than on playing classical music [35]. This process can be understood as a natural result of increased self-knowledge and social awareness that express the development of emotional intelligence (Figure 3).

Rejecting the previous passion: Changing a person’s own long-term goal or dream to something new that seems to offer a stronger promise of good life and flourishing.

**The relationship between the four elements of the THL model and the three elements of basic psychological needs theory (BPNT)**

According to the basic psychological needs theory (BPNT), a famous sub-theory of the self-determination theory (SDT),

there are three human psychological needs: competence, relatedness and autonomy, which are beneficial for the human intrinsic motivation. Satisfying them also enhances well-being [36].

The THL model describes an optimal kind of a process, where all the components of the model support grit and the long-term process leads not only to developing a person’s own skills and potential, but to rewarding PERMA-related experiences and acquiring something good and valuable that can then be shared with others.

It can be interpreted that the THL model includes the three elements of BPNT, but uses concepts that emphasize the positive nature of the process (Figure 4) [1,3,31].

**Trust (THL) vs. competence (BPNT)**

The concept of Trust emphasizes that a person believes they have already or will have in the future (Growth Mindset), enough competence that the long-term goal feels attainable enough for maintenance of effort. (Figure 4: The circles of Trust and Shared love and flourishing overlap.)

The THL model has been developed in an educational context, so the component Trust also means that an individual trusts they will get all such help and support (mental and material) that are important to achieve their goal or make their dream come true (Figure 4: The circles of Received love and Trust overlap).

**Hope (THL) vs. autonomy (BPNT)**

The concept of Hope emphasizes the autonomic choice of some long-term goal or dream that the person (passionately) wants to achieve. (Figure 4: The circles of Hope and Shared love and Flourishing overlap).

In educational contexts, it’s more beneficial to emphasize a child’s hope instead of their total autonomy. Educators are specialists who have knowledge about leading long-term learning processes. They use their expertise to create suitable short-term goals that build a path that helps the learner to approach their own long-term goal or dream and maintain self-control [37]. Achieving their own long-term goal usually requires commitment, structure and creating habits that support grit (Received love).

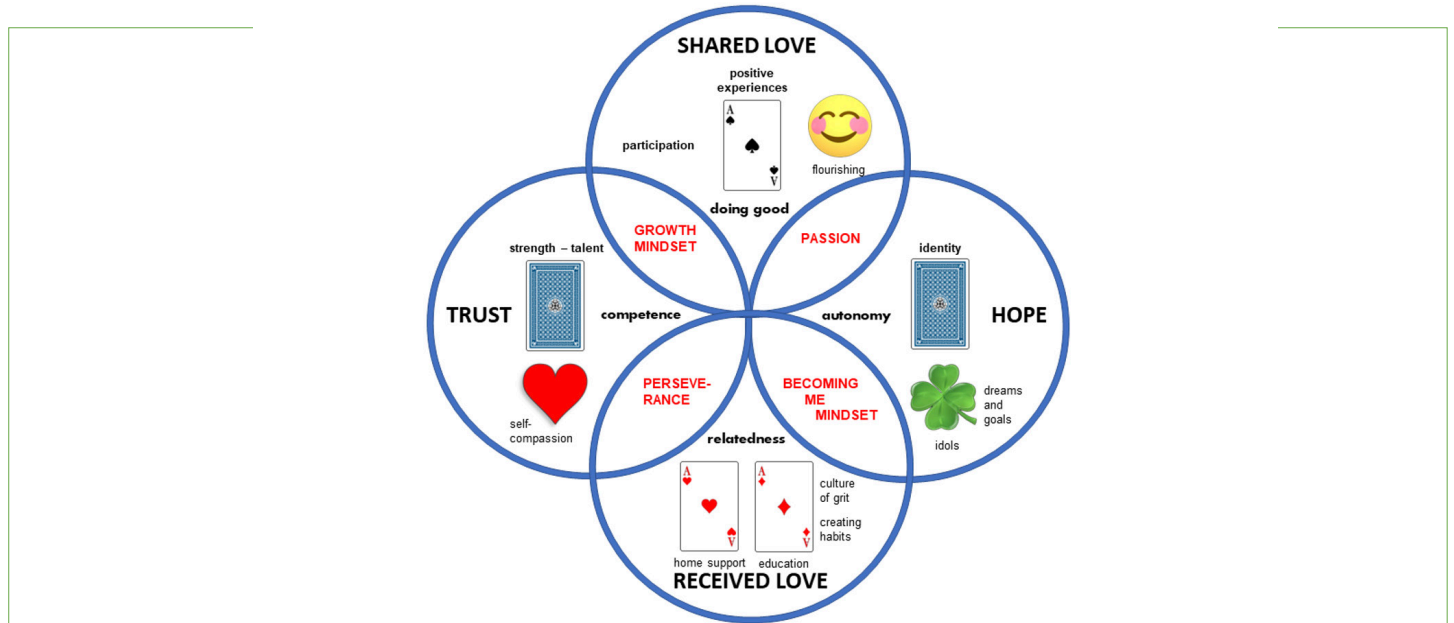


Figure 4. The differences and similarities between BPNT [36], classical grit theory [3] and THL model [1].

The qualitative data of this study showed that children really loved to play in a class orchestra. They had many different hopes and dreams about becoming skillful players, professional musicians, etc. [1,14]. If every individual child could decide every week whether they feel like attending rehearsal or want to stay home and play a video game, this autonomy would destroy the hopes of all the other children who would have loved to play together at those rehearsals. Thus, hope seems to be a more beneficial concept than autonomy, at least in educational contexts. (Figure 4: The circles of Hope and Received love overlap).

### Received love (THL) vs. relatedness (BPNT)

The concept of Received love emphasizes the huge role of other people and social connections that enable a person to reach their own goals and dreams – and for the feeling of relatedness. Many top performers have experienced in their early childhood a crystallized moment. They heard a fantastic musical performance and from that moment they have been filled with passion to devote their life to music, so that they could themselves create such uplifting, magical moments of beauty and shared humanity [38]. The feeling of relatedness is at the very core of musical experience, and our study indicated that social motivation strongly supported grit (Table 1).

### Shared love and flourishing (THL) vs. beneficence

The study of Martela and Ryan investigated whether beneficence could be added to the BPNT theory and considered as a fourth basic psychological need but concluded that beneficence (“doing good”) is rather a wellness enhancer [39].

The grit model of trust, hope and love contains the component of Shared love and flourishing. It displays a situation in which the gritty process finally leads to a situation of the acquired skills being used for building good for others. It is typical for musical interpretation that the performer offers magical moments for the audience and at the same time also experiences “musical flourishing”, PERMA-V types of well-being experiences [40].

This flourishing is a kind of payday of psychological wellbeing rewards after doing the hard work of gritty practicing. The component of Shared love and flourishing can be considered a cocktail of psychological basic needs and

wellness enhancers. It could be interpreted that these well-being prizes enable the grit and patience to wait for delayed gratification [41,42].

The experiences of flourishing, including art experiences, are individual [18]. Csikszentmihalyi et al., noticed how talented young teenagers got hooked on the flow experience [43]. For them, learning became an obsessive passion. According to BPNT, relatedness is a basic human psychological need, and positive relationships form one component of the PERMA well-being theory. There are already some studies about feeling PERMA-related experiences through music, but there is a great need for further study to better understand the component of Shared love and flourishing in the THL model, especially related to the arts [1, 44, 45].

Children’s musical flourishing – music-caused well-being experiences – were measured by using a self-made survey, where the answers were provided on a 7-point Likert scale strongly disagree–strongly agree [1,14]. The Finnish music class system appeared to offer generous well-being rewards for the students, who invested much time and energy in learning music. These results show that music was a stronger well-being source for the children in music classes than for the children in normal classes (Table 2).

### Nurturing of grit and fortitude through music education

Detecting an individual’s own special strength, combined with the passion to develop that strength, offers a special opportunity for a very positive growth process because it makes people ready to challenge themselves and even go a bit into their own discomfort zone, if needed [46,47].

The Grit Scale (10 items, 5-point Likert) was used to measure grit, and the musical flourishing survey was used to measure children’s music-based well-being [3,1]. Children in music classes showed a higher level of general perseverance and music-based well-being than the regular class as a control group (Table 3).

Self-efficacy was measured by the General Self-Efficacy Scale and well-being was measured by the Flourishing Scale [48,49]. Flow was measured based on the original definition of flow experience and it’s dimensions [50]. This investigation made musical instrument studies accessible (even free of charge) for all, so playing years could also be understood to represent musical grit (Table 4).

Table 2. Comparison of music classes and normal classes in musical flourishing (2020 [1]).

Item	Class type	N	Mean	SD	T-value	df.	Sig. (two-tailed)
1. Music gives me positive emotions and good feelings.	music	42	6.10	1.031	2.466	66	.037*
	normal	26	5.23	1.861	2.171		
2. It is rewarding to concentrate on music and forget everything else for a while.	music	42	5.86	1.117	2.858	66	.006**
	normal	26	4.96	1.455	2.686		
3. I'm happy that I have music-related friends and we can make music together.	music	42	5.95	1.081	6.836	66	<.001 ***
	normal	26	3.50	1.881	6.056		
4. Music gives content and meaning to my life.	music	42	5.74	1.211	4.620	66	<.001 ***
	normal	26	4.12	1.681	4.282		
5. Music offers me experiences of achieving and success.	music	42	5.98	.975	6.131	66	<.001 ***
	normal	26	4.12	1.532	5.539		

Table 3. Comparison of music classes and normal classes in perseverance, passion and musical flourishing [1].

Item	Class type	N	Mean	SD	T-value	df	Sig. (two-tailed)
Perseverance, sum (Grit Scale) 5 items, 5-point Likert	music	59	20.51	3.11	2.21	81	.030*
	normal	24	18.88	2.91			
Passion, sum (Grit Scale) 5 items, 5-point Likert	music	58	13.48	3.89	.003	81	.998 <i>n.s.</i>
	normal	25	13.48	3.71			
Musical flourishing, sum 5 items, 7-point Likert	music	42	29.62	4.53	5.62	66	<.001 ***
	normal	26	21.92	6.77			

\*p < .05, \*\*p < .01, \*\*\*p < .001

Table 4. Correlations (Pearson) of musical flourishing, perseverance, self-efficacy, general flourishing, flow and playing years in May 2020 [1].

Variable	Alpha	Mean	S.D.	N	1	2	3	4	5
1. Musical flourishing, sum	.90	26.68	6.62	68					
2. Perseverance, sum	.77	20.04	3.13	83	.02				
3. Self-efficacy, sum	.86	32.09	4.50	79	.39**	.59***			
4. General flourishing, sum	.87	47.50	6.81	68	.50***	.43***	.55***		
5. Flow experiences, sum	.74	21.19	3.88	85	.25*	.27*	.41***	.35**	
6. Playing years		1.5	1.79	95	.42***	.01	.02	.07	.13

\*p < .05, \*\*p < .01, \*\*\*p < .001 (two-tailed).

Musical grit appeared to have strong correlation with musical flourishing. Those who really enjoyed music continued to play as a hobby for a longer time. Gritty long-term musical studies might also have advanced children’s abilities to understand and analyze music, play better, and therefore feel more musical enjoyment.

Musical flourishing showed strong correlation with general self-efficacy, flow experiences and general well-being (flourishing). So, this strengths-based type of education seemed to offer a very special opportunity for nurturing such features of character that also build resilience [51,52].

### CONCLUSION

Most children who study in music classes don’t end up becoming professional musicians, but music class studies seemed to offer them a very beneficial kind of learning environment that catalyzed positive growth. The qualitative data of this study showed that many teenagers had developed a very optimistic attitude (explanatory style) when facing difficulties or disappointments in learning music [1]. Music was highly meaningful for the children in music classes and for their friends.

Many studies show that grit is not only beneficial for children’s school performance and well-being; it can also support adolescent’s resilience against school burnout [25,53,54]. Children’s exceptional capacity to show inner fortitude and just keep practicing music – in spite of difficulties – might be a logical consequence of the traditional music class system (Received love) that supported each child’s musical grit as a member of the community – and could produce this effect.

The old music class tradition may have managed to preserve some features that still express the secrets of Finland’s past educational miracle. Music classes seem to offer a highly beneficial environment for supporting children’s grit. The secret to building grit – or even a culture of grit – in the

school environment may finally be simple: grit is about trust, hope and love – and the most important of those is love – received and shared.

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