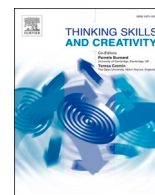


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## Designing a creative storytelling workshop to build self-confidence and trust among adolescents

Véronique Rizzi, PhD \*, Caroline Pigeon, PhD , Florian Rony ,  
Alexandra Fort-Talabard, PhD

*Imagineo, 2 Rue Professeur Zimmermann, 69007 Lyon, France*

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### ABSTRACT

In a constantly changing world facing important challenges, educational activities need to be aimed at empowering the young generation to take an active part in shaping both their lives and society. The empowerment process builds on the development of self-confidence and trust. Specifically, self-confidence as generalised self-efficacy, confidence in speaking, confidence in one's ability to learn and the resulting persistence seem crucial in today's society. Relevant components of trust, in turn, concern the ability to rely on others in group settings and to cooperate in challenging situations. Adolescence itself is a phase of uncertainty and rapid changes, which makes it sensitive to drops in self-confidence and trust. It is recommendable to go beyond a problem oriented focus and to address protective factors through positive interventions.

This paper presents the design of a creative storytelling workshop building on psychological mechanisms promoting self-confidence and trust. In three consecutive half-day sessions, adolescent participants are given the opportunity to invent stories based on their self-reflection and self-expression, to audio-record them and to create a finalized podcast. By presenting the relevant elements of the intervention design, this paper provides guidance to practitioners for creating and implementing life skill enhancing workshops, particularly those aiming to develop self-confidence and trust. Besides creativity and storytelling, relevant elements of the workshop were a framework of positive psychology, the cooperative experience of small successes towards a shared goal, experiential learning, a balance between task types including movement, the creation of a safe and immersive space and an encouraging posture of the facilitators.

A pilot study was carried out with twelve teenagers in order to gain first evidence on the effects of the intervention on the above mentioned components of self-confidence and trust. Results from self-report data indicate several components of self-confidence and trust can be positively impacted by the experience provided through the workshop.

### 1. Introduction

Contrasting with previous decades where success was tied to knowledge retrieval and competition, the challenges of the 21st century require creative and collaborative solutions ([National Education Association, 2012](https://www.nationaleducationassociation.org)). There is a need to empower people to take

\* Corresponding author.

*E-mail addresses:* [veronique.rizzi@imagineo.org](mailto:veronique.rizzi@imagineo.org) (V. Rizzi), [caroline.pigeon@imagineo.org](mailto:caroline.pigeon@imagineo.org) (C. Pigeon), [alexandra.fort@imagineo.org](mailto:alexandra.fort@imagineo.org) (A. Fort-Talabard).

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charge of their journey through life and to take an active part in shaping society. Empowerment is a process of developing a person's or a group's ability to make purposive choices and to transform them into actions and results (Alsop, Bertelsen, & Holland, 2006). In doing so, people will need to navigate ambiguity, given that most environments are characterized by fast and multi-faceted disruption, and long standing plans are not adapted to the present context any more (Gibbs Howard, 2018). Hence, the possibility to move along a planned path is substituted by the need to explore and build new paths in the absence of certainty of outcome. People need to come together and practice curiosity rather than apprehension, to make and test rather than to speculate and control. In a fast paced, unpredictable world, the empowerment process therefore builds on the development of self-confidence and trust among individuals (Gibbs Howard, 2018).

Self-confidence can be described as a **global self-regard determined by the perception of having the capabilities to handle a variety of situations effectively** (Shrauger & Schohn, 1995). It is based on an internal sense of overall positive self-worth and self-efficacy (Bowers et al., 2010). The concept of self-efficacy refers to people's beliefs in their capabilities to produce given attainments linked to distinct realms of functioning (Bandura, 1997). It seems to be essential to consider the larger scope of self-confidence when targeting the achievement of self-fulfilment and wellbeing of the individual in a changing society. Beside the confidence to perform competently in general, as suggested by the definition of Shrauger and Schohn (1995), it seems relevant to take into account the components of confidence that play a decisive role in an individual's capacity to thrive in today's society. Among the subscales included in Shrauger and Schohn's Personality Evaluation Inventory (PEI) in accordance with the determinants of self-confidence most frequently reported by students, confidence in speaking could be considered as a contemporary skill that deserves particular attention in youth development. In order to thrive, an individual needs to be able to respond with flexibility to changing opportunities and challenges (Bowers et al., 2010). This means that the capacity to overcome adversity is one of the individual thriving indicators (Theokas et al., 2005). Correspondingly, Leffert (1997) has identified commitment to learning or achievement motivation as a developmental asset. As reported by Park, Tsukayama, Yuc, and Duckworth, (2020), effort and success in dealing with difficult situations have proven to be related to grit and growth mindset, the belief that intellectual ability can evolve (Dweck, 2008). Developing grit and growth mindset is a vector of resilience and thriving during adolescence (Park et al., 2020). Hence, both persistence in the face of difficulties and the belief in one's capacity to learn how to deal with challenging situations seem to be relevant components of self-confidence to be considered in the scope of positive youth development.

When people collectively operate to make progress in a context of high ambiguity, trust is key. Although definitions of trust vary throughout the literature, they show one common element: **trust is characterized by the willingness to depend on others with a feeling of relative security, in a situation that implies a certain risk**, i.e. where negative consequences are possible (McKnight & Chervany, 2001). While trusting intentions refer to specific other people, disposition to trust indicates a consistent tendency to be willing to depend on others, without being person-specific nor situation-specific (Rotter, 1971). Similarly, Freitag and Traummüller (2009) distinguish intimate trust in people close to the truster from abstract trust in people in general. Generalized trust seems to be essential when collaborating creatively with diverse groups of people, without building long-term trusting relationships. Collaboration has been consistently identified as a 21st century skill throughout different frameworks (Voogt & Pareja Roblin, 2010). Given that creative tasks imply a certain exposure to risk, mutual relationships of trust have been stated as a precondition of creative collaboration (Searle, 2004; Storey & Joubert, 2004). It seems relevant to consider the manifestations of trust in the context of cooperation and especially in situations where a challenge is faced with collective effort. In this context, it has been suggested that safe environments which minimize vulnerability are required (Searle, 2004). In situations where people need to collaborate with strangers, it could equally be argued that the ability to make oneself vulnerable to others (as a component of trust) is needed. Apart from the emotional safety in collaborative situations, trust is also tied to receiving help from others in a group (Eteläpelto & Lahti, 2008). Being able to accept help from others in situations that are too challenging for the individual seems to be a crucial component of trust, closely related to trusting the capacity of the group to deal with that situation. This assumption is in line with the conceptualisation of trust as a dispositional willingness to rely on others (Colquitt, Scott, & LePine, 2007), which implies to be comfortable with feelings of interdependence. Finally, just as the confidence in one's ability to learn how to deal better with uncomfortable situations, trust in others could manifest as the willingness to learn from others in a cooperative context. This assumption reflects the view of a deeply social view of learning and the associated issue of trusting to learn (Landrum, Eaves, & Shafto, 2015).

During the life span, adolescence is a difficult phase of adjustments that is especially sensitive to drops in self-confidence (Alsaker & Kroger, 2020). Youth are facing a variety of unknown situations as the scope of life enlarges when leaving childhood behind. They transition to new learning environments, they experience new social situations, and autonomy becomes a relevant development goal for them (Goossens, 2020). The challenges of growth are complex and adolescents have to deal with feelings of uncertainty. Spending less time in the close family circle, they have to evolve in more unknown environments (McElhaney, Allen, Stephenson, & Hare, 2009). The need to adapt to new social interaction modalities while forging an adult identity represents a further challenge of this development stage (Blakemore, 2008; Steinberg, 2008).

Adolescence is a critical age to develop self-esteem, motivation, goal setting and responsible action. At the same time, it is a period of fragility, characterized by a rapid cognitive, social and emotional development (World Health Organisation, WHO, 2017). Tensions can occur due to a widening gap between biological maturity and social transition to adulthood, and the struggle for an emerging need of autonomy and a strong attachment to the family (McElhaney et al., 2009). Vulnerability can also increase due to some aspects of globalization, such as gaming or online bullying (WHO, 2017). In this context, doubts tend to appear in the adolescents' self-concept (academic and social abilities) and their feeling of connection with their parents, peers and larger ecological context may decline.

A lack of self-confidence can have a particularly negative impact at this stage of the young person's development by limiting experience, willingness to try and perseverance, and by increasing vulnerability to self-doubt and undue influence of peers ((Mann, Hosman, Schaalma, & De Vries, 2004). Confidence in social interactions is highly relevant to the ability to form social networks (Cheng

& Furnham, 2002). It has been shown that both self-confidence and interpersonal trust negatively correlate with loneliness (Cheng & Furnham, 2002; Rotenberg, 1994) and thus affect the person's psychosocial wellbeing.

Increased emotional reactivity during adolescence may result in poor risk management (Pfeifer & Blakemore, 2012), with substance use or self-harm as a possible consequences (Dorard, Bungener, & Berthoz, 2013; WHO, 2017). Since adolescence is recognized as the peak age of onset for mental disorders (Green, McGinnity, Meltzer, Ford & Goodman, 2006; Zarobe and Bungay, 2017), it should also be the targeted moment of preventive measures that enhance mental health, resilience and coping strategies (Zarobe and Bungay, 2017). During adolescence, both risk and protective behaviours start or are consolidated, which can be decisive factors of future adult health (WHO, 2017). Building life skills and enhancing competences can help promoting good mental health (Barry, Clarke, Petersen, & Jenkins, 2019; WHO, 2018). Adolescents' health and well-being are considered drivers of change in the attempt to create healthier and more sustainable societies (WHO, 2017). The Global Strategy for Women's, Children's and Adolescents' Health (2016–2030) even identifies adolescents as being central to achieving the United Nations' Sustainable Development Goals (Every Woman Every Child, 2015). Considering adolescents as powerful societal assets, efforts should be made to ensure they can thrive and are in a position to positively transform the communities in which they live. Under this perspective, positive behaviours that need to be promoted among adolescents also include constructive forms of risk-taking, such as sport or drama. The need to go beyond a problem oriented focus and to address protective factors is addressed in the 5 C model of positive youth development (Lerner, Phelps, Forman, & Bowers, 2009). According to this model, positive adolescent interventions should target the development of Competence, Confidence, Connection, Character and Caring (Lerner et al., 2009; WHO, 2017).

Recognizing the importance of the new generation's capacity to evolve with ease in a constantly changing society and to collectively build solutions to the challenges of transition, this paper focuses on the enhancement of self-confidence and trust through a creative storytelling workshop, to be carried out with a non-clinical adolescent population. With the aim to provide a framework to practitioners to guide the design and facilitation of life-skill enhancing workshops, this paper explicits how the design of this intervention applies pedagogical mechanisms that specifically build self-confidence and trust. Based on a pilot implementation, this paper provides preliminary results regarding the impact of the intervention on relevant components of self-confidence and trust.

## 2. Intervention design

### 2.1. Pedagogical mechanisms promoting self-confidence and trust

The intervention was designed as a creative workshop using storytelling techniques. Both creativity and storytelling are promising drivers of self-confidence and trust. In addition, the storytelling approach cultivates social connection and self-accomplishment during adolescence.

Shaping a positive society in an increasingly unpredictable and challenging world requires to use one's **creativity** (Gardner, 2000; Shaheen, 2010; Smears, Cronin, & Walsh, 2011). Besides, active participation in arts activities has a role to play in well-being and quality of life (Clift, 2012). Several programmes targeted at enhancing youth's resilience and mental wellbeing use arts-based interventions to promote the development of a sense of belonging and purpose, social inclusion, relationship building and the improvement of social skills and self-esteem (Zarobe and Bungay, 2017). Studies on the benefits of participating in arts activities commonly reveal an increase in self-confidence and self-esteem in teenagers (Ennis & Tonkins, 2015; Hauseman, 2016; Kemp, 2006; Salmon, Orme, Kimberlee, Jones, & Murphy, 2005; Wood, Ivery, Donovan, & Lambin, 2013). A literature review on drama interventions in non-clinical settings (Daykin et al., 2008) concluded that performing arts had impacts on self-confidence and social skills (Douglas, Warwick, & Whitty, 2000; Lasic & Kenny, 2002), as well as enhanced peer interaction and cooperation (Walsh-Bowers & Basso, 1999). Moreover, arts-based activities represent an opportunity for people to explore and learn about themselves, and may thus be a positive vector of identity development (Zarobe and Bungay, 2017). Beyond creativity related to arts, creative skills also apply to cognitive domains such as creative problem-solving (Williamson, 2011) and creative learning (Jeffrey, 2006). A review study concludes that offering creative learning environments has shown to increase not only academic achievement, but also confidence and resilience of youths (Davies et al., 2013).

The mental health benefits of **storytelling** interventions have been documented in several studies, observing positive developments such as increased self-efficacy and decreased depression (Esterling, L'Abate, Murray, & Pennebaker, 1999; Gortner, Rude, & Pennebaker, 2006; Pennebaker, 2000). In particular, telling their own story in a group setting has proven to generate positive feelings among participants, mainly related to the opportunity to describe their own experiences and having their voices heard (DiFulvio, Gubrium, Fiddian-Green, Lowe, & Del Toro-Mejias, 2016). Writing a story and sharing it with others provides a sense of accomplishment and pride among participants. Furthermore, increases in self-confidence have been observed regarding the capability to express one's story (DiFulvio et al., 2016).

Within a storytelling activity, **positive psychology** can serve as a framework to guide self-reflection, drawing on the classification of strengths and virtues that enable human thriving (Seligman, Steen, Park, & Peterson, 2005). Identifying one's signature strengths and using them in a new way has shown positive effects on wellbeing, specifically raised levels of happiness (Seligman et al., 2005).

Increased confidence in one's ability to perform and in oneself more generally is closely related to the ability to communicate with others and to relate to other people (Kemp, 2006). Accordingly, improved social connection has previously been observed as a consequence of a storytelling workshop, with participants reporting feeling cared for and supported by the group and the facilitator (DiFulvio et al., 2016).

Creating and sharing a story not only provides an opportunity of being seen and valued, but it also allows to experience **small successes** in an active learning process. Research suggests that experiencing small successes helps developing a growth mindset, which

in turn builds self-confidence by perceiving challenge as an opportunity to learn (Dweck, Walton, & Cohen, 2014). **Experiential learning** has proven benefits on knowledge acquisition but also on the development of memory, creativity and sensitivity to acquire knowledge (Boud, Cohen, & Walker, 1993; Efstratia, 2014). First approaches on experiential learning date back to Dewey, who considered education a process of living rather than a preparation for later life (Dewey, 1897). It has then been argued that in order to prepare for life experiences, pedagogical methods should foster self-confidence, cooperation and determination (Stetson, 1941), and more recent studies have shown that effective youth programmes provide a context that empowers the participants to become active learners (Durlak, Weissberg, & Pachan, 2010; Larson & Rusk, 2011; Vandell, Larson & Mahoney, 2015).

In order to maintain the participants’ attention and active participation, it is crucial to establish a **balance between task types** during the intervention (Wick, Faude, Manes, Zahner, & Donath, 2018). Besides, alternating different types of activity also fosters creative thinking, providing stimulation for creative ideas and reflection to evaluate ideas and make them evolve (Cramond & Connell, 2009; Fairweather & Cramond, 2010; Poon, Au, Tong, & Lau, 2014).

Both self-reflection and creative risk taking require time, and creating a dedicated **space of safety and immersion** is essential in order to allow for a deep and significant experience. Establishing safe and caring learning environments involving peer initiatives and community-building activities has been identified as one of the components that foster young people’s social-emotional development, tied to the experience of feeling valued and to the arousal of intrinsic motivation (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011).

**Mouvement** is a driving force of immersion, connection and esteem. Movement enhances attention to the present and focus (Taylor, 2018). Besides, movement exercises that include rhythm help the participants to connect with each other and to bond (Taylor, 2018). Movement exercises that involve mirroring develop empathy, and they respond to the human need to be seen and appreciated (Taylor, 2018), a likely vector of self-confidence.

Research on an intervention involving performing arts has shown that increased confidence was not only associated to overcoming challenges and having a purpose, but also from feeling valued and being treated like an adult (Ennis & Tonkins, 2015). Thus, a central aspect of creative **facilitation** is adopting a **posture** that is exempt of judgement and that encourages self-expression. Facilitators need to develop trust-building skills in order to foster positive relationships of authentic trust with the participants. Research has shown that youth’s trust in programme leaders amplifies programme benefits, by increasing participants’ willingness to take risks and thus opening them to new experiences, and by helping increase youth’s agency (Griffith & Larson, 2016).

2.2. A workshop design that integrates the pedagogical mechanisms

In the present workshop, participants were given the opportunity to invent stories, to audio-record them, and to edit the recordings so as to create a finalized podcast. The creative process integrated a strong component of self-reflection and self-expression, facilitated through a storytelling approach. Participants gathered in groups of three based on a signature strength they had in common, and they assigned it to the hero of their story. They created a scenario where the hero put his/her strength into action, and a second one where the hero used it to help out a hero from a fellow group. This procedure was designed to give participants the opportunity to become aware of their own possibilities through the experience of an imagined character. They got their inspiration for their fictional stories from a reflection on their own strengths and weaknesses, and on the values they stand for. Self-reflection and self-expression were facilitated through back and forth moves between reality and fiction during the course of the workshop. A series of exercises led participants from becoming aware of themselves and acknowledging their strengths and weaknesses, to progressive self-disclosure in front of the group. The creative storytelling workshop gave the participants the opportunity to express what made sense to themselves and to actively listen to fellow participants, under the pretext to fuel their stories. The groups shared their creations at several stages of the workshop, leading them to get used to speaking to an audience and to take creative risks.

The creative storytelling workshop was carried out in a format of three sessions, lasting three hours each. The workshop thread was

	Session 1	Session 2	Session 3
<b>Opening</b>	<ul style="list-style-type: none"> <li>• Barometer &amp; Introduction</li> </ul>		
<b>Safe space</b>	<ul style="list-style-type: none"> <li>• Objectives &amp; agreements</li> <li>• Experiential learning games</li> </ul>	<ul style="list-style-type: none"> <li>• Group rhythm</li> <li>• Cooperation game</li> </ul>	<ul style="list-style-type: none"> <li>• Objectives &amp; agreements</li> <li>• Group game</li> </ul>
<b>Collective creation</b>	<ul style="list-style-type: none"> <li>• Inspiration through self-expression: dreams, character strengths and difficulties</li> <li>• Creation of introduction to group stories</li> </ul>	<ul style="list-style-type: none"> <li>• Inspiration: mechanisms on how to overcome difficulties</li> <li>• Application of a mechanism to the hero of the story : recording and theatre play</li> </ul>	<ul style="list-style-type: none"> <li>• Cooperation among groups: one hero helps the other to overcome a difficulty</li> <li>• Edition and finalisation of group podcast</li> </ul>
<b>Celebration through sharing</b>	<ul style="list-style-type: none"> <li>• Collective listening to the recorded story introductions</li> </ul>	<ul style="list-style-type: none"> <li>• Collective presentation of theatre plays</li> </ul>	<ul style="list-style-type: none"> <li>• Collective listening to the finalized podcasts</li> </ul>
<b>Closing</b>			<ul style="list-style-type: none"> <li>• Participants' feedback &amp; Barometer</li> </ul>

Fig. 1. Content of the three workshop sessions.

structured in a way that gave the participants opportunities for small, stepwise successes: Three cycles of collective creation were each followed by sharing to celebrate progress (cf. Fig. 1: improvised drama performance of the story, playing the audio-recorded story, playing the finalized podcast).

A decisive element of the workshop was to create a safe space, where adolescents could participate fully and open up to the experience they were offered. Furthermore, positive workshop dynamics were created by alternating playful and serious episodes. These included creativity-enhancing activities, such as a theatre play and imagination exercises, as well as cooperation games and exercises that activate the body or the senses, and may therefore play a role in developing trust. These creative and physical activities were interspersed between phases of self-reflection, presentation to the group and productive teamwork to create the stories.

The workshop structure featured an alternation of plenary sessions and small group work. During the plenary sessions, group dynamics could be initiated and positive interactions among participants could be experienced. Subsequent phases of creation in small teams allowed the participants to reproduce the dynamics they had experienced in the plenary sessions, while creating their stories in a more intimate and more autonomous setting. This structure aimed at giving the participants the opportunity to gradually open up to themselves and others, experience interactions with fellow participants in more or less controlled settings, while enjoying to co-create the stories.

Essentially, the storytelling workshop was designed to offer the opportunity to experience situations of personal progress and positive interaction with others, leading to the achievement of a common goal. Feelings of self-confidence and trust are expected to increase through this experience itself, rather than through overt discussions on self-confidence and trust.

The workshop was led by two experienced facilitators. Creating a safe and caring environment does not only depend on the exercises that are implemented, but also on the way they are presented. The facilitators need to provoke immersion of all participants by finding a sensitive balance in guiding them: they should neither leave room for hesitations to come up, nor should they push the participants into a reluctant execution of the exercises. The facilitators should lead the participants through a sequence of opportunities to be creative and to take creative risks progressively, always making sure that a safe and caring environment is maintained within the group (Taylor, 2016). In that, the way the facilitator interacts with the participants influences the posture of the participants towards the facilitator and among themselves.

As described above, the facilitators should actively create positive group dynamics in the plenary sessions and leave room for the participants to self-adjust and reproduce the interactions they are comfortable with in the small teams. Working in groups of three with no proactive intervention of the facilitators gives the participants a space of freedom that fosters autonomy and accountability.

In sum, the expected impact of this workshop design is based on experiential learning and raised awareness of self-worth and caring connection among participants. Rather than evoking the concepts of self-confidence and trust, the workshop builds on the framework of positive psychology, progressive risk taking and self-disclosure, and the cooperative experience of small successes towards a shared goal. The role of the workshop structure and of its facilitators is to create a safe environment that allows participants to lean into their edges in a playful yet reflected and personal way. It furthermore provides a progressively increasing experience of autonomy throughout the workshop activities.

### 3. The pilot study

#### 3.1. Method

##### 3.1.1. Study design and participants

A pre-experimental design including a pre- and post-measurement was applied with 12 participants. The participants (seven girls, five boys) aged from 13 to 15 years (mean ( $M$ ) = 13.5, standard deviation ( $SD$ ) = 1.0) were recruited on a voluntary basis through convenience sampling from a non-clinical setting. They were offered to participate in a creative storytelling workshop, and the objective of raising self-confidence and trust was not disclosed before the final debriefing at the end of the workshop. None of the participants did know more than one fellow participant before the workshop. The study was organized in accordance with the Declaration of Helsinki. The parents of the participants signed a parental consent form.

##### 3.1.2. Procedure of the creative storytelling workshop

The creative storytelling workshop was held in three half-day sessions on three consecutive days in April 2017. The two workshop designers took the role of facilitators. They followed a previously established workshop thread, including the exercises to create a safe space, the creative storytelling activities and the impact measurement tools for data collection. Fig. 1 presents the content of the three sessions. The detailed workshop thread is available on request.

#### 3.2. Data collection & analysis

At the beginning of the first workshop session and at the end of the third workshop session, quantitative data was collected with a set of continuous scales named the barometer. In addition, qualitative feedback was gathered from participants at the end of the workshop.

##### 3.2.1. The barometer

The barometer was developed to collect self-report data concerning participants' self-confidence and trust. This giant-sized print-out barometer is composed of eight items, consisting in one-sentence statements with continuous answering scales, horizontally



represented below each other on a wall. Four items refer to self-confidence and four items to trust (Table 1). The items specifically refer to the components of self-confidence and trust that have been identified as relevant for the capacity to evolve in a changing society and to collectively respond to its challenges.

Participants were asked to place a dot-shaped sticker on each answering scale so as to rate how well the statement describes themselves in the present moment. Verbal anchors of the scales were “That’s absolutely not me” (left) and “That’s totally me” (right). The stickers were personalized in colour and pattern, in order to assign the data to each participant without making their answers easily identifiable by the other participants.

The barometer was presented as part of the workshop, as a welcome activity for the pre-treatment measure and a closing activity for the post-treatment measure. This way, putting the participants into a situation of judgement was avoided and the activity was also used to raise awareness on the value of diversity and on the evolutive character of each person’s development.

Quantitative data was subsequently transcribed by coding the continuous scale into a 10-point Likert scale. Pre- and post-measures were compared for each item using paired samples t-tests with SPSS Statistics 24. Effect sizes (Cohen’s  $d_z$ ) were calculated with G\*Power 3.1.9.4.

### 3.2.2. Feedback of the participants

A closing exercise involving individual self-reflection and self-expression was used to collect participants’ feedback just before the end of the workshop. Participants were, in a first place, asked to individually write on post-its what the workshop had brought them, and in a second time to present their feedback to the group. More specifically, they had to answer by completing the following three sentences: “I have overcome [...]”, “I felt gifted in [...]”, and “I am leaving with [...]”.

### 3.3. Results

Paired samples t-tests revealed significant differences between the pre-treatment measure and the post-treatment measure for the items “I can learn how to deal with situations that I am not yet comfortable with” ( $t(8) = -5.515$ ,  $p = .001$ , Cohen’s  $d_z = 1.34$ ; Table 2), “I feel comfortable speaking out, even in front of people who do not agree with me” ( $t(10) = -5.051$ ,  $p < .001$ , Cohen’s  $d_z = 3.19$ ), “I trust others when I can’t manage alone” ( $t(10) = -4.457$ ,  $p = .001$ , Cohen’s  $d_z = 1.18$ ), and “In a difficult situation, I let others help me” ( $t(9) = -2.953$ ,  $p = .016$ , Cohen’s  $d_z = 0.79$ ). Concerning the item “I am able to deal with a lot of situations, even complicated ones”, the difference between the pre-treatment measure and the post-treatment measure tends towards significance ( $t(9) = -2.25$ ,  $p = .051$ , Cohen’s  $d_z = 0.72$ ). However, no significant difference was found between the pre-treatment measure and the post-treatment measure for the items “When a situation is difficult, I keep it up” ( $t(9) = -0.126$ ,  $p = .903$ , Cohen’s  $d_z = 0.02$ ), “I enjoy learning from others” ( $t(9) = -1.741$ ,  $p = .116$ , Cohen’s  $d_z = 0.56$ ), and “For the most difficult situations, I prefer to be with others” ( $t(10) = -1.747$ ,  $p = .111$ , Cohen’s  $d_z = 0.33$ ).

The feedback of the participants suggests that the workshop increased their self-confidence, especially in terms of communication, technical and creative skills. Indeed, they declared they overcome: “the fear of talking to people”, their “shyness”, and the challenge of “speaking in front of everyone” and they felt gifted “in the use of the software”, “in recording”, “as an actress” and “creatively”. Participants acknowledged that the workshop led them to collaborate with others: they met the challenge of the group work and they overcome the “reluctance to trust people”. They also reported having “met new people” and “made friends” during the workshop. Finally, the participants had fun participating in the workshop: they declared having “good times” and left “in a good mood”, with “good memories” and with “happiness”.

## 4. Discussion

The aim of this paper was to present the design of a creative storytelling workshop based on pedagogical mechanisms that specifically build self-confidence and trust in a non-clinical adolescent population. Through pilot data, this paper provided first evidence for the workshop’s effects on components of self-confidence and trust that are particularly important in the current societal context.

The results of the pilot study show that the experience provided to the participants during the workshop positively impacts several of the measured components of self-confidence and trust. Indeed, quantitative results reveal a statistically significant improvement at the end of the workshop for the self-confidence items relating to confidence in learning (growth mindset) and speaking, as well as the trust items referring to the willingness to rely on others in challenging situations. An improvement which tends to be significant has

**Table 1**  
Items of the barometer.

	Item wording
Self-confidence	I am able to deal with a lot of situations, even complicated ones.
	I can learn how to deal with situations that I am not yet comfortable with.
	When a situation is difficult, I keep it up.
	I feel comfortable speaking out, even in front of people who do not agree with me.
Trust	I enjoy learning from others.
	I trust others when I can’t manage alone.
	For the most difficult situations, I prefer to be with others.
	In a difficult situation, I let others help me.

**Table 2**

Responses (means and standard deviations) to the items of the barometer at the beginning (pre) and the end (post) of the workshop.

Item	M (SD)		p values
	pre	post	
I am able to deal with a lot of situations, even complicated ones. <sup>1</sup> (/10)	6.9 (2.4)	8.7 (1.3)	.051
I can learn how to deal with situations that I am not yet comfortable with. <sup>2</sup> (/10)	5.6 (2.5)	9.1 (1.1)	<b>.001</b>
When a situation is difficult, I keep it up. <sup>1</sup> (/10)	6.8 (3.2)	6.9 (3.0)	.903
I feel comfortable speaking out, even in front of people who do not agree with me. <sup>3</sup> (/10)	5.5 (1.2)	8.7 (1.7)	<b>.000</b>
I enjoy learning from others. <sup>1</sup> (/10)	6.7 (3.9)	8.8 (2.3)	.116
I trust others when I can't manage alone. <sup>3</sup> (/10)	4.9 (2.4)	8.0 (1.7)	<b>.001</b>
For the most difficult situations, I prefer to be with others. <sup>3</sup> (/10)	9.3 (1.4)	9.8 (0.6)	.111
In a difficult situation, I let others help me. <sup>1</sup> (/10)	5.3 (2.9)	7.8 (2.2)	<b>.016</b>

note. <sup>1</sup> n = 10; <sup>2</sup> n = 9; <sup>3</sup> n = 11. Bold values correspond to p values <.05.

been observed for the self-confidence item referring to generalised self-efficacy. The feedback of the participants was in line with these results, since they declared having acquired or improved personal and relational skills. The concepts of self-confidence and trust were specifically mentioned by teenagers although the objectives of the workshop had not been revealed to them. In terms of their perceived achievements during the workshop, they did not only refer to their tangible results (e.g. production of stories) but underlined the effect of the experience on their personal growth (e.g. overcome their shyness).

The results regarding the evolution of self-confidence seem to relate to the experience of going beyond their comfort zone and thus gaining confidence in their capability to manage new situations, to learn new skills and especially to speak publicly (including self-disclosure). The impact of the workshop on trust appears to operate through the experience of succeeding collectively in an unfamiliar or challenging situation, presupposing the ability to accept help from peers.

The missing impact of the workshop on the item "For the most difficult situations, I prefer to be with others" can be attributed to a ceiling effect. This finding underlines the importance of collaboration among youth, who are reluctant to face challenges alone. It seems, however, that relying on concerted efforts to achieve goals does not necessarily go in hand with an appreciation of peer-learning ("I enjoy learning from others"). On the one hand, this finding suggests that the workshop does not provide sufficient experience in this regard so as to develop the participants trust in this dimension. On the other hand, the item might not be specific enough to measure trusting to learn.

As argued in the introduction of this paper, adolescence is a period in life that is characterized by new challenges and changing life context. Being able to step out of their comfort zone with confidence is essential to youth, in order to be able to venture into unknown environments. An experiential learning approach as the one presented in this paper seems to be an appropriate and effective means to develop their self-confidence.

The results of this study also indicate that providing a collaborative and challenging creative experience to youth is a promising approach to build their generalised trust. This conclusion is in line with the sphere-specific logic of trust formation argued by Freitag and Traunmüller (2009), stating that generalised trust is not only based on psychological predispositions but also on the radius of trust building experiences. It supports that the generalised expectancy to trust is built through social interaction and individual learning rather than being genetically predisposed (Rotter, 1971).

The creative storytelling workshop satisfies three out of four criteria of recommended training practices (SAFE - sequenced, active, focused, explicit), established by Durlak et al. (2010) to qualify after-school programmes that seek to promote personal and social skills in children and adolescents. Firstly, the workshop uses a connected and coordinated sequence of activities to achieve skill development. Training outcomes could probably be enhanced if the workshop was embedded in a wider programme of targeted activities. Secondly, the workshop is almost exclusively based on active forms of learning to help adolescents develop confidence and trust. Thirdly, the workshop integrates several mechanisms specifically devoted to developing confidence and trust. However, the workshop cannot be considered as an explicit intervention given that the objective to develop confidence and trust was only revealed at the very end, and rather masked on purpose behind the more tangible objectives of collective creation of the stories. Whether making the objective to develop confidence and trust explicit to the participants would enhance or hamper the effectiveness of the workshop is arguable.

#### 4.1. Limitations and further research needs

The first limitation of this study is its reduced sample size. As a pilot study, above all, it proves the feasibility of the workshop and indicates its potential of impacting confidence and trust positively. A second limitation concerns its measurements, which rely exclusively on self-report data, making it subject to biases such as social desirability. However, the use of coloured stickers which were randomly assigned to the participants just before putting them on the barometer hampers individual identification at first glance and thus reduces the likelihood of shame-triggered answers. In order to conclude on the psychometric qualities of the barometer, in particular the reliability and construct validity, further studies with larger samples are required. It is also recommendable to further assess the effect of this type of workshops with other types of data, such as body language observations, more extensive questionnaires or semi-structured interview techniques. In addition, long-term effects and the impact on participant's daily life have not been measured in this study. It would be interesting to investigate how stable the effects on confidence and trust are, and how they need to be consolidated through follow-up interventions. Moreover, the observed effects on confidence and trust can only be attributed to an

interplay of the pedagogical mechanisms operating in the workshop, but the role or importance of each mechanism was not specified (e.g. creativity, storytelling approach, workshop structure). Likewise, the attitude and skills of the facilitators are likely to be decisive for the success of the intervention. It is therefore of importance to be trained for this type of intervention, especially since the creative storytelling workshop uses a bottom-up pedagogy traditional educators are not necessarily familiar with. Studies on skill training not only concluded that the trainer's interpersonal skills are important but also noted that the trainer should help youth generalize their developed skills to their everyday life (Dusenbury & Falco, 1995; Gresham, 2002). Ideally, the workshop would be embedded into a larger programme that, beyond offering opportunities to build confidence and trust, would allow establishing deeper relationships between the adolescents and the facilitators, and that would build youths' engagement in activities through a programme routine and long-term structure (Yohalem, Wilson-Ahlstrom, Fischer, & Shinn, 2009).

#### 4.2. Conclusion

This paper presents a creative storytelling workshop as a promising positive intervention to build the components of self-confidence and trust among adolescents that will help them thrive in today's society. Practitioners can find guidance to create and implement life skill enhancing workshops (especially those targeted at self-confidence and trust) that provide an impactful experience to the participants, by considering the relevant elements and pedagogical mechanisms exposed in this paper.

#### Declaration of competing interest

None.

#### CRediT authorship contribution statement

**Véronique Rizzi:** Writing - original draft, Writing - review & editing, Conceptualization. **Caroline Pigeon:** Writing - original draft, Methodology. **Florian Rony:** Conceptualization. **Alexandra Fort-Talabard:** Methodology.

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#### References

- Alsaker, F. D., & Kroger, J. (2020). Self-concept, self-esteem and identity. In S. Jackson, & L. Goossens (Eds.), *Handbook of adolescent development*. Psychology Press.
- Alsop, R., Bertelsen, M., & Holland, J. (2006). *Empowerment in Practice. From analysis to implementation*. Washington DC: World Bank.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Barry, M. M., Clarke, A. M., Petersen, L., & Jenkins, R. (2019). *Implementing mental health promotion* (2e éd.). Switzerland: Springer International Publishing. <https://doi.org/10.1007/978-3-030-23455-3>.
- Blakemore, S. J. (2008). The social brain in adolescence. *Nature Review Neuroscience*, 9, 267–277.
- Boud, D., Cohen, R., & Walker, D. (1993). *Using experience for learning*. Bristol, USA: Society for Research into Higher Education and Open University Press.
- Bowers, E., Li, Y., Kiely, M., Brittan, A., Lerner, J., & Lerner, R. (2010). The five Cs model of positive youth development: A longitudinal analysis of confirmatory factor structure and measurement invariance. *Journal of Youth and Adolescence*, 39(7), 720–735.
- Cheng, H., & Furnham, A. (2002). Personality, peer-relations, and self-confidence as predictors of happiness and loneliness. *Journal of Adolescence*, 25, 327–339. <https://doi.org/10.1006/yjado.475>.
- Clift, S. (2012). Creative arts as a public health resource: Moving from practice-based research to evidence-based practice. *Perspectives in Public Health*, 132(3), 120–127. <https://doi.org/10.1177/1757913912442269>.
- Colquitt, J., Scott, B., & LePine, J. (2007). Trust, trustworthiness, and trust propensity: A meta-analytic test of their unique relationships with risk taking and job performance. *The Journal of Applied Psychology*, 92(4), 909–927.
- Cramond, B., & Connell, E. (2009). Nurturing creative thinking. In F. A. Karnes, & S. M. Bean (Eds.), *Methods and materials for teaching the gifted*. TX: Prufrock Press.
- Davies, D., Jindal-Snape, D., Collier, C., Digby, R., Haya, P., & Howea, A. (2013). Creative learning environments in education — A systematic literature review. *Thinking Skills and Creativity*, 8, 80–91.
- Daykin, N., Orme, J., Evans, D., Salmon, D., McEachran, M., & Brain, S. (2008). The impact of participation in performing arts on adolescent health and behaviour: a systematic review of the literature. *Journal of Health Psychology*, 13(2), 251–264. <https://doi.org/10.1177/1359105307086699>.
- Dewey, J. (1897). My pedagogic creed. *ELSE*, 54(3), 77–80.
- DiFulvio, G. T., Gubrium, A. C., Fiddian-Green, A., Lowe, S. E., & Del Toro-Mejias, L. M. (2016). Digital storytelling as a narrative health promotion process: Evaluation of a pilot study. *International Quarterly of Community Health Education*, 36(3), 157–164.
- Dorard, G., Bungener, C., & Berthoz, S. (2013). Estime de soi, soutien social perçu, stratégies de coping, et usage de produits psychoactifs à l'adolescence. *Psychologie Française*, 58(2), 107–121.
- Douglas, N., Warwick, I., & Whitty, G. (2000). Vital youth: Evaluating a theatre in health education project. *Health Education*, 100(5), 207–215.
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405–432.
- Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American Journal of Community Psychology*, 45(3–4), 294–309.
- Dusenbury, L., & Falco, M. (1995). Eleven components of effective drug abuse prevention curricula. *The Journal of School Health*, 65(10), 420–425.
- Dweck, C., S. (2008). Can personality be changed? The role of beliefs in personality and change. *Current directions in psychological science*, 17(6), 391–394.
- Dweck, C. S., Walton, G. M., & Cohen, G. L. (2014). Academic tenacity: Mindsets and skills that promote long-term learning. *Bill & Melinda Gates Foundation*.
- Efstratia, D. (2014). Experiential education through project based learning. *Procedia-social and behavioral sciences*, 152, 1256–1260.
- Ennis, G., & Tonkins, J. (2015). Youth arts and mental health: Exploring connections in the TOP end. *The Research Centre for Health and Wellbeing, Charles Darwin University*.



- Esterling, B. A., L'Abate, L., Murray, E. J., & Pennebaker, J. W. (1999). Empirical foundations for writing in prevention and psychotherapy: Mental and physical health outcomes. *Clinical Psychology Review*, 19(1), 79–96.
- Eteläpelto, A., & Lahti, J. (2008). The resources and obstacles of creative collaboration in a long-term learning community. *Thinking Skills and Creativity*, 3, 226–240.
- Every Woman Every Child. (2015). *The global strategy for women's, children's and adolescents' health (2016-2030)*, 2015. New York [http://www.who.int/pmnch/media/events/2015/ga\\_2016\\_30.pdf](http://www.who.int/pmnch/media/events/2015/ga_2016_30.pdf).
- Fairweather, E., & Cramond, B. (2010). Infusing creative and critical thinking into the curriculum together. In R. A. Beghetto, & J. C. Kaufman (Eds.), *Nurturing creativity in the classroom*. Cambridge, England: Cambridge University Press.
- Freitag, M., & Traummüller, R. (2009). Spheres of trust: An empirical analysis of the foundations of particularised and generalised trust. *European Journal of Political Research*, 48, 782–803.
- Gardner, H. E. (2000). *Intelligence reframed: Multiple intelligences for the 21st century*. UK: Hachette.
- Gibbs Howard, S. (2018). *4 tips for navigating ambiguity*. IDEOU blog. <https://www.ideou.com/blogs/inspiration/4-tips-for-navigating-ambiguity>.
- Goossens, L. (2020). Theories of adolescence. In S. Jackson, & L. Goossens (Eds.), *Handbook of adolescent development*. Psychology Press.
- Gortner, E. M., Rude, S. S., & Pennebaker, J. W. (2006). Benefits of expressive writing in lowering rumination and depressive symptoms. *Behavior Therapy*, 37(3), 292–303.
- Green, H., McGinnity, Á., Meltzer, H., Ford, T., & Goodman, R. (2006). In H. Green (Ed.), *Mental health of children and young people in Great Britain, 2004*. Basingstoke: Palgrave Macmillan.
- Gresham, F. M. (2002). Best practices in social skills training. In A. Thomas, & J. Grimes (Eds.), *Best practices in school psychology IV* (pp. 1029–1040). National Association of School Psychologists.
- Griffith, A. N., & Larson, R. W. (2016). Why trust matters: How confidence in leaders transforms what adolescents gain from youth programs. *Journal of Research on Adolescence*, 26(4), 790–804.
- Hauseman, D. C. (2016). Youth-led community arts hubs: Self-determined learning in an out-of-school time (OST) program. *Cogent Education*, 3(1), 1210492.
- Jeffrey, B. (2006). Creative teaching and learning: Towards a common discourse and practice. *Cambridge Journal of Education*, 36(3), 399–414.
- Kemp, M. (2006). Promoting the health and wellbeing of young black men using community-based drama. *Health Education*, 106, 186–200.
- Landrum, A. R., Eaves, B. S., Jr., & Shafto, P. (2015). Learning to trust and trusting to learn: A theoretical framework. *Trends in Cognitive Sciences*, 19(3), 109–111.
- Larson, R. W., & Rusk, N. (2011). Intrinsic motivation and positive development. In R. M. Lerner, J. V. Lerner, & J. B. Benson (Eds.), *Advances in child development and behavior: Positive youth development* (pp. 89–130). Oxford, UK: Elsevier. <https://doi.org/10.1016/b978-0-12-386492-5.00005-1>.
- Lasic, S., & Kenny, L. (2002). Theatre and peer education: An innovative approach to health promotion. *Australian Journal of Primary Health Interchange*, 8(3), 87–93.
- Leffert, N. (1997). Building assets. A positive approach to adolescent health. *Minnesota medicine*, 80(12), 27–30.
- Lerner, J. V., Phelps, E., Forman, Y. E., & Bowers, E. P. (2009). Positive youth development. In R. M. Lerner, & L. Steinberg (Eds.), *Handbook of adolescent psychology, volume 1: Individual bases of adolescent development* (Vol. 1). John Wiley & Sons.
- Mann, M., Hosman, C., M., Schaalma, H., P., & De Vries, N., K. (2004). Self-esteem in a broad-spectrum approach for mental health promotion. *Health education research*, 19(4), 357–372.
- McElhaney, K. B., Allen, J. P., Stephenson, J. C., & Hare, A. L. (2009). Attachment and autonomy during adolescence. In R. M. Lerner, & L. Steinberg (Eds.), *Handbook of adolescent psychology, volume 1: Individual bases of adolescent development* (Vol. 1). John Wiley & Sons.
- McKnight, D. H., & Chervany, N. L. (2001). Trust and distrust definitions: one bite at a time. In R. Falcone, M. Singh, & Y.-H. Tan (Eds.), *Trust in cyber-societies, LNAI 2246* (pp. 27–54). Berlin, Germany: Springer-Verlag Berlin Heidelberg.
- National Education Association. (2012). *Preparing 21st century students for a global society: An educator's guide to "the four Cs"*. Available: Washington: National Education Association <http://www.nea.org/assets/docs/A-Guide-to-Four-Cs.pdf>.
- Park, D., Tsukayama, E., Yuc, A., & Duckworth, A. L. (2020). The development of grit and growth mindset during adolescence. *Journal of Experimental Child Psychology*, 198(October 2020), 104889.
- Pennebaker, J. W. (2000). Telling stories: The health benefits of narrative. *Literature and Medicine*, 19(1), 3–18.
- Pfeifer, J. H., & Blakemore, S. J. (2012). Adolescent social cognitive and affective neuroscience: Past, present, and future. *Social Cognitive and Affective Neuroscience*, 7, 1–10.
- Poon, J., Au, A., Tong, T., & Lau, S. (2014). The feasibility of enhancement of knowledge and self-confidence in creativity: A pilot study of a three-hour SCAMPER workshop on secondary students. *Thinking Skills and Creativity*, 14, 32–40.
- Rotenberg, K. J. (1994). Loneliness and interpersonal trust. *Journal of Social and Clinical Psychology*, 13, 152–173.
- Rotter, J. B. (1971). Generalized expectancies for interpersonal trust. *The American Psychologist*, 26, 443–452.
- Salmon, D., Orme, J., Kimberlee, R., Jones, M., & Murphy, S. (2005). Implementing the rock challenge: Young people's perspectives on a drug-prevention and performing-arts programme. *Journal of Research in Nursing*, 10(3), 339–353.
- Searle, R. H. (2004). Creativity and innovation in teams. In D. Miell, & K. Littleton (Eds.), *Collaborative creativity: Contemporary perspectives* (pp. 175–188). London: Free Association Books.
- Seligman, M. E., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *The American Psychologist*, 60(5), 410.
- Shaheen, R. (2010). Creativity and education. *Online Submission*, 1(3), 166–169.
- Shrauger, J. S., & Schohn, M. (1995). Self-confidence in college students: Conceptualization, measurement, and behavioral implications. *Assessment*, 2(3), 255–278.
- Smears, E., Cronin, S., & Walsh, B. (2011). A risky business: Creative learning in education exploring ways to develop student teacher confidence. *Teacher Education Advancement Journal*, 2(1).
- Steinberg, L. (2008). A social neuroscience perspective on adolescent risk-taking. *Developmental Review*, 28(1), 78–106.
- Stetson, C. P. (1941). *An essay on Kurt Hahn founder of outward bound 1866-1974*. Retrieved from <http://www.kurthahn.org/writings/stet.pdf>.
- Storey, H., & Joubert, M. M. (2004). The emotional dance of creative collaboration. In D. Miell, & K. Littleton (Eds.), *Collaborative creativity: Contemporary perspectives* (pp. 40–51). London: Free Association Books.
- Taylor, P. (2018). *The five facilitation game changers. Partners for Youth Empowerment online document*. Available at: [Partnersforyouth.org](http://Partnersforyouth.org).
- Taylor, P. (2016). *Creative facilitation 1 training manual*. PYE Global, Partners for Youth Empowerment.
- Theokas, C., Almerigi, J. B., Lerner, R. M., Dowling, E. M., Benson, P. L., Scales, P. C., et al. (2005). Conceptualizing and modeling individual and ecological asset components of thriving in early adolescence. *The Journal of Early Adolescence*, 25(1), 113–143.
- Vandell, D. L., Larson, R. W., Mahoney, J. L., & Watts, T. W. (2015). Children's organized activities. In M. H. Bornstein, & T. Leventhal (Eds.), *Handbook of child psychology and developmental science, volume 4: Ecological settings and process in development systems* (7th ed., pp. 305–344). Hoboken, NJ: Wiley. <https://doi.org/10.1002/9781118963418.chilpsy408>.
- Voogt, J., & Pareja Roblin, N. (2010). *21st century skills. Discussion paper*. University of Twente.
- Walsh-Bowers, R., & Basso, R. (1999). Improving early adolescents' peer relations through classroom creative drama: An integrated approach. *Social Work in Education*, 21(1), 23–32.
- WHO. (2017). *Global accelerated action for the health of adolescents (AA-HA!): Guidance to support country implementation*. Geneva.
- WHO. (2018). *Adolescents: Health risks and solutions. Fact sheet. 5 Feb 2018*. Available online: <http://www.who.int/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions>.
- Wick, K., Faude, O., Manes, S., Zahner, L., & Donath, L. (2018). I can stand learning: A controlled pilot intervention study on the effects of increased standing time on cognitive function in primary school children. *International Journal of Environmental Research and Public Health*, 15(2), 356. <https://doi.org/10.3390/ijerph15020356>.
- Williamson, P. K. (2011). The creative problem solving skills of arts and science students—The two cultures debate revisited. *Thinking Skills and Creativity*, 6(1), 31–43.

- Wood, L., Ivery, P., Donovan, R., & Lambin, E. (2013). "To the beat of a different drum": Improving the social and mental wellbeing of at-risk young people through drumming. *Journal of Public Mental Health*, 12(2), 70–79.
- Yohalem, N., Wilson-Ahlstrom, A., Fischer, S., & Shinn, M. (2009). Measuring youth program quality: A guide to assessment tools. January *The Forum for Youth Investment*, 1–92.
- Zarobe, L., & Bungay, H. (2017). The role of arts activities in developing resilience and mental wellbeing in children and young people a rapid review of the literature. *Perspectives in Public Health*, 137(6), 337–347.