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Mind the Gap: Workshop Satisfaction and Skills Development in Art-Based Learning

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ABSTRACT

Research on art-based leadership development suggests that this form of multimodal experiential learning enhances soft skills. Against this backdrop, two quantitative sub-studies from a research program on leadership development explored training effects of improvisational theater and visual arts. In both sub-studies, we applied a longitudinal pretest-posttest design and compared skills development with learner satisfaction and perceived usefulness of educational content. Our findings suggest that participants overestimate training success because very high satisfaction and favorable opinions on the programs' practical relevance are not reflected in desired skills development. We interpret this discrepancy as a halo effect, in which the fun factor of art-based learning and other facets of aesthetic experience outshines actual learning results. Despite limitations such as small sample sizes, our findings contribute to research by putting overly positive assumptions on art-based learning's effectiveness into perspective.

1. Introduction

Conventional approaches to leadership development do not guarantee that learnings are actually transferred into professional practice (Deloitte, 2016; Moldoveanu & Narayandas, 2019). One of the main reasons leadership development programs fail are outdated training approaches that rely heavily on cognition and offer behavioral schemes to complex leadership situations (Garavan et al., 2015; Kruse, 2020). Art-based approaches seem to be a promising alternative on the rise (Adler, 2006; Meisiek & Barry, 2018).

Art-based learning or art-based training—depending on the perspective—is less about acquiring explicit knowledge about an issue than exploring it while actively engaging in an art form or reflecting on artworks as an illustration of essence (Taylor & Ladkin, 2009; Patteson et al., 2010; Rieger & Chernomas, 2013). Multimodal teaching activities using artistic material or techniques are supposed to turn felt experience into embodied, implicit knowledge (Taylor & Ladkin, 2009; Springborg & Ladkin, 2018). In that sense, art-based learning is a form of experiential learning that neglects cognition, verbal instruction, and the training of routines in favor of multimodal learning opportunities and individual self-reflection (Woodward & Funk,

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2010; Rieger & Chernomas, 2013; Springborg & Ladkin, 2018). Instead of defining learning goals in terms of explicit knowledge or behavior patterns, art-based learning is characterized by dealing with artworks or art making with an attitude of exploration and playfulness (George & Ladkin, 2008).

Meanwhile, there are some documented examples for leadership training based on visual arts (Garavan et al., 2015), improvisational theater (Gibb, 2004), dance (Zeitner et al., 2015; Bozic Yams, 2018), choral singing (Parush & Koivunen, 2014; Sutherland & Jelinek, 2015; Jansson, 2020), or poetry (Romanowska et al., 2013, 2014). Empirical research suggests that art-based learning in such environments has an effect on self-awareness (Gibb, 2004; Romanowska et al., 2014; Zeitner et al., 2015; Jansson, 2020), reflectivity (Sutherland & Jelinek, 2015; Jansson, 2020), communication skills, and prosocial behavior (Zeitner et al., 2005; Romanowska et al., 2013; Garavan et al., 2015; Sutherland & Jelinek, 2015; Bozic Yams, 2018).

However, most available studies follow a qualitative design without accurately measuring training effects. Hitherto, assertions on any lasting skills transfer into every working life are merely based on anecdotal evidence (Meltzer, 2015; Jansson, 2020). Although an unknown number of unrecorded cases does not enhance participants' skills (Badham et al., 2016; Seppälä et al., 2020) and there is no guarantee for a skills transfer into professional practice (George & Ladkin, 2008), it is widely assumed that art-based learning adds value to leadership development (George & Ladkin, 2008; Nissley, 2010; Taylor & Ladkin, 2014; Springborg & Ladkin, 2018).

Against this backdrop, we contrast skills development through art-based learning with perceived usefulness of educational content and learner satisfaction. In doing so, we do not discuss particular learning outcomes or modes of learning but focus instead on different dimensions of training success. In order to explore whether art-based learning delivers on its promise, we refer to data from two quantitative studies on leadership development based on improvisational theater or visual art. We present findings on training success and learner appraisal from Study 1. Preliminary findings on skills development from Study 2, which are described in detail in Sandberg and colleagues (2022), are complemented by findings on perceived usefulness and satisfaction that are presented in this paper for the first time.

2. Method

In the following section, we describe the research design and sample for each sub-study. In the two studies, a longitudinal pretest-posttest design was used to evaluate effects of art-based training. Participant satisfaction was evaluated using the same online questionnaire in both. Competence scales were developed for each study individually in order to evaluate disparate learning objectives. Study 2 was set up to analyze the robustness of the first study's results.

2.1. Study 1

2.1.1. Context and research design

The first study's research subject was part of an advanced training program for becoming a *Meister in Veranstaltungstechnik* (master in event technology), which is a German advanced certified degree in vocational education. For the purpose of our study, the "human resource management" part of the program combined conventional education with art-based learning. Participation in the art-based intervention was mandatory. Due to the COVID-19 pandemic in 2021, the advanced training program was mainly conducted online. In a period of eased government regulations, the art-based workshop took place in person while complying with protection and hygiene regulations. All preceding units occurred in a virtual classroom.

Learning objectives for selected conventional lectures and the art-based workshop were in line with skills the examination framework requires (VTMBAProVTFPrV, 2020). They focused on situationally appropriate conversational skills, in particular on communication to defuse conflict situations. Participants had been instructed on this matter in single lectures at various points during the program before the two-day art-based workshop began.

The art-based workshop was designed by a director and involved a seminar actor as a second trainer. They used scenic impulses with the participants as an audience and implemented scenic exercises or improvisation exercises that implied interaction between participants and the actor. The workshop also offered space for discussion and reflection.

The embedding of the workshop in the advanced training program and the data collection dates of Study 1 are displayed in Figure 1. Initial data collection took place at the beginning of the advanced training program (T1). Another survey was conducted before the art-based workshop (T2). The final survey was conducted shortly after the art-based workshop had ended (T3). All participants provided written consent to participate in the study.

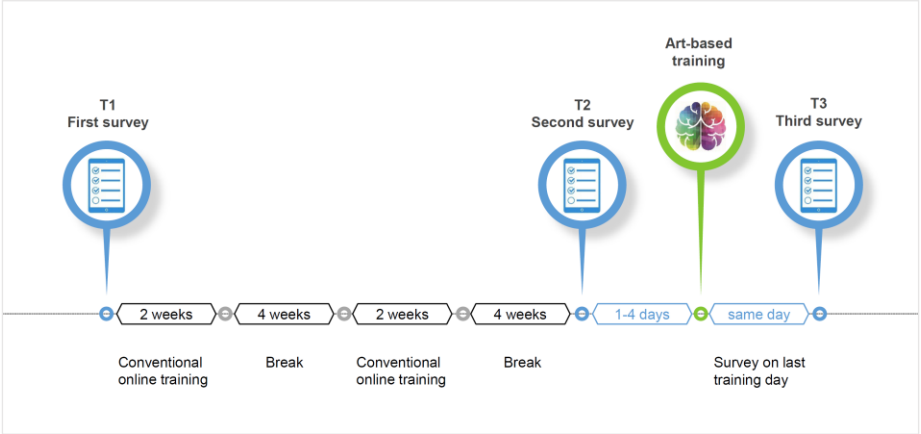

Figure 1. Timeline of Study 1 (January to April 2021)

2.1.2. Participants

14 people (13 = male, 1 = female) joined the art-based workshop, one of which did not take part in the third survey. On average, participants were 30.0 years old (*SD* = 6.00) and had 12.4 years of work experience (*SD* = 6.18). Most participants had leadership experience (3 = disciplinary; 7 = professional; 1 = other; 3 = no leadership experience; multiple responses were possible). Participants differed in terms of the organization in which they were employed (3 = microenterprise; 4 = small enterprise; 4 = medium-sized enterprise; 2 = large enterprise; 1 = other).

2.2. Study 2

2.2.1. Context and research design

For the second study, an art-based training program on dealing with uncertainty in projects was designed and promoted among project managers. Participation was voluntary but tied to a 35 euros attendance fee to ensure commitment. During the month-long program, which took place in September 2021, two half-day workshops were carried out online by means of videoconferencing technology. The workshops were prepared and debriefed by a series of assignments for reading and reflection, which participants had to handle individually. This supporting program was transmitted through a pre-existing, web-based learning application.

The program, which was designed and jointly performed by an artist and a psychologist, aimed at training project managers in coping with unpredictable situations. In the first workshop, instructors used paintings as a projection space for exploring personal strengths and self-management. In the second workshop, they assigned small groups with co-creating installations from Post-It notes. In doing so, they exposed participants to an experience of working without preconceived objectives or procedures and coached them through their creative process.

The timeline of the art-based program and data collection dates of Study 2 are displayed in Figure 2. Data collection took place at the beginning of the program (T1), immediately after the first workshop (T2), and following the second workshop (T3). At the second measurement point, participants were asked, among other things, to indicate their impression regarding the workshop they had just attended. Basically, the last measurement point (T3) represented the end of the program as only one short online debriefing task followed. Hence, participants were asked to provide information on how they perceived the whole program. All participants provided written consent to participate in the study.

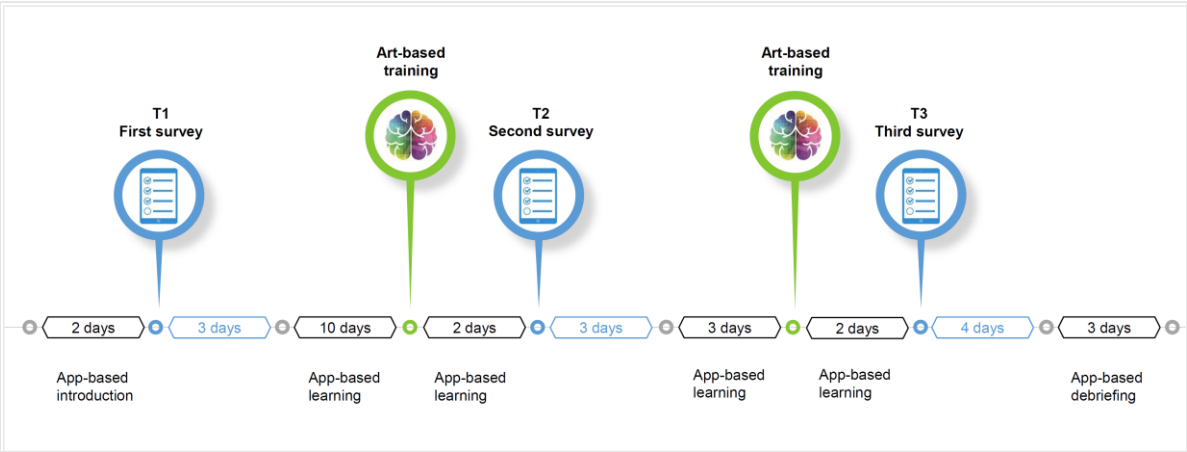

Figure 2. Timeline of Study 2 (September 2021)

2.2.2. Participants

28 project managers signed up to participate. 22 of them answered the first questionnaire and 23 participants started with the first assignment of the web application. 16 project managers participated in the first or second workshop of the program. When entrants did not attend the workshop, instructors provided them with a comparable spare assignment. There are several reasons for participants dropping out of this study. Besides the duration of the program, entrants mentioned they had expected another approach or underestimated the workload involved in completing both program and survey. Because of moderate attendance fees exit barriers were low.

In order to ensure that changes in our measurements were based on participation and to increase data quality, we only used complete data sets (N = 10). Participants (8 = female, 2 = male) were on average 50.4 (*SD* = 8.36) years old and had 24.3 years of work experience (SD = 9.68). All participants were experienced in project management (6 = experience in generating project ideas; 9 = experience in project planning; 10 = experience in project monitoring; 10 = experience in project completion; multiple responses were possible).

2.3. Measurement instruments

We developed or adapted several scales and items for this study. For all scales described below, participants had to answer how much they agreed with the statement on a Likert scale from 1

(Strongly Disagree) to 5 (Strongly Agree). Item and reliability analysis were performed to establish the quality of the scales. Items that had an item-total correlation $r < .3$ or contributed to a low reliability[1] were deleted and not used for scale calculations.

Transfer design. The *transfer design* scale measures the extent to which workshop exercises prepare participants for actual job requirements (Kauffeld et al., 2008). Two items were slightly adapted from the GLTSI (Kauffeld et al., 2008). An example item is: "The exercises in the workshop will help me apply what I have learned to my work."[2] The reliability of this scale reached values from $\alpha_{T2} = .55$ and $\alpha_{T3} = .86$ in Study 1 and $\alpha_{T2} = .94$ and $\alpha_{T3} = .68$ in Study 2. Although a reliability value of .55 can be viewed as almost too low or only acceptable in early research stages (Nunnally, 1967), we kept this scale due to the other values, which can be considered acceptable to excellent (Kline, 2013; Blanz, 2015).

Transfer motivation. The intention to use acquired skills and knowledge in everyday working life is referred to as *transfer motivation*. Three items from the GLTSI (Kauffeld et al., 2008) were slightly adapted to measure this scale. An example item is: "I can't wait to get back to work after the workshop and try out what I have learned." The reliability of this scale reached values from $\alpha_{T2} = .76$ and $\alpha_{T3} = .82$ in Study 1, and $\alpha_{T2} = .91$ as well as $\alpha_{T3} = .75$ in Study 2, perceivable as acceptable to excellent (Kline, 2013; Blanz, 2015).

Perceived satisfaction. Participants were asked to indicate if they liked the workshop. We used two items from the Q4TE (Grohmann & Kauffeld, 2013) to measure this scale. An example item is: "The workshop was big fun to me." The reliability of this scale could also be deemed acceptable, reaching values from $\alpha_{T2} = .70$ in Study 1 and $\alpha_{T2} = .78$ in Study 2 (Kline, 2013; Blanz, 2015). In studies 1 and 2, the reliabilities for this scale for the following time point (α_{T3}) could not be calculated because of a lack of variance (all participants completely agreed with the statements). Due to the importance of this scale for our study and the different values for Cronbach's α for the first time point in each study, we kept the scale for closer analysis.

Perceived usefulness. Participants were asked to indicate how useful they considered the workshop content for their occupation. Two items from the Q4TE (Grohmann & Kauffeld, 2013) were used to measure this scale. An example for an item is: "The workshop is very useful for my work." The reliability of this scale reached values from $\alpha_{T2} = .70$ and $\alpha_{T3} = .79$ in Study 1, and $\alpha_{T2} = .92$ and $\alpha_{T3} = .90$ in Study 2, which can be recognized as acceptable to excellent (Kline, 2013; Blanz, 2015).

Conflict communication. The main goal of the art-based workshop in Study 1 was to enhance participants' skills in conflict situations. Hence, we used several scales to measure skills development in this area. Four items from the Toronto Empathy Questionnaire (Spreng et al., 2009) were adapted to measure *empathy*. An example item is: "I am not interested in how other people feel." The reliability of the scale *empathy* reached $\alpha_{T1} = .73$, $\alpha_{T2} = .80$ and $\alpha_{T3} = .87$, acknowledgeable as acceptable to good (Kline, 2013; Blanz, 2015). In addition, the 3-item *integrating* and *dominating* scales from the Rahim Organizational Conflict Inventory-II were adapted (Rahim, 1983). An example item for the *integrating* scale is: "I negotiate with my colleagues to reach a compromise." An example item for the *dominating* scale is: "I use my influence to push my ideas forward." The reliability of the *integrating* scale reached $\alpha_{T1} = .77$, $\alpha_{T2} = .90$ and $\alpha_{T3} = .90$, which can be considered acceptable to excellent (Kline, 2013; Blanz, 2015). The reliability of the *dominating* scale reached $\alpha_{T1} = .73$, $\alpha_{T2} = .70$ and $\alpha_{T3} = .71$, admittedly acceptable (Blanz, 2015; Kline, 2013). Five *verbal aggression* scale items from the

[1] For reliability analysis, the internal consistency was calculated (Cronbach's Alpha) in SPSS 26. For two-item scales, values are based on correlations between these two items.

[2] The exploratory items were translated into English. Due to the participants' background, items in German were used.

Aggression Questionnaire (Buss & Perry, 1992) were adapted for this study. An example for an item is: "Sometimes I get loud to represent my interests at work." The reliability of this scale reached $\alpha_{T1} = .70$, $\alpha_{T2} = .72$ and $\alpha_{T3} = .68$, which can be considered acceptable (Kline, 2013; Blanz, 2015).

Uncertainty and self-efficacy. The main learning objective in Study 2 was to enhance participants' skills in uncertain work-related situations. Intolerance of uncertainty describes an individual trait whereby a person is likely to perceive ambiguous information as dangerous or threatening, which in turn might lead to worry and anxiety (Greco & Roger, 2001; Laugesen et al., 2003; Dugas et al., 2005; Carleton et al., 2007). The subscales *prospective anxiety* and *inhibitory anxiety* from the Intolerance of Uncertainty Scale were adapted to work context to evaluate whether the training programs affected participants' uncertainty (Carleton et al., 2007). An example item from the *prospective anxiety* scale is: "At work, it frustrates me not to have all the information I need." An example *inhibitory anxiety* scale item is: "At work, I am often paralyzed by uncertainty." The reliability of the *prospective anxiety* scale reached $\alpha_{T1} = .88$, $\alpha_{T2} = .93$ and $\alpha_{T3} = .96$, which can be recognized as good to excellent (Kline, 2013; Blanz, 2015). The reliability of the *inhibitory anxiety* scale reached $\alpha_{T1} = .93$, $\alpha_{T2} = .83$ and $\alpha_{T3} = .96$, perceivable as good to excellent (Kline, 2013; Blanz, 2015).

Self-efficacy is the degree to which individuals believe they can achieve desired goals based on their own abilities, competences and behavior. Self-efficient individuals feel they are in control and can influence their environment (Bandura, 1997; Pajares, 1997; Beierlein et al., 2013). The general self-efficacy short scale was used to measure *self-efficacy* (Beierlein et al., 2013). An example item is: "I can rely on my skills in difficult situations." The reliability of the scale reached $\alpha_{T1} = .86$, $\alpha_{T2} = .90$ and $\alpha_{T3} = .89$, which can be considered good to excellent (Kline, 2013; Blanz, 2015).

3. Results

In the following sections, we describe the results of each study separately. Due to the non-normal distribution of most variables and the small sample sizes in both studies, non-parametric tests were calculated.

3.1. Results of Study 1

The means of the scales for skills development in conflict communication are displayed in Figure 3. Friedman tests with a Bonferroni correction were calculated. Results revealed no significant differences between the time points for the scale verbal aggression ($X^2_{(2, N = 13)} = 1.000$, $p > .05$), for the scale dominating ($X^2_{(2, N = 13)} = 0.79$, $p > .05$), for the scale integrating ($X^2_{(2, N = 13)} = 1.41$, $p > .05$) and for the scale empathy ($X^2_{(2, N = 13)} = 0.00$, $p > .05$).

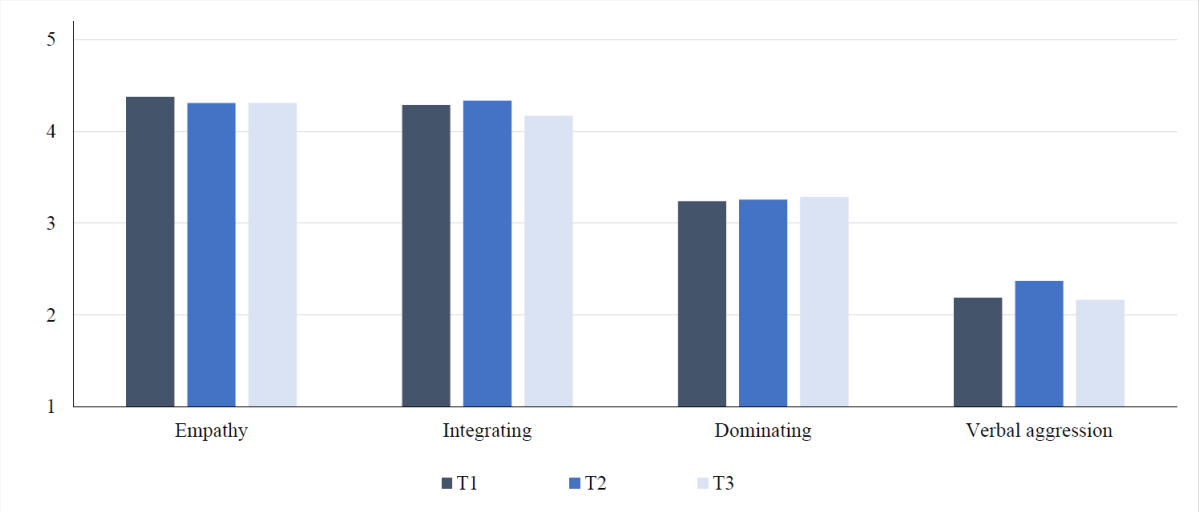

Figure 3. Mean Values for Skills Development in Study 1

Note. T1, Before the start of the advanced training program; T2, Before the art-based workshop; T3, After the art-based workshop. Participants were asked to indicate to what extent the statements in the questionnaire applied to them (on a Likert scale from 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly Agree).

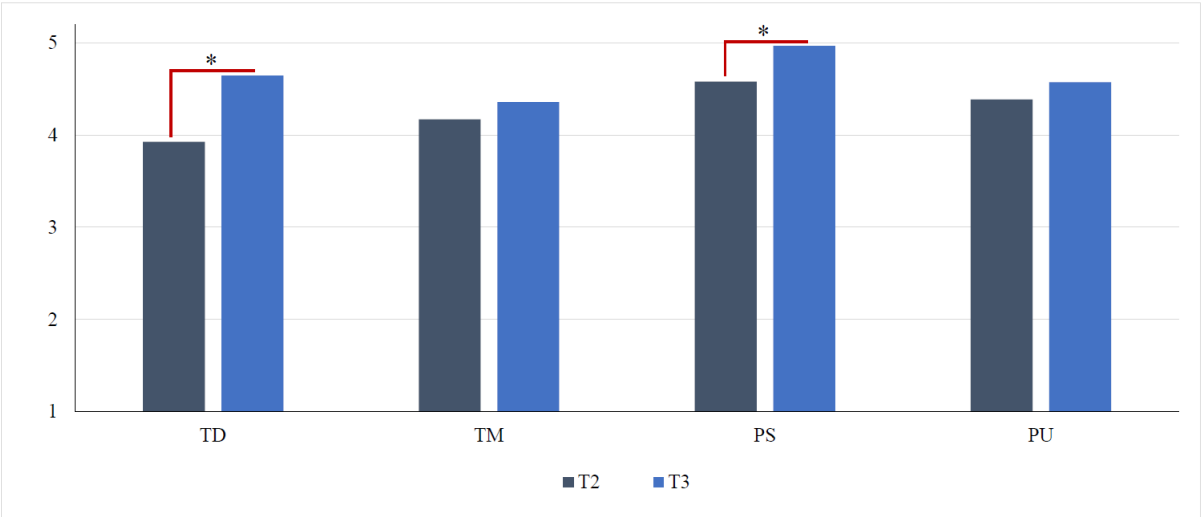

Figure 4. Mean Values for Participants' Evaluation of the Art-Based Workshop in Study 1

Note. TD, Transfer design; TM, Transfer motivation; PS, Perceived satisfaction; PU, Perceived usefulness; T2, Before the art-based workshop; T3, After the art-based workshop. Participants were asked to indicate to what extent the statements in the questionnaire applied to them (on a Likert scale from 1, Strongly Disagree; 2, Disagree; 3, Undecided; 4, Agree; 5, Strongly Agree). * $p < .05$.

Results on the second measurement point show that participants rated the advanced training program up to that point as very good. Means are displayed in Figure 4. However, there is an increase after the art-based workshop. Wilcoxon tests were performed. Due to the small sample size, only (one-sided) exact significances are reported. Results show that the increase is significant for transfer design ($z = -2.71$, $p < .05$, $n = 13$) as well as perceived satisfaction ($z = -2.43$, $p < .05$, $n = 13$).

3.2. Results of Study 2

To gain insight into participants' skills development, the central tendencies for each scale for each time point were compared. Friedman tests with Bonferroni correction were calculated.

Results reveal that there is a significant difference between the measurement points for the self-efficacy scale ($X^2_{(2,\ N=10)} = 7.28$, $p = .03$). However, when calculating post-hoc-tests, this difference lost significance ($z = -.950$, $p_{corrected} > .05$). There were no significant differences for the scales prospective anxiety and inhibitory anxiety (Table 1).

Table 1.
Results of Friedman Tests in Study 2

Scale	Chi-square	p	Mean rank T1	Mean rank T2	Mean rank T3
Prospective anxiety	2.11	.38	2.35	1.85	1.80
Inhibitory anxiety	0.083	.99	2.00	1.95	2.05
Self-efficacy	7.28	.03	1.55	1.95	2.50

Note. N = 10, degrees of freedom = 2, p = exact significance. T1, Beginning of the art-based program; T2, After the first online workshop; T3, After the second online workshop. Participants were asked to indicate to what extent the statements in the questionnaire applied to them (on a Likert scale from 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly Agree).

Results indicate that participants in the art-based workshop rated the workshop positively. The scale perceived satisfaction reached a mean value of 4.6 ($SD = 0.84$, see Figure 5).

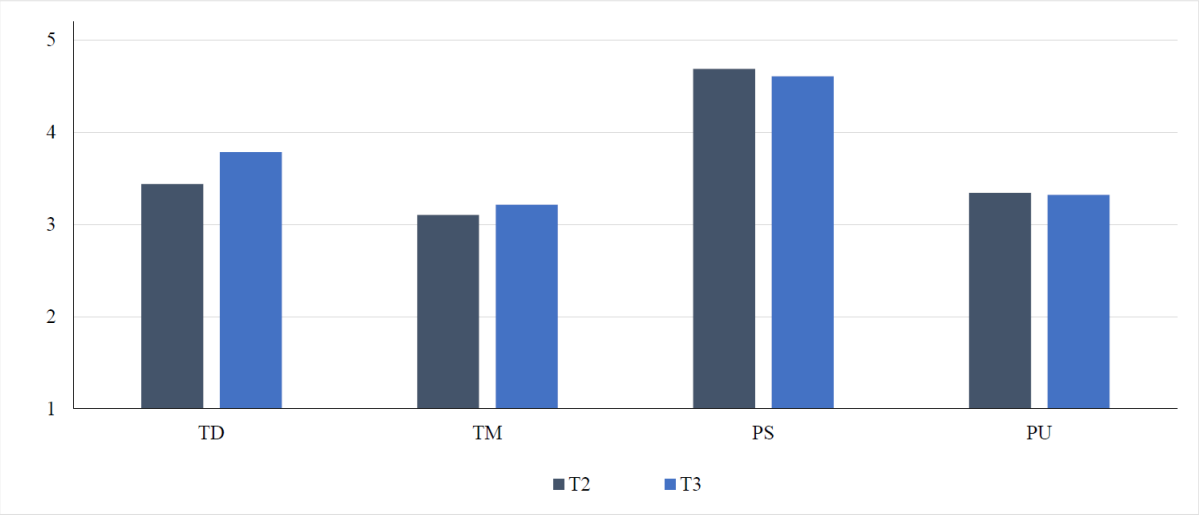

Figure 5. Mean Values for Participants' Evaluation of the Art-Based Workshops in Study 2

Note. TD, Transfer design; TM, Transfer motivation; PS, Perceived satisfaction; PU, Perceived usefulness; T2, After the first workshop; T3, After the second workshop. Participants were asked to indicate to what extent the statements in the questionnaire applied to them (on a Likert scale from 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly Agree).

4. Discussion

During the program on conflict communication that we examined in Study 1, neither the conventional training approach as a lecture nor the art-based one, which involved scenic exercises with actors, had significant effects on skills development. This may partly result from a ceiling effect, as participants were very sociable and empathetic at the outset. However, for dominance and verbal aggression there would have been some potential for improvement.

Although art-based training in Study 1 did not support the skills it explicitly targeted, participants rated it as very good regarding its usefulness and applicability to their professional practice. In addition, it was perceived as more useful than the preceding conventional teaching units and resulted in a significant increase in ratings for transfer design and satisfaction.

As a result of the art-based training in Study 2, there was a significant but temporary increase in self-efficacy, while uncertainty measures remained virtually unchanged. Integrating experiential learning through visual arts did not enhance participants' capability to cope with uncertainty. The effect on self-efficacy may result from individual feedback participants received for several assignments in course of the whole program, while these individual assignments may not have been suitable to reduce insecurity to a similar extent.

Nonetheless, participants regarded the program's design as applicable to their work context, though with some limitations in transfer motivation. Stable values for the *transfer design* and *perceived* satisfaction scales indicate that the program's quality did not vary during its course. Despite a lack of skills development, the program attained very high satisfaction values. While participant dropout may have affected results for satisfaction in a positive way, it did not result in significant changes in skills development during the program.

Both art-based approaches resulted in high participant satisfaction, which somewhat contradicts the fact that they missed their learning objectives. Participants stated they would keep good memories of the events, which they found very entertaining. Fun interaction is known as a learning factor (Lucardie, 2014; Chan et al., 2019). Participants in the program for Study 1 may have particularly enjoyed the fact that the art-based training took place in presence, whereas the preceding part had been held online. However, in both studies, the fun factor of art-based learning (George & Ladkin, 2008; Mack, 2013) did not contribute to desired learning success.

Our findings demonstrate that, in the two cases under review, participant perceptions of art-based learning's usefulness extend well beyond demonstrable effects on soft skills. Overall, participants overestimate training success. We interpret this discrepancy as a halo effect, with high spirits and aesthetic experience outshining actual learning results.

The halo effect, as coined by Thorndike (1920), denotes a constant error in the correlation of basically disjointed items. It is a type of cognitive bias in which someone's overall impression of a person or object affects how they think and feel about single characteristics. Overall impression impairs inferences on specific unknown or vague features as a result of information overload and selective perception. Mental shortcuts are even able to obscure judgement on unambiguous features. In the end, judgement on one characteristic is distorted by the way another, often irrelevant feature is perceived (Nisbett & Wilson, 1977; Beckwith et al., 1978; Fisicaro & Lance, 1990).

Empirical research on the learning-satisfaction relationship in college education has previously pointed to a halo effect. The linear model of perceived learning and satisfaction suggests a true relationship between these constructs, while the direction of the cause-effect relationship cannot be determined (Pace, 1984). The alternative view models the connection as an artifact of a halo effect, which offers a reasonable explanation for observed correlations between satisfaction and learning dimensions inasmuch as satisfied students rate their learning success better (Pike, 1993).

In the art-based settings under scrutiny, memorable characteristics of the learning environment that were perceived as pleasant are reflected in overall satisfaction. This overall impression seems to imply significant values for transfer design and goes along with high values for perceived usefulness and transfer motivation. However, from an objective point of view, learning success is nonexistent or limited. Likewise, there is hardly any potential for transferring knowledge into professional practice.

In essence, results indicating a halo effect did not differ between the mandatory program in Study 1 and the voluntary one in Study 2, which is contrary to common belief in the importance of personal involvement in art-based interventions (Sutherland, 2013; Meltzer, 2015). Instead,

we suggest that the aesthetic nature of art-based learning, which participants experience as different from conventional leadership development approaches (Sandberg et al.), triggers the halo effect. We assume that the otherness, multimodality and playfulness of art-based learning approaches make a significant contribution to satisfaction and overall assessment, as elements of play in education have been linked to learning outcomes and learner satisfaction (Yu, 2019; Yu et al., 2021).

Another aspect that might contribute to a cognitive bias is the way instructors and their facilitation styles are perceived (Meltzer, 2015). In our cases, group dynamics and episodes of joint reflection may have fostered the effect because, in general, halo effects can be traced back to shared beliefs (Kahnemann et al., 2011). Independent of contingent influencing factors, we corroborated the fun factor of art-based learning (George & Ladkin, 2008; Mack, 2013) and it is known that positive affect—that is being in a good mood—amplifies halo effects (Forgas, 2011).

It is important to underscore that the main limitation of our studies are small sample sizes, which may alter the significance of effects in skills development, transfer potential and satisfaction. In addition, our findings represent two different approaches to art-based learning that did not enhance participants' leadership skills in the desired way. They cannot be generalized to other formats or effective endeavors without more ado. Aside from ceiling effects and dropout influences mentioned above, it cannot be ruled out that characteristics of the learning environment like COVID-19 restrictions in Study 1 and the virtual setting in Study 2 influenced research results.

Our assumptions need to be put to the test by introducing control groups and exploring interrelationships within bigger samples than we were able to provide. Modes of action that explain what and how participants in art-based interventions learn are still under-researched (Flamand et al., 2021). This is all that much truer for the comparison between art-based and conventional approaches in the context of learning theory.

5. Conclusion

We explored skills development, transfer potential and participant satisfaction for two art-based learning interventions. The data displays positive values for perceived practical relevance and individual satisfaction on the one hand, whereas relevant competencies hardly ever changed. These findings suggest a halo effect in art-based learning that distorts attitudes and judgements. We suggest that the presumed halo effect is largely fueled by a traceable fun factor of art-based interventions.

We did not identify to what extent which characteristics of the learning environment outshine skills development, as this was beyond our research goals; this question is a starting point for further research. In addition, future research needs to rely on larger samples, use more complex waiting control group designs, and measure participants' learning transfer to work context. Art-based interventions with different foci—visual arts, dance, theater, music, poetry—should be assessed for understanding the impact of art-based learning in a more holistic way.

A review of our findings through specific research is indicated, not least because they put results of qualitative research on art-based learning outcomes into perspective. There is a danger in qualitative studies relying on interviews and participants' reflective essays, that positive statements on learning experience (e.g., Sutherland, 2013; Sutherland & Jelinek, 2015; Zeitner et al., 2015) conceal true learning results.

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References

Adler, N. J. (2006). The arts & leadership: Now that we can do anything, what will we do? *Academy of Management Leadership & Education*, *5*(4), 486–499. https://doi.org/10.5465/amle.2006.23473209

Badham R. J., Carter, W. R., Matula, L. J., Parker, S. K., & Nesbit, P. L. (2016). Beyond hope and fear: The effects of organizational theatre on empowerment and control. *The Journal of Applied Behavioral Science*, *52*(1), 124–151. https://doi.org/10.1177/0021886315573023

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.

Beckwith, N. E., Kassarjian, H. H., & Lehmann, D. R. (1978). Halo effects in marketing research: Review and prognosis. In H. K. Hunt (Ed.), *Advances in Consumer Research* (pp. 465–467). Association for Consumer Research.

Beierlein, C., Kemper, C., Kovaleva, A., & Rammstedt, B. (2013). Kurzskala zur Erfassung allgemeiner Selbstwirksamkeitserwartungen (ASKU). *Methoden, Daten, Analysen (mda), 7*(2), 251–278. https://doi.org/10.12758/mda.2013.014

Blanz, M. (2015). *Forschungsmethoden und Statistik für die Soziale Arbeit: Grundlagen und Anwendungen*. Kohlhammer.

Bozic Yams, N. (2018). The impact of contemporary dance methods on innovative competence development. *Journal of Business Research*, *85*, 494–503. https://doi.org/10.1016/j.jbusres.2017.10.028

Buss, A. H., & Perry, M. (1992). The Aggression Questionnaire. *Journal of Personality and Social Psychology*, *63*(3), 452–459. https://doi.org/10.1037/0022-3514.63.3.452

Carleton, R. N., Norton, M. P. J., & Asmundson, G. J. (2007). Fearing the unknown: A short version of the Intolerance of Uncertainty Scale. *Journal of Anxiety Disorders, 21*(1), 105–117. https://doi.org/10.1016/j.janxdis.2006.03.014

Chan, S. C. H., Wan, J. C. L., & Ko, S. (2019). Interactivity, active collaborative learning, and learning performance: The moderating role of perceived fun by using personal response systems. *The International Journal of Management Education*, *17*(1), 94–102. https://doi.org/10.1016/j.ijme.2018.12.004

Deloitte (2016). *The new organization: Different by design, global human capital trends 2016*. Deloitte University Press. https://www2.deloitte.com/content/dam/Deloitte/global/Documents/HumanCapital/gx-dup-global-human-capital-trends-2016.pdf

Dugas, M. J., Hedayati, M., Karavidas, A., Buhr, K., Francis, K., & Phillips, N. A. (2005). Intolerance of uncertainty and information processing: Evidence of biased recall and interpretations. *Cognitive Therapy and Research*, *29*(1), 57–70. https://doi.org/10.1007/s10608-005-1648-9

Flamand, G., Perret, V., & Picq, T. (2021). Working with the potential of arts-based learning: Making sense and leaving 'business as usual' behind in an art seminar. *Management Learning*. https://doi.org/10.1177%2F1350507621990256

Fisicaro, S. A., & Lance, C. E. (1990). Implications of three causal models for the measurement of halo error. *Applied Psychological Measurement*, *14*(4), 419–429. https://doi.org/10.1177/014662169001400407

Forgas, J. P. (2011). She just doesn't look like a philosopher…?: Affective influences on the halo effect in impression formation. *European Journal of Social Psychology*, *41*(7), 812–817. https://doi.org/10.1002/ejsp.842

Garavan, T. N., McGarry, A., Watson, S., D'Annunzio-Green, N., & O'Brien, F. (2015). The impact of arts-based leadership development on leader mind-set: A field experiment. *Advances in Developing Human Resources*, *17*(3), 391–407. https://doi.org/10.1177/1523422315588358

George, A., & Ladkin, D. (2008). The aesthetics of leadership development. In K. T. James & J. Collins (Eds.), *Leadership learning* (pp. 77–92). Palgrave Macmillan. https://doi.org/10.1057/9780230584075_5

Gibb, S. (2004). Arts-based training in management development: The use of improvisational theatre. *Journal of Management Development*, *23*(8), 741–750. https://doi.org/10.1108/02621710410549594

Greco, V., & Roger, D. (2001). Coping with uncertainty: The construction and validation of a new measure. *Personality & Individual Differences*, *31*, 519–534. https://doi.org/10.1016/S0191-8869(00)00156-2

Grohmann, A., & Kauffeld, S. (2013). Evaluating training programs: development and correlates of the Questionnaire for Professional Training Evaluation. *International Journal of Training and Development*, *17*(2), 135–155. https://doi.org/10.1111/ijtd.12005

Jansson, D. (2020). Taming the 'Alpha-Male' in the space between art and business. *Organizational Aesthetics*, *9*(2), 4–19.

Kahneman, D., Lovallo, D., & Sibony, O. (2011). Before you make that big decision. *Harvard Business Review*, *89*(6), 50–60.

Kauffeld, S., Bates, R., Holton III, E. F., & Müller, A. C. (2008). Das deutsche Lerntransfer-System-Inventar (GLTSI): Psychometrische Überprüfung der deutschsprachigen Version. *Zeitschrift für Personalpsychologie*, *7*(2), 50–69. https://doi.org/10.1026/1617-6391.7.2.50

Kline, P. (2013). *Handbook of Psychological Testing*, Routledge. https://doi.org/10.4324/9781315812274

Kruse, K. (2020, January 7). Top 6 reasons your leadership development program is failing. *Forbes*. https://www.forbes.com/sites/kevinkruse/2020/01/07/top-6-reasons-your-leadership-development-program-is-failing/?sh=44cdf7b174fc

Laugesen, N., Dugas, M. J., & Bukowski, W. M. (2003). Understanding adolescent worry: The application of a cognitive model. *Journal of Abnormal Child Psychology*, *31*, 55–64. https://doi.org/10.1023/A:1021721332181

Lucardie, D. (2014). The impact of fun and enjoyment on adult's learning. *Procedia – Social and Behavioral Sciences*, *142*, 439–446. https://doi.org/10.1016/j.sbspro.2014.07.696

Mack, K. (2013). Taking an aesthetic risk in management education: Reflections on an artistic-aesthetic approach. *Management Learning*, *44*(3), 286–304. https://doi.org/10.1177/1350507612442048

Meisiek, S., & Barry, D. (2018). Finding the sweet spot between art and business in analogically mediated inquiry. *Journal of Business Research*, *85*, 476–483. https://doi.org/10.1016/j.jbusres.2017.10.026

Meltzer, C. (2015). Understanding the ambiguity and uncertainty in creative processes when using arts-based methods in education and working life. *Organizational Aesthetics*, *4*(1), 46–69.

Moldoveanu, N., & Narayandas, D. (2019). The future of leadership development. *Harvard Business Review*, *97*(2), 40–48. https://hbr.org/2019/03/the-future-of-leadership-development

Mumford, M. D. (2003). Where have we been, where are we going?: Taking stock in creativity research. *Creativity research journal*, *15*(2-3), 107–120. https://doi.org/10.1080/10400419.2003.9651403

Nisbett, R. E., & Wilson, T. D. (1977). The halo effect: Evidence for unconscious alteration of judgments. *Journal of Personality and Social Psychology*, *35*(4), 250–256. https://doi.org/10.1037/0022-3514.35.4.250

Nissley, N. (2010). Arts-based learning at work: Economic downturns, innovation upturns, and the eminent practicality of arts in business. *Journal of Business Strategy*, *31*(4), 8–20. https://doi.org/10.1108/02756661011055140

Nunnally, J. C. (1967). *Psychometric theory*. McGraw-Hill.

Pace, C. R. (1984). *Measuring the quality of college student experiences: An account of the development and use of the College Student Experiences Questionnaire*. Higher Education Research Institute, Graduate School of Education, University of California, Los Angeles. https://files.eric.ed.gov/fulltext/ED255099.pdf

Pajares, F. (1997). Current directions in self-efficacy research. *Advances in motivation and achievement*, *10*(149), 1–49.

Parush, T., & Koivunen, N. (2014). Paradoxes, double binds, and the construction of "creative" managerial selves in art-based leadership development. *Scandinavian Journal of Management*, *30*(1), 104–113. https://doi.org/10.1016/j.scaman.2013.12.001

Patteson, A., Restoule, J., Margolin, I., & de Leon, C. (2010). *Arts-based teaching and learning as an alternative approach for Aboriginal learners and their teachers*. Canadian Council on Learning. http://en.copian.ca/library/research/ccl/arts_based_teaching/arts_based_teaching.pdf

Pike, G. R. (1993). The relationship between perceived learning and satisfaction with college: An alternative view. *Research in Higher Education*, *34*(1), 23–40. http://www.jstor.org/stable/40196094

Rahim, M. A. (1983). *Rahim Organizational Conflict Inventory*. Consulting Psychologists Press.

Rieger, K., & Chernomas, W. (2013). Arts-based learning: Analysis of the concept for nursing education. *International Journal of Nursing Education Scholarship*, *10*(1), 53–62. https://doi.org/10.1515/ijnes-2012-0034

Romanowska, J., Larsson, G., & Theorell, T. (2013). Effects on leaders of an art-based leadership intervention. *Journal of Management Development*, *32*(9), 1004–1022. https://doi.org/10.1108/JMD-02-2012-0029

Romanowska, J., Larsson, G., & Theorell, T. (2014). An art-based leadership intervention for enhancement of self-awareness, humility, and leader performance. *Journal of Personnel Psychology*, *13*(2), 97–106. https://doi.org/10.1027/1866-5888/a000108

Sandberg, B., Stasewitsch, E., & Prümper, J. (2022). Skills development through virtual art-based learning: Learning outcomes of an advanced training program for project managers. Education Sciences, 12(7), Article 455. https://doi.org/10.3390/educsci12070455

Sandberg, B., Stasewitsch, E., & Prümper, J. (in prep.). Leadership as dance: A mixed methods study on art-based leadership development.

Spreng, R. N., McKinnon, M. C., Mar, R. A., & Levine, B. (2009). The Toronto Empathy Questionnaire: Scale development and initial validation of a factor-analytic solution to multiple empathy measures. *Journal of Personality Assessment*, *91*(1), 62–71. https://doi.org/10.1080/00223890802484381

Springborg, C., & Ladkin, D. (2018). Realising the potential of art-based interventions in managerial learning: Embodied cognition as an explanatory theory. *Journal of Business Research*, *85*, 532–539. https://doi.org/10.1016/j.jbusres.2017.10.032

Sutherland, I. (2013). Arts-based methods in leadership development: Affording aesthetic workspaces, reflexivity and memories with momentum. *Management Learning*, *44*(1), 25–43. https://doi.org/10.1177/1350507612465063

Sutherland, I., & Jelinek, J. (2015). From experiential learning to aesthetic knowing: The arts in Leadership Development. *Advances in Developing Human Resources*, *17*(3), 289–306. https://doi.org/10.1177/1523422315587894

Taylor, S., & Ladkin, D. (2009). Understanding arts-based methods in managerial development. *Academy of Management Learning & Education*, *8*(1), 55–69. https://doi.org/10.5465/amle.2009.37012179

Taylor, S., & Ladkin, D. (2014). Leading as craft-work: The role of studio practices in developing artful leaders. *Scandinavian Journal of Management*, *30*(1), 95–103. https://doi.org/10.1016/j.scaman.2013.11.002

Thorndike, E. L. (1920). A constant error in psychological ratings. *Journal of Applied Psychology*, *4*(1), 25–29. https://doi.org/10.1037/h0071663

VTMBAProVTFPrV, Veranstaltungstechnikmeister-Bachelor Professional für Veranstaltungstechnik-Fortbildungsprüfungsverordnung von 2020, BGBl. I S. 2977.

Walia, C. (2019). A dynamic definition of creativity. *Creativity Research Journal*, *31*(3), 237–247. https://doi.org/10.1080/10400419.2019.1641787

Woodward, J. B., & Funk, C. (2010). Developing the artist-leader. *Leadership*, *6*(3), 295–309. https://doi.org/10.1177/1742715010368768

Yu, Z. (2019). A meta-analysis of use of serious games in education over a decade. *International Journal of Computer Games Technology*, (2019), Article ID 4797032. https://doi.org/10.1155/2019/4797032

Yu, Z., Gao, M., & Wang, L. (2021). The effect of educational games on learning outcomes, student motivation, engagement and satisfaction. *Journal of Educational Computing Research*, *59*(3), 522–546. https://doi.org/10.1177/0735633120969214

Zeitner, D., Rowe, N., & Jackson, B. (2015). Embodied and embodiary leadership: Experiential learning in dance and leadership education. *Organizational Aesthetics*, *5*(1), 167–187.

Zhou, J., & George, J. M. (2001). When job dissatisfaction leads to creativity: Encouraging the expression of voice. *Academy of Management Journal*, *44*(4), 682–696. https://doi.org/10.5465/3069410