

Dance Ahead Report May 2015 – December 2015

This document reports the findings of a collaborative research project between the Trinity Laban's Dance Science and Learning & Participation (dance) departments. This report documents the dance science research findings, which was one element of a larger evaluative report on the dance participatory project titled *Dancing Ahead*. *Dancing Ahead* is funded by Headstart Lewisham, an initiative supported by Big Lottery, to improve the emotional wellbeing of 10 to 14 year-olds. Lewisham is one of 12 areas in England to receive a grant. Trinity Laban's dance science research of *Dancing Ahead* was conducted alongside a larger evaluation commissioned by *HeadStart Lewisham* whose findings are yet to be published.

This report includes a brief overview of the measures, description of the participants, an outline of the research methods, and findings, a comment on the limitations, and a final note to conclude, which offers future recommendations. This element of the project aimed to measure pre and post intrinsic motivation of young people participating in a 12-week creative dance class. The invited participants were young people who were identified as being at risk of not succeeding in their transition from primary to secondary school due to low resilience and other determining characteristics, such as low confidence and learning difficulties. This class was intended to aid in the development of specific skills: teamwork, communication, problem solving, open to taking risk and taking initiative necessary for a child to build resilience and succeed during a transitioning time.

Overview of Motivation and Measures:

Motivation is the **reason or intent** an individual **engages** with an **activity or behavior** (Deci, Vallerand, Pelletier & Ryan, 1991, p. 328; Quested & Duda, 2010, p. 41). There are two types of motivation: intrinsic and extrinsic. Researchers of psychological behaviors have discovered that there are several sub-groupings of intrinsic and extrinsic motivation, and although psychological behaviors have many complexities, motivation type is related to the wellbeing and success of the individual in the particular activity they engage with (Deci et al, 1991, p. 327; Quested & Duda, 2010; Pelletier, Fortier, Vallerand, Tuson, Briere, & Blais, 1995). **Intrinsic motivation** is when an individual **engages with a certain activity** at his or her **own volition**, and for the joy and gratification the activity brings them (Deci et al., 1991, p. 328 and Pelletier et al., 1995, p. 36). Intrinsic motivation has been linked to a **task-involving environment**: "performance-related progress tends to be judged by self-referenced standards, and **choice, cooperative and peer learning**, and **individual effort** are emphasized," (Quested

& Duda, 2010, p. 41). This task-involving environment shows evidence that participants feel accomplished and more confident during and after participation (Deci et al, 1991 and Quested & Duda, 2009). **Extrinsic motivation** refers to extrinsic factor such as **rewards**; others imposing judgment or pressure, and internal constraints drive the intention and reason for an individual to participate in an activity. Extrinsic motivation has been linked to an **ego-involving environment**; mistakes are punished, negatively compared to others, peer competition, and focused on outcomes outside of personal control (Quested & Duda, 2010, p. 41 and Reinboth & Duda, 2006, p. 271). The learning environment, teaching/coaching, and behavior all play a role in the type of motivation that an individual has when participating in a given activity. This can factor into the individuals perceptions of the activity (positive or negative) and the overall outcome.

There are various scales and questionnaires that measure a participant's level of intrinsic and extrinsic motivation. The Sport Motivation Scale (SMS) (Pelletier, Fortier, Vallerand, Tuson, Briere, & Blais, 1995) is one of many scales. The SMS has seven-subscale which measures three types of intrinsic motivation, three types of extrinsic motivation and amotivation. This scale has been used widely in sports and dance contexts.

Objective/Aim:

Intrinsic motivation was a relevant concept to investigate in this study due to its **relationship to environment and participant's reason for involvement**. The particular population in this study has been identified to have low resilience, low confidence, and lack of engagement in school settings. In order to **understand the possible effects or outcome**-in relation to **psychological well-being**- a creative dance class would have on this population of young people, the researchers measured to **what extent the participants were, or were not, intrinsically motivated**. Quested and Duda concluded that when dancers were more intrinsically motivated and perceived to be in a task-involving environment the learning and progress of the dancer was enhanced (2009, p. 16). This research project was investigating if, and to what degree, the particular population was intrinsically motivated, which could potentially allow for **further understanding of the link between intrinsic motivation and learning environment to a creative dance class**.

Design of Methods:

Description of participants and recruitment:

The volunteer participants in this study were primary school children, aged 9-11 years of age, who had been identified via their primary school's evaluation process as potentially at-risk of not succeeding in their transition from primary to secondary school. Two groups (Group 1 and Group 2) were provided with 12 weeks of creative dance classes. Table 1 provides the participants characteristics for Group 1 and Table 2 provides the participants characteristics for Group 2. The participants previous dance experience ranged from one day a week in school gym/PE class to no dance experience at all. The parents/guardians of the young people provided consent for participation in the study.

Table 1: *Participant characteristics of Group 1.*

N	Male	Female	Average Age Range (yrs.)
9	3	6	9-11

Table 2: *Participant characteristics of Group 2.*

N	Male	Female	Average Age Range (yrs.)
7	3	4	9-11

Group 1's participants were identified from a Year Six class in a local primary school following contact from Trinity Laban's Learning and Participation (Dance) Team. The participants were identified by the Year Six class teacher and the Community Cohesion, Behaviour & Family Liaison officer as meeting the set criteria. They were subsequently offered the opportunity to take part in the *Dancing Ahead* project. A group of nine children volunteered to participate in the creative dance class. The students were excused from their regular classes to participate in the dance class, which took place at the school.

To recruit Group 2's participants a flyer describing the creative dance class was sent to primary schools in the local borough (Lewisham). Teachers/SENCO/Learning Mentors within the schools recommended the class to the young people who they believed to fit the criteria. The young people were invited to the Laban building one evening a week to participate in the dance class.

Selection of Questionnaire:

The questionnaire selected to measure the participant's intrinsic motivation was the Sports Motivation Scale (SMS). The SMS is a statistically reliable questionnaire that has been measured for internal consistency of the individual sub-scales (Pelletier et al, 1995, p. 48). When selecting the most appropriate questionnaire the factors considered were: age appropriate questions, length of questionnaire, and specificity to what is being measured (intrinsic motivation). Three out of the possible seven subscales were used for this study: intrinsic motivation to experience stimulation, intrinsic motivation to know, and intrinsic motivation to accomplish. These three specific sub-scales best fit the objective of the project based on their descriptions from a group of researchers who analyzed the SMS questionnaire (Pelletier, Fortier, Vallerand, Tuson, Briere, & Blais, 1995). Their given descriptions are as follows:

1. Intrinsic motivation to experience stimulation, "when someone engages in an activity in order **to experience stimulating sensations** such as **sensory pleasure, aesthetic experiences** as well as **fun and excitement**," (Pelletier, et al, 1995, p. 37).
2. Intrinsic motivation to know, "as performing an activity for the **pleasure** and the **satisfaction** on experiences **while learning, exploring, or trying to understand something new**" (Pelletier, et al, 1995, p. 36).

3. Intrinsic motivation to accomplish, “engaging in an activity for the **pleasure and satisfaction** experienced when one **attempts to accomplish or create something**,” (Pelletier, et al, 1995, p. 37).

There are four questions in each sub-scale, making a total of 12 questions for the participants to answer. The participants were asked to complete the SMS questionnaire before and after the 12-week long creative dance classes. Due to researcher error, in the pre-questionnaire one question from the sub-scale “intrinsic motivation to experience stimulation” was not included. All 12 questions were included in the post questionnaire. Participants were given pre-determined responses to select from: definitely disagree, disagree, I don’t know, agree and definitely agree. The responses were transferred to a 5-point Likert scale, 1 being definitely disagree through 5 being definitely agree, for analysis.

Procedures:

Group 1

Group 1’s creative dance class took place once a week at the student’s primary school gymnasium. The participating students were excused from their classroom for one hour and fifteen minutes to participate in the dance class. Two lead teachers and one assistant teacher taught the class. (Note: The assistant teacher was also the primary researcher for this element of the project). The creative class included: warm-up, technique, creative tasks (working with individual, partner, and whole class), cool-down, and if time allowed, a plenary. There were several scheduling and space conflicts with the primary school causing some sessions to be canceled or taught in a different (more limiting) space.

The pre-questionnaire was sent to the primary school teacher to have the students complete it before the first dance session. Eleven of the 12 SMS questions were included within the larger HeadStart questionnaire pack. This was done for participant convenience; all participants only one pack of questionnaires to complete. Every student participating in the creative dance class completed the pre-questionnaire (N=9). Group 1’s participants did not complete the post-questionnaire. The post-questionnaire was given to the primary school teacher before the last dance session; however, the teacher did not administer the post questionnaire before the students were dismissed for summer break. It was not considered methodologically sound to collect the data retrospectively.

Group 2

The creative dance class was one night a week at the Laban building. This class was taught by one of the same lead teacher’s from Group 1 classes and the same assistant teacher. The teachers were consistent for every dance class. The dance class was one hour and fifteen minutes and included the following elements: welcome circle, warm-up, technique, creative tasks (working with individual, partner, and whole class work), cool-down, and plenary.

The pre-questionnaire was emailed to parents/guardians one week before the start of the dance class. Some of the questionnaires were returned to the researcher within week one of the first dance class; the remaining questionnaires were returned up to three weeks later. Only five out of the seven students participating in the dance class completed the pre-questionnaire.

Group 2 completed the post questionnaire at the end of the dance class in week eleven or the 12-week programme. The teacher assistant/researcher and the lead teacher were present to assist if necessary. The post-questionnaire was completed independently, and not included in the larger *HeadStart* study questionnaire pack. This adaptation on how the questionnaire was administered occurred in order to reduce the overall amount of questions the young people had to answer at one time, and also to retrieve as many responses possible. Five (three of which completed the pre-questionnaire) out of the seven participants completed the questionnaire due to absence of two participants in the last two sessions.

Findings:

Group 1 and Group 2 Pre-Questionnaire

The response averages for Group 1 and Group 2's pre-questionnaire were calculated for all three sub-scales. Figure 1 displays Group 1 and Group 2 pre-questionnaire response averages for sub-scale "to experience stimulation". This subscale has been presented separately from the other two sub-scales due to the missing question; therefore "to experience stimulation" has a total possible score of 15, whereas the other two subscales are out of a maximum of 20. For the sub-scale "intrinsic motivation to experience stimulation" Group 1 had a positive score of 10.33 out of 15 (68.9%) and Group 2 had a positive score of 13.6 out of 15 (90.7%).

Figure 1: Group 1 and Group 2 pre-questionnaire response averages for sub-scale "to experience stimulation".

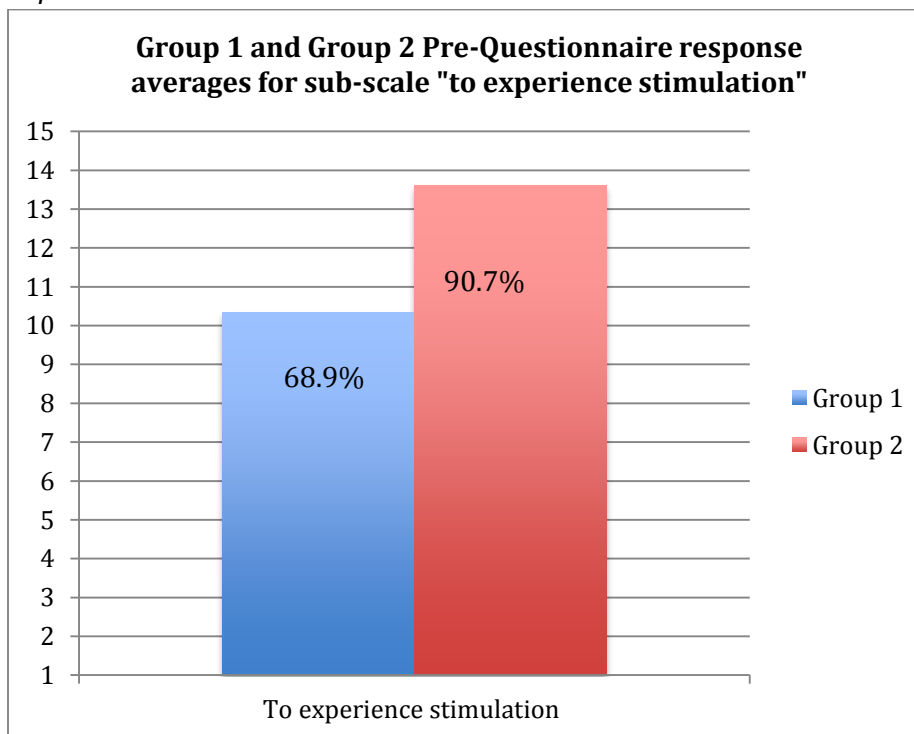
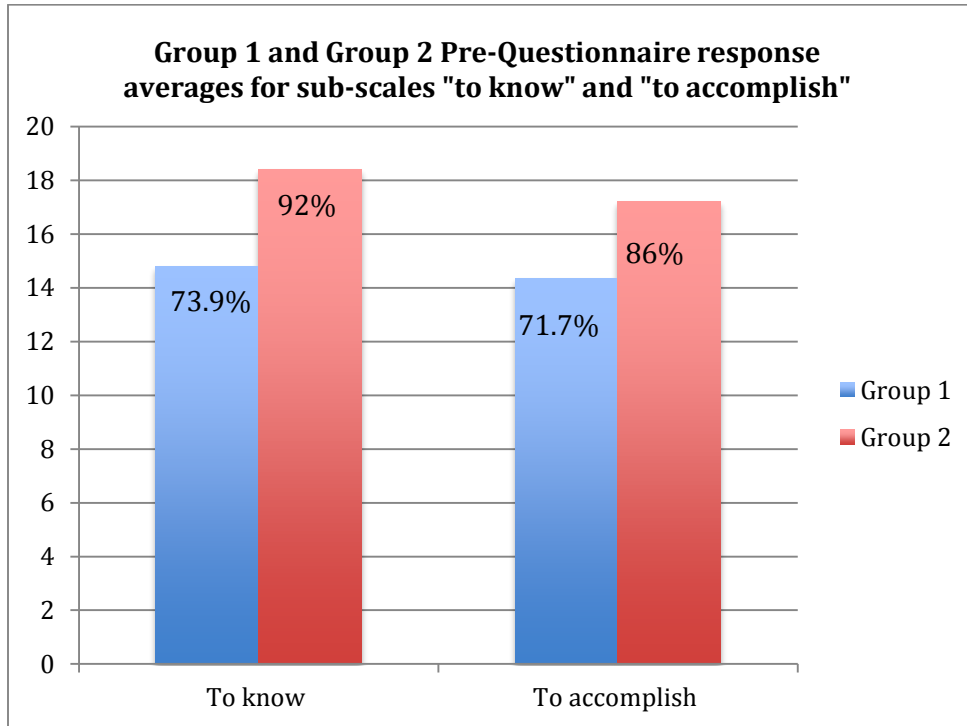


Figure 2 displays Group 1 and Group 2 Pre-Questionnaire response averages for sub-scales "intrinsic motivation to know" and "intrinsic motivation to accomplish". For the sub-scale

“intrinsic motivation to know” Group 1 had a positive score of 14.78 out of 20 (73.9%) and Group 2 have a positive score of 18.4 out of 20 (92%). For the sub-scale “intrinsic motivation to accomplish” Group 1 had positive score of 14.33 out of 20 (71.7%) and Group 2 have a positive score of 17.2 out of 20 (86%).

Figure 2: Group 1 and Group 2 Pre-questionnaire response averages for sub-scales “intrinsic motivation to know” and “intrinsic motivation to accomplish”.

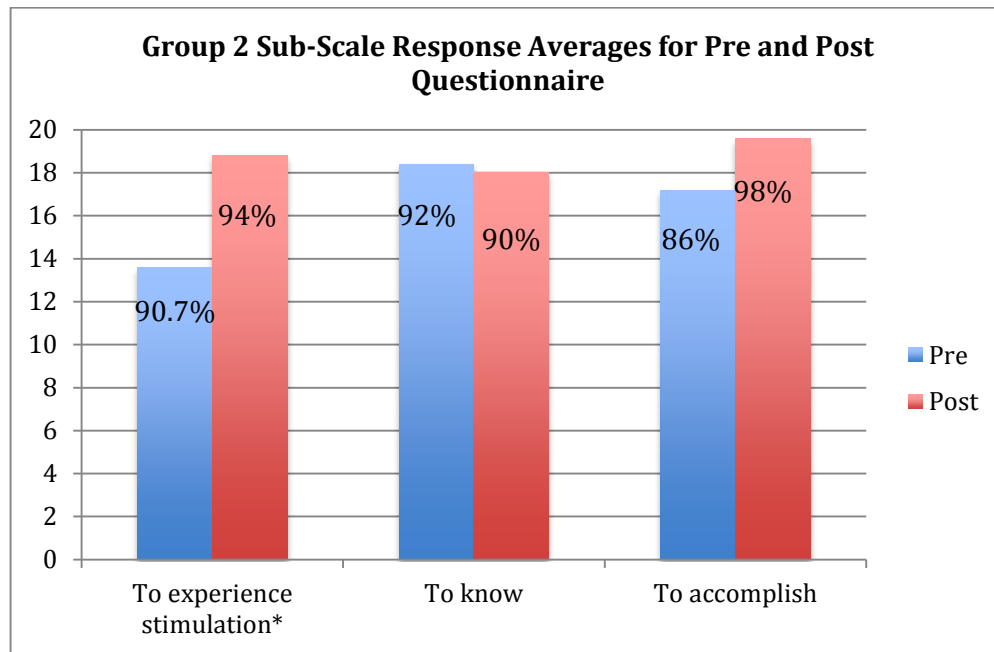


Group 2 Pre and Post Questionnaire

Figure 3 displays Group 2's Pre and Post questionnaire response averages for all three sub-scales. There was an increase in positive scoring for “intrinsic motivation to accomplish” (2.4 point difference, 12% increase). There was a decrease in positive score average for

“intrinsic motivation to know” (0.4 point difference, 2% increase). It is unknown if, and how much, of an increase occurred for “intrinsic motivation to experience stimulation” due to the pre questionnaire missing a question.

Figure 3: Group 2 Pre and Post Questionnaire Response Averages for all three sub-scales.



*Pre-questionnaire for sub-scale “to experience stimulation is out of 15 total possible points instead of 20 total possible points.

Discussion:

Group 1 and Group 2 Pre-Questionnaire

The results show that Group 2 had a higher pre-participation motivation score than Group 1 for all three sub-scales. This difference could be due to the change in participant recruitment process and/or the different setting in which the dance class took place. Group 1’s participants were selected on account of the primary teacher’s recommendations. The class occurred during regular class time; the students were excused from their primary school classroom to attend the dance session. These students could have felt more obliged to participate in the project; as described in the overview, this could be an external factor causing the student to be extrinsically motivated. Although extrinsic motivation was not measured, Group 1 participants could have perceived the environment to be ego-involving therefore the students had no desire to know or accomplish any of the tasks in the creative dance class. Group 2’s participants chose to participate in the project at their own discretion and the class took place outside of school hours. Perhaps the students in Group 2 were more eager and willing to participate in a creative dance class than Group 1. However, this cannot be concluded without further investigation.

Deci and colleagues (1991) define intrinsic motivation as participating in an activity for the pleasure and satisfaction received when doing said activity. Research and literature

discussing intrinsic motivation states that people who are intrinsically motivated to engage with an activity find the activity interesting and satisfying (Pelletier et al, 1995; Deci et al, 1991; Quested & Duda, 2009), and therefore can find that the activity leaves them feeling more fulfilled, more positive and even more confident. When comparing Group 1 and Group 2's pre questionnaire responses it is evident that Group 2 had more of an interest to engage in the dance activity.

Group 2 Pre and Post Questionnaire

The greatest change in Group 2's Pre to Post questionnaire responses occurred in the sub-scale "intrinsic motivation to accomplish." This sub-scale is described as "engaging in an activity for the pleasure and satisfaction experienced when one attempts to accomplish or create something," (Pelletier, et al, 1995, p. 37). Further investigation would be needed in order to understand this sub-scales increase.

When describing Basic Needs Theory Quested and Duda (2009) state that **an environment that satisfies autonomy, relatedness and competence allow for psychological growth and well-being**. Furthermore, Pelletier and colleagues state that an environment that undermines these characteristics could lead to a loss of intrinsic motivation (1995, p. 39). The intention of this dance class was to create an environment in which these young individuals could learn skills (i.e. communication, teamwork and problem solving) through creative dance practice that could be utilized in their transition from primary school to secondary school. With this intention in mind the teacher and assistant were not only focused on the activity but the delivery, feedback, and environment created for this activity to be carried out.

Although no direct link can be made, a strongly considered possibility for Group 2 participants scoring higher in the post-questionnaire for the subscale "intrinsic motivation to accomplish", could be due to the learning environment and delivery of feedback. The students were **verbally acknowledged for their efforts and accomplishments**, not only in a dance context but when they worked well with others and/or challenged themselves: these are traits of a task-involving environment (Quested & Duda, 2010 and Deci et al., 1991). The team building exercises allowed **for students to interact with one another and create relationships**. Perhaps through the use of teaching strategies that support fulfillment of the three Basic Needs the **students felt more empowered and competent** in the activity, making them feel intrinsically motivated to accomplish the tasks at hand.

Reflection/Limitations:

Although there were theories and research studies that connect high levels of intrinsic motivation with other wellbeing factors such as fulfillment of the three Basic Needs and increases in confidence and self-belief, the use of the Sports Motivation Scale was possibly not the most appropriate scale to examine changes in resilience, which was the specific objective of the larger study. Although the SMS has been shown in previous research to be valid and reliable Intrinsic Motivation Inventory (McAuley, Duncan and Tammen, 1989) could be considered a more suitable alternative. The questions in the IMI can be re-worded to address the specific activity in question, the sub-scales are designed for independent use from one

another, and some of the subscales also measure aspect of Basic Needs satisfaction. Another possible measure that could have been more thoroughly considered for this project is the Perceived Motivation Climate in Sport Questionnaire-2 (Newton, Duda, and Yin, 2000). This scale is designed to measure the participant/athlete's perceptions of the climate and goals set by the teacher/coach. This scale is a bit more complex in regards to what it measures and focuses more on the participants perception of the teacher, this project wanted to focus more on the individual participant.

The method of administering the questionnaire should have been more stringent. In future, where there are numerous research partners administering different questionnaires greater consideration needs to be given to the most effective and robust means from a research perspective, as well as the least obstructive means from the participant's perspective. Upon reflection, the questionnaire that formed the Dance Science element of the research should have been completed by the participants independently of the larger questionnaire battery. Limiting the length of the questionnaire is important, especially for a young or vulnerable population so as not to overwhelm the participants or negatively influence their experience. In addition, the assigned researcher should be present to administer the questionnaire in a controlled manner, allowing the participants to ask questions regarding wording of the questionnaire, and ensuring that the response to these questions remains consistent and true to the original intention of the questionnaire.

Overall, the inclusion of the research component of this project could have been more rigorously supported to the general design and delivery of the project. Confounding experience from the delivery phase for Group 1 was partially rectified for the second phase (Group 2), but more could be done in future. A more thorough investigation of scales and measures for intrinsic motivation, and a greater understanding of the objective of the project would have created a more sound research project. Finally, it is important to remember that while the research needs rigour and consistency, the ultimate aim of the project is to positively affect the wellbeing of the young participants; therefore the research methods and procedures need to not unduly interfere with that aim.

Further Recommendations

This research project made evident that the creative dance class had a positive impact on Group 2's intrinsic motivation. In order to fully understand the increase in response average for the three sub-scales further investigation of why this is occurring is necessary. Future research should examine the qualitative and quantitative aspects of the classroom environment, and teaching methods. Observations should take place over the 12-weeks of dance classes and consider the following: what is happening in the class, what are the teachers' doing/saying, how are the students responding to the teacher. Perhaps the use or investigation of the research and literature of the Perceived Motivation Climate in Sport Questionnaire-2 would be appropriate at this stage. Grounding future research within Basic Needs Theory (a tenet of Self-Determination Theory) or similar theories, could allow for further understanding of the impact of the classroom environment and teaching behaviors on the participant's wellbeing and behavioral development.

References:

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