LIVE-N-LEARN'S 'POWER OF YET' EVALUATION REPORT AND EXECUTIVE SUMMARY MAY 2019

UNIVERSITY of STIRLING

Independent Evaluator: Dr. Jennifer Milne
jennifer.milne@stir.ac.uk

Contents

Executive Summary

The Power of Yet, an intervention programme delivered by Live-N-Learn, aims to develop pupil confidence and raise attainment by encouraging students to take personal responsibility, foster a 'growth mindset' and develop their resilience.

This report evaluates the impact of the Power of Yet programme in terms of the following research questions:

- **What are the impacts of the programme?**
- **What qualities of the organisation contribute to these impacts?**

This evaluation utilised mixed methods with a variety of different data collection methods and both quantitative and qualitative data were analysed. There were 85 school pupils involved from S1-S3 in one Scottish Secondary school. There were three sessions of 90 minute delivered to pupils by one presenter in groups <30 at 3 points over the school year 2018 -2019. The intervention also involved an after-school session for all staff and an evening session for parents of those children participating. Quantitative measures included Dweck's theories of intelligence scale, the self-efficacy scale for children (SEQ-C) and Prince-Embury's resiliency scales for children and adolescents. The evaluation was framed in narrative theory. Qualitative data from interviews, a focus group, open questionnaires to school staff and parents, detailed field research notes, from observations and informal discussions with pupils, wider staff and parents, were categorised and coded using a thematic approach. Quantitative data was collected pre-intervention and post-intervention with a total of 30 pupils completing all data measurements (13 female and 17 male) for a sample group analysis. Additionally, a group of 4 students formed a case study group who were involved in narrative interviews throughout a 6-month period and their quantitative data, including attendance and attainment data, was compared to a purposefully sampled control group. The rich descriptive qualitative data allows for insight into the quantitative data and provides deeper understanding of the issues. Thus, ensuring breadth and depth of analysis.

Key Impacts and Benefits of the Intervention

1. Resiliency(mastery)
2. Emotional Intelligence
3. Educational
4. Life Skills
    a. Physical Health, Psychological Wellbeing and Motivation
    b. Social Skills and Positive Peer Interaction
    c. Creative Problem Solving and Persistence

Quantitative Analysis Results Impacts Evidenced

- Increase in raw resiliency for each of 3 case study pupils compared to no difference in comparison pupil
- Increase in mastery for each of case study pupils compared to decrease in mastery in comparison pupils

- Decrease in emotional reactivity for each of case study pupils compared to no difference in comparison group
- Decrease in vulnerability for case study group compared to no difference or increase in vulnerability for comparison group
- Increase of 3% mean attendance for case study group compared to decrease 3% mean attendance for comparison group
- No significant difference in test sample (n30) mindset score pre and post intervention
- No significant difference in test sample (n30) self-efficacy score pre and post intervention
- Lowest pre-intervention mindset pupils showed greatest increase in post-intervention mindset scores

Qualitative Analysis Results Impacts Evidenced

- Increase in confidence and self-efficacy
- Increase in resiliency and particularly mastery
- Increase in emotional intelligence
- Increase in self- awareness
- Increase in self-regulation
- Increase in motivation
- Increase in persistence, in having a go, working hard, trying new strategies
- Increase in problem solving skills
- Increase in communication skills
- Increase in health and wellbeing outcomes- physical activity, friendship and peer-interaction, social and emotional skill development
- Increase in enjoyment of school subjects
- Increase in maths engagement
- Increase in arts engagement
- Improved growth mindset

Qualities of the Provision and Organisation

The programme was overwhelmingly positively received by the pupil participants and highly valued by the small number of staff and parents who participated in the research. The key strengths were:

- Interactive, fun and engaging provision
- Passion and Commitment
- Integrity of organisation

Introduction

The current continued focus in Scottish education is to close the attainment gap and increase the life chances along with the attainment of all young people in Scotland (The Scottish Government, 2018, 2019). Theory based interventions with clearly intended rationale and measurable outcomes are a method of evidence-based practice favoured by schools looking to improve attainment and health and wellbeing outcomes for their pupils (Department of Education, 2016; The Scottish Government, 2019). The Power of Yet, provided by Live-N-Learn, is one such intervention which is theoretically underpinned by Implicit theories of intelligence (Dweck, 1999). The purpose of this evaluation was to independently assess and evaluate the impact of this intervention in one Scottish Secondary school, Chryston High School, in North Lanarkshire. This case study uses multiple sources of evidence to illustrate strengths and impacts of the provision that can be applied, enhanced and developed in other educational establishments and contexts (Yin, 2009).

The research questions were:

- **What are the impacts of the programme?**
- **What qualities of the organisation contribute to these impacts?**

Background Evidence and Analysis of the Literature

Implicit theories of intelligence established that individuals' beliefs about intelligence and whether their own intelligence is fixed or has potential to grow and develop has significant repercussions on their motivation, attitude and learning behaviours, and therefore educational and academic achievement (Dweck, 1999; Yeager & Dweck, 2012). If intelligence is viewed as an inborn trait, an entity belief, someone is naturally clever or good at something, this is detrimental to both learning progression and achievement: because it results in both an adversity to challenging/difficult learning and an avoidance of trying new things due to fear of failure and not being clever/good enough (Blackwell, Trzesniewski and Dweck 2007; Hong, et al., 1999). If intelligence is viewed as malleable, an incremental belief, it can be grown and developed with effort, persistence, strategic thinking, skill learning and support from others- then learning progression and achievement know no bounds (e.g. Blackwell, Trzesniewski and Dweck, 2007) Individuals with incremental belief, a growth mindset, will seek mastery goal orientation and be intrinsically motivated while those with a fixed mindset will be extrinsically motivated. Students' pursuit of mastery goal orientation and/or performance goal orientation has been found to impact on motivation and performance because mastery orientation is concerned with seeking deeper understanding of the knowledge/skill to be learned while performance goals are only about being better than others (Deci and Ryan 1985,2002; Ryan & Deci, 2017).

Educational research in recent years has continued to focus on mindset and motivation. An autonomy-supportive environment has been shown to be key to fostering intrinsic motivation in pupils (Bedford, 2017). The most recent research on goal motivation theory is based in self-determination theory and has shown that autonomy supportive goals, through supporting psychological need satisfaction, increase value in learning, goal striving and intrinsic motivation (Bedford, 2017; Deci & Ryan, 1985; Ryan & Deci, 2017). There is however still not a clear understanding of pupil's motivation processes. Mindset is part of a subconscious complex system, dynamic, multidimensional and context driven (Dweck, 1999, 2006; Ng, 2018). The advances in neuroscience in the 21st century supports propose mindset as part of a neural response system that

creates the conditions for intrinsic motivation (Ng, 2018). The research literature supports the theory that improving mindset will increase educational attainment; the biggest impact being on pupils identified as being targeted for equity or with a low mindset score (Blackwell, Trzesniewski and Dweck 2007; Good et al., 2003; Pauneska et al., 2015; Yeager at al., 2012) A very recent study showed that even a one-shot mindset intervention in school increased growth mindset and lessened the prevalence of performance goals (DeBacker et al. , 2018). Other studies have emphasised the importance of consistent long term and multi-learning context development of growth mindset as part of a whole school approach in order to sustain educational improvements (Brougham & Kashubeck-West, 2018; Donohoe et al., 2012; Fraser, 2017). Recent questions about the measurement of mindset reinforce the idea that "Our mindsets not only reflect how we view ourself, but also how we view other people and events. In this way, mindsets are more like psychological worlds which we inhabit rather than discrete cognitions." (Williams, 2018)

Theoretical Framework

This evaluation is under-pinned by narrative theory. Narrative theory has been developed and deployed across disciplines as an important method of research to understand many given human experiences. Narrative is "a complex genre that routinely contains a point and characters along with a plot connecting events that unfold sequentially over time and in space to provide an overarching explanation or consequence." (Smith & Sparkes, 2006) It is the form we use to tell stories. Put simply: narrative analysis is the study of people's stories (Frank, 2005). This methodology is based on the theory that fundamental to human existence is meaning and that human beings lead storied lives through and in which they actively seek meaning (Smith, 2007). The stories people tell both relate and create meaning: key to narrative theory is that "Stories do not simply describe the self; they are the selfs medium of being." (Frank, 1995) Narrative theory holds that people need to tell stories in order to initiate and sustain the process of identity development - to create and recreate our identities. Identity is something we do, not something we have: it is fluid and not fixed. Our stories are articulated from and through our individual physical body, and this too is a social body and part of a social world (Frank, 1995). Identity development and our stories -who we are, who we have been, and who we are yet to become- are a result of our personal embodied experience within the particular cultural context in which we exist (McLeod, 1997). Narrative theory places as the forefront "the 'constitutive' role played by language in the course of our everyday lives and worlds." (Crossley, 2003). How these experiences are organised in story form. It is important that each individual story told is dependent on the wider available cultural narratives the individual is able to access: the sociological and cultural influences on our identity are as important as the psychological ones (Sparkes & Partington, 2003). Through living and articulating our story we create and recreate ourselves and our meaning of life: as we tell the story, in both what we say and what we do, so the story is who we are and who we are becoming (Smith, 2007). It is through story that experiences are given meaning both on a personal level and within, simultaneously being influenced by, the social sphere of these very personal experiences (McLeod, 1997). Through these our story, our personal narratives, we understand our past and present and through articulation of them we create our future, they are an integration of past, present and future selves (Braveman et al., 2003).

This theoretical framework for the evaluation allows both the articulation, through narrative life history interviews, and development of the new stories emerging as part of the intervention. The intervention within the school provides the context for availability of new stories of growth and change: the narrative research process further enhances this.

Through narrative analysis, insight to each individual pupil's lived experience and personal story of their learning is a way of understanding possible common experiences of learning: "Any person's

story is the site of struggles permeated by multiple voices." (Frank, 2005). Experiential knowledge and story-telling allow 'truth' to be interpreted as shared knowledge (Denzin, 2002). Every story is important and adds something to our understanding of the wider cultural influences that help create or sustain it. The narrative methodology allows us to select three specific pupils and from their interviews understand a complex detailed story of each of their experiences, of their learning and the influence of the educational intervention, as they experience it. From this rich data there is insight and illumination of the wider experiences and impacts of the intervention.

Method

The school was contacted and agreed to participate in the research. There were 85 children involved in the intervention. These children were included based on their SIMD decile (1 -3), if they were in receipt of free school meals or care experienced. All children were sent out an information letter about the research and parental consent was given. The case study group and control group were purposefully sampled so there were similarities between the 2 comparison groups in terms of circumstances, challenges, health and wellbeing, and attainment. The case study group originated at 6 pupils: 2 did not complete the intervention and 1 completed the intervention but did not complete all the narrative interviews or complete all data collection. Her data was retained and analysed as part of qualitative data. Measures of mindset and self-efficacy were taken from 30 pupils both pre-intervention and post intervention. The 3 case study pupils and control group students completed Dweck's (2000) theories of intelligence scale for children and Prince-Embury's (2006) Resiliency Scales for Children and Adolescents pre and post intervention.

Measures

Dweck's (2000) theories of intelligence scale for children were used to measure all pupil participants' implicit theories of intelligence. Dweck's original questions include six items comprising three entity theory questions and three incremental theory questions. Because of the age of the sample and due longitudinal nature of the study, Dweck (1999) recommends using the entity-only scale, as the incremental questions are more likely to suffer from social desirability, especially when repeated over time. The entity theory question statements are as follows: • You have a certain amount of intelligence and you really can't do much to change it. • Your intelligence is something about you that you can't change very much. • You can learn new things, but you can't really change your basic intelligence. For each of these statements, pupils rated the degree to which they agreed with each statement using a 6-point Likert scale, ranging from 1 (strongly disagree) to 6 (strongly agree).

Prince-Embury's (2006) Resiliency Scales for Children and Adolescents: A Profile of Personal Strengths measured resiliency for each of the case study pupils and each of the control group pre and post-intervention. This scale contains three subscales: sense of mastery, sense of relatedness and emotional reactivity. The sense of mastery scale has 24 items, the sense of relatedness scale comprises of 24 items and emotional reactivity contains 20 items. The measure is scored on a four point Likert scale (0: Never to 4: Almost Always). Examples of items on the scale: I can learn from my mistakes (Mastery), There are people who will help me if something bad happens (Relatedness) and I get very upset when things don't go my way (Emotional Reactivity).

Narrative interviews between 15 and 30 minutes were conducted with each case study pupil pre-intervention as well as after sessions 1 and 2 had been completed but on a different day. Field work conducted across the 6 months included collecting detailed notes, a diary of observations of the pupils at the different intervention sessions and informal interviews. Then there was a final narrative interview with each case study student post-intervention. All data was anonymised, and

pseudonyms are used in analysis and discussion of case study pupils. A framework approach involved an analysis of all the written qualitative data, including transcripts of all interviews, focus group discussion, parental and teacher questionnaires, diary excerpts and detailed research notes from observations. There was a triangulation of data between focus group, qualitative responses to questionnaires and field work notes. The data was coded and categorised resulting in themes which were compared, looking for similarities, differences and distinctions, and subthemes. The narrative interview process began with the question: tell me about yourself, your experiences of school life, learning and education. Rapport and relationship were built with the case study pupils over the six months so that the final narrative interview allowed a deepening of discussion on their story as it was articulated and gave clearer understanding of the key story/stories identified as part of their own wider stories of life. The narrative analysis was a holistic content analysis. Holistic content analysis focused on the important themes and issues recurring, resolved and unresolved, across the story and examined their significance. This analysis of content focused on themes, types, commonalities, patterns, as well as omissions or inconsistencies to them, within the data (Lieblich et al., 1998).

The focus group was conducted several weeks post-intervention and 6 pupils were purposefully sampled to allow for comparison and encourage stimulating discussion based on differing views and experience while allowing all voices to be heard. It included both a pupil who was completely enthusiastic and positive about the intervention and a pupil who was one of the least enthusiastic about the intervention. The 6 pupils had a variety of low, middle and high mindset scores pre-intervention and a mixture of middle and high post-intervention. Trust and credibility were established, and the library was used as a quite informal safe environment for uninhibited discussion to find out what the young people thought and why they thought this. There was a clear distinction between the researcher as someone apart and different from the intervention provision, and apart from the school. This allowed for frank open opinions to be shared and talked about. The focus group transcription was printed off onto hard copy and a rigorous content analysis was conducted to establish the central themes. Key themes relating to previous education research were highlighted with significant points noted in the margin. The researcher re-read all the online data and identified corroborations or discrepancies along with the particular point in the intervention that these occurred (Rovio et al., 2012). The results are analysed and discussed in the following section.

Results and Analysis

Mindset

It was clear from the pre-intervention questionnaires that many of the pupils already understood the malleability of the brain and believed that intelligence was incremental. 25% of the participants had the highest possible mindset score pre-intervention. There were gains in mindset scores for almost all of those who had the lowest mindset scores pre-intervention. There were also important notable increases in mindset for certain individual pupils. The qualitative data indicated that despite the awareness of brain malleability, many students did not automatically respond to difficult tasks with enthusiasm, motivation and persistence as was reflected in the opening session of the intervention. A variety of comments included *"This is witchcraft/a trick/too hard/impossible…my brain just doesn't work like that…since it has gotten harder (school) I don't like it."* This can be explained by "believing that it is possible to improve intelligence does not necessarily mean that students are confident that they can improve their own" (Castella & Byrne, 2015). Our mindset is a complex subconscious system through which we are making sense of the world, we shift in and out of growth and fixed mindsets. Knowing we can improve our ability does not automatically mean that we will be motivated, have the energy, the drive, commitment or support to pursue what we want

to improve. This is even more true for pupils in high school. This even more true in performance measured and judgement contexts. Interventions teaching about the malleability of the brain, are effective- as previously discussed in this report- but this intervention offered more than a teaching of brain malleability. It strived to interactively teach and engage pupils in the qualities, strategies and skills that foster new thought processes and sustain new behaviours. The qualitative data clearly indicated a much deeper shift in mindset by the final session of the intervention: *"That is my first failed attempt*!" (said proudly as the pupil immediately engaged in his next attempt), "*I have got the first bit … what now?" (*looking for help), *"How did you do that?"* (seeking and watching a demonstration from a peer). Recent research has sought a development of mindset measurement scales and begun to use qualitative measurements of mindset (Castella & Byrne, 2015; Donohoe et al., 2012).

Self-efficacy

The Self-Efficacy Questionnaire for Children (SEQ-C), (Muirs, 2001), was administered to all the 30 sample pupils pre and post intervention. The results were very mixed and there was not a significant increase in general self-efficacy or educational self-efficacy pre and post intervention. Bandura (1997) defines perceived self-efficacy as "belief in one's capabilities to organise and execute the courses of action required to produce given attainments." The over-arching theme of resilience (mastery), marked by self-confidence and self-efficacy gains, was clearly evident in the qualitative data; this increase in confidence and efficacy was most marked in learning outside of the classroom demonstrated by the comment *"it helps you as a person."*

Resiliency

The Prince-Embury (2006) Resiliency tests have been used in recent educational research (Bailey & Baines, 2012; Donohoe et al., 2012) and are used for clinical assessments. These showed an increase in raw resiliency for each of 3 case study pupils compared to no difference in comparison pupils. There was an increase in mastery for each of case study pupils compared to decrease in mastery in comparison pupils. Mastery scale comprises self-efficacy, optimism and adaptability. These three competencies were clear objectives of the intervention and relate fully to growth mindset learning. There was a decrease in emotional reactivity for each of case study pupils compared to no difference in the comparison group. Emotional reactivity strand comprises sensitivity, which can be considered a temperament trait, impairment, which will be related to uncontrollable circumstances, and recovery which is again a focus of the intervention and a growth mindset skill. It is highly significant that for this group of 3 case study students, who were and are extremely vulnerable, there was a decrease in vulnerability. There was no difference or increase in vulnerability for comparison group.

Thematic Analysis

The sub-themes are now listed for each qualitative data set with the over-arching themes in brackets.

Focus group themes: Embedding mindset (Emotional Intelligence); Relationships- self and others (Resiliency and Social Skills); Confidence, self-esteem and positivity (Resiliency); Motivation (Emotional Intelligence); Controlling Emotions (EI); Enjoyment: fun, interactive, inspiring (qualities of the intervention); Team building(Life Skills);Helps with some school work- maths (Educational Attainment); Distinction between school work, don't see how it helps that much, and learning and life outside school, helps a lot with this (LifeSkills).

Parental Themes: Creative Learning/Think out of the box (Life Skill); Trying new things (Resiliency); Accepting Criticism(Resiliency and EI); Confidence/ Not being frightened to tackle problems: look for solutions (Resiliency); Entitled generation v Hard work, persistence, struggle, try and error (Resiliency); Increased Confidence (Resiliency); All students should be learning and developing growth mindset, in all levels of education.

Teacher Themes: Enjoyed both content and delivery qualities of intervention; Limited impact on classroom learning; Not sure how to apply and engage with closed mindset pupils; All valued growth mindset as a whole school focus.

Narrative Interview Themes: Overcoming maths block(Educational Attainment); Motivation and Energy- physical activity, psychological wellbeing and motivation (Emotional intelligence and Life Skills); Controlling Emotions(EI); Need for whole school approach(EI); Fun and Interactive (qualities of the intervention); Team work and problem solving (Social Skills); Ask for help (Resiliency); Try harder with homework(Educational Attainment).

Field work, observational notes and informal interview themes: Development of group cohesion, team work, communication, cooperation (Life Skills); Relationships (Resiliency); Confidence and self-efficacy (Resiliency); Development of growth mindset; Self-awareness and self-reflection (EI).

The 4 over-arching themes resulting from the triangulation of qualitative data are discussed as follows in relation to the quantitative measure and considering the narrative stories identified.

1. **RESILIENCY (mastery)**

Curriculum for Excellence (Learning & Teaching Scotland, 2009) core intention is to produce resilient learners: resiliency is a widely valued characteristic in education and life. Resiliency is a complex, multi-dimensional dynamic context driven construct (Roffey, 2016). This evaluation utilised Prince-Embury (2006) Resiliency Scales as a theoretically grounded framework for understanding the interacting factors and processes that contribute to protecting young people against the fast-paced pressured environment that they are growing up in. UK charity Young Minds estimates that at least 3 pupils in every class has a mental health issue. It is the intention of current Education reform and focus to make Scotland the best place to grow up in the world: however, nearly one third of Scottish pupils receive free school meal, a marker of poverty, and other multiple stressors such as family break-up, loss, neglect, over-stimulation (e.g. advances in technology and media) and a peer-orientated culture (that doesn't offer the adult support and connection necessary for healthy attachment and development) are consistent and common (The Good Childhood Report, 2018). Current research now considers resiliency to be part of a developmental process and fostering strengths, through development of skills and mechanisms such as mastery, self-efficacy, adaptability and emotional regulation, means resiliency can be both developed and taught in all our young people (Roffey, 2016). Resiliency "is a characteristic that emerges out of the systemic interdependence of children with their families, communities and schools" (Doll, 2013). Resilient youth thrive, despite adversity, by development of clear attainable goals, application of problem-solving skills and sustaining a positive relationship with themselves and others (Prince-Embury, 2006).

Confidence and Self-efficacy

One of the 3 strands of resiliency(mastery) is self-efficacy and the most wide-spread theme evident in the qualitative data was self-confidence and self-efficacy. One parent shared the transformation in her child*: "I have seen my son grow in confidence. AND although he may still be shy, he is more*

confident in his own ability. He is also more open to trying and failing as he understands that failing teaches him about how he can get better and achieve it with practice" Mastery in any field involves practice and feedback on how to improve. These pupils increased confidence enough through the intervention to try, they then build up more confidence to keep practicing. Mastering part of a skill then increases motivation to persist and continue to persist though difficulties: resilience. In February this year, addressing the Church of England Foundation for Educational Leadership conference, the Secretary of State for Education, Damian Hinds, spoke about the "vision to help children build character and resilience". He focused on the key ideas of confidence and mindset-building in order to develop bouncebackability, sticking with goals through tough times, exactly what is described in the parental comment. There were frequent and passionate evidences in the qualitative data of increase in self-belief and a mastery approach to learning and life illustrated by the following selection of insights: *"helps your self confidence in general", "mainly helps you as a person", "When you are feeling down, it boosts you up", "You think of what they told you and you think you can get through it", "if it gets hard, try harder" and "believe in yourself."* In the focus group, one quiet boy spoke uninhibitedly about his experience in a swimming competition and how he was really nervous, as always. He looked up and saw his grandad watching. He thought about *"what I had learned"* and felt less nervous, more relaxed and confident to go for it- he was really proud that he won that race. He undoubtedly felt a real increase in confidence and efficacy through the intervention.

2. Emotional Intelligence

Self-awareness and embedding growth mindset

Emotional intelligence (E.I.) is defined "as the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions." (Salovey & Mayer, 1990). Goleman (1998) clustered the multidimensional construct of E.I. into the 5 desired behavioural groupings of self-awareness, self-regulation, motivation, empathy and social skills. Self-awareness and self-regulation are the core of this: through development of these skills there can be a following of social awareness and relationship management. Self-awareness is a key characteristic of both group and leader skills and is the foundation for social skills (Goleman, 2003). Self-awareness leads in to self-regulation. Self-awareness allows for a conscious decision making and planning. Through development and sustaining of these skills there can be a following of effective communication which is an important is part of conflict approaching and conflict resolution. As Brackett (2016) asserts "what makes students thrive is what makes people human- emotions." This is reflected by the comment from one of the case study girls in relation to learning and school: *"It all depends on my mood."* Emotions are part of resiliency. Emotion management skills can be learned whatever personality traits have developed or what personal circumstances already dictate: "we all have the potential to increase our emotional intelligence- After all, the competencies are a set of learnable skills- without the right kind of practice, this change won't occur. We'll remain stuck in the habits … it will take new skills to get us to the new stage" (Goleman, 2019).

Story of Reduced Emotional Reactivity

Narrative analysis identified Andrew's story as one of emotional vulnerability and isolation. He lives with his dad, has limited contact with his mum, and feels his dad, who has anger and health problems, doesn't like him and he has a difficult relationship with his sister. Life and emotions were *"really hard"* for him and he spends a lot of his time at home in his room trying to keep things out of his mind, like death and *"other scary stuff".* He is in S1, he likes learning and he likes coming to school for learning but the transition to secondary has been difficult. In the early interviews he felt

scared and overwhelmed a lot of the time, didn't feel he had anyone to talk to, and felt lost and *"alone".* Over time school got better and was *"ok now"* but he still feels lonely and tries to block things out. He still struggles to focus and is overwhelmed with emotions under the surface. Homework is a struggle. The intervention programme for him was about "*how to control our emotions".* His story was one of development of more self-awareness and the intervention was something he talked about as enjoying and was able to express how his *"attitude to life sometimes changes a lot"* depending on his home life which has a *"bad impact*". He has *"nothing to help"* with his feelings at home but on the final interview he said he can think sometimes on "*what they (Live-N-Learn) told you, what is right and wrong basically."* In the third interview Andrew was able to talk reflectively about all the help he does get/has had (social worker, charity, counsellor) and that he feels it hasn't helped him much but for him the sessions were *"pretty fun*" and can now *"think more on how to control our emotions."* Andrew's resiliency score reflects an increase in emotional intelligence through decrease in emotional reactivity and though he is still highly vulnerable compared to group norm he was able to talk and reflect in a calmer way. One recent study examined the transition from primary to secondary school in terms of adjustment and progress into academic improvement and found that apart from support (the more obvious factor), the other significant factor was the emotional reactivity element of resiliency (and being aware of and so then begin to control emotions): this predicted successful transition and academic achievement (Bailey & Baines, 2012). A key theme concurrent across the qualitative data was self-awareness: *"Think on what they told you", " I paused for a bit…", "It made me think a lot about.." and "Just remember …"*

The idea of growth mindset wasn't new to a lot of these young people. They had learned about the malleability of the brain in Primary school and had "done it" (growth mindset) in tutor group. Their scores on Dweck's mindset test before intervention showed most did believe intelligence was incremental. The qualitative data demonstrated that even with a strong awareness of incremental intelligence, growth mindset was not easy for them to access in themselves or in any challenging situation. What this provision did was reinforced and embedded some of the ideas, skills, thought processes and strategies for developing and growing their learning and intelligence. The wellbeing literature indicates that taking notice- the self-awareness strand of emotional intelligence- is one of the 5 factors most important in young people's own perception of their health and wellbeing (Eames, Shippen and Sharp, 2016). All strands of the qualitative data in this research support that this intervention developed and increased self-awareness.

3. EDUCATIONAL ATTAINMENT

Despite Curriculum for Education intention of a broad general education, and master goal orientation rather than performance, matching with growth mindset, considerable emphasis is placed on achievement across the UK and classes are still often set by performance markers as part of a performance narrative in schools. The current drive to close the attainment gap and raise attainment for all further supports a performance culture. Growth mindset and fostering learning goals is strongly recognised by teachers and parents alike to both encourage value in learning, increase motivation and simultaneously raise attainment.

Maths story: unblocking

Khloe's narrative interviews identified a story of unblocking negative responses to learning in Maths. articulated that she felt "bored" in primary 7 but underlying this boredom was a fear of failure and a reactive response to her perceived criticism by teachers. Her negative experience of education was one in which she got *"dead bored quite easily"* and found it difficult to concentrate, enjoy or be motivated to learn. She was enjoying secondary school *"better".* Academically she had struggled

throughout school life but had hopes and ambitious to do well and become a beautician or as her story, and widening cultural stories she had access to, developed a photographer. She had family support and had received lots of educational support in transition which she enjoyed. She clearly had positive peer relations and strong relationships with teachers and staff in school. He r story from the opening interview was one in which maths was a *"struggle", "hard", "too hard"* and she just *"couldn't do it"* a lot of the time. For her she was *"not good"* at maths and it was *"too confusing"* for her. Gradually, her confidence and understanding of her perception of maths changed over the time of the provision: *"Maths has got a little better in the last couple of months*" and in her final interview post intervention she said that she was actually enjoying maths some of the time. She was now *"feeling more relaxed about it"* and *"understanding it more."* She said that having a growth mindset was about feeling you *"could achieve it*" and to *"try harder with it"*. There was an unblocking of previous feelings when she talked again about primary school experience of maths and said *"Inside I knew I could do it"* and she now transfers this learning to future educational aspirations: *"when I go to college, it might be easy, might be hard, might be a mix, but I'll be ok"* and *"I think about the positives, not the negatives."*

Clara's narrative story was one of overcoming her Maths block. She felt that her primary school experience wasn't *"that bad"* but had always struggled with Maths. When she was asked to talk about learning and school experiences, she immediately focused on maths and how *"hard"* it was for her. Pre-intervention she had a fixed view of her maths ability and that she just wasn't good at maths. She spoke intensely about her frustration and how she would often *"put the pencil down …and give up."* Post intervention she stated, "*all my learning and subjects are the same, except maths because I have progressed a little bit in that in the last couple of months …Algebra is hard and there is two different ways of teaching which is confusing but I am focusing better now …I do sometimes find it harder than other people but that is ok because I ask for help and the teacher explains."*

This story of the intervention helping these pupils to overcome learning, and particularly maths learning blocks, was further supported by Greta (the original case study pupil whose narrative interview transcripts were analysed as additional evidence). At the outset she was categorically fixed: *"don't math good"* and in fact *"can't math."* The underlying reason came from a negative early learning experience were a growth mindset wasn't fostered: *"I did like Maths in primary but I wasn't good at it, I always got the questions wrong"* She was made to feel bad for not getting the answers *"right"* and *"felt useless"* . After only one session, Greta immediately connected to the ideas and possibilities in growth mindset to the extent there was a clear positive impact on her learning attitude and motivation: *"Maths isn't that bad anymore"* and *"I kinda like Maths sometimes now..."*

These narratives are supported by the research literature and how prior negative learning experiences impact learning attitude, behaviours and achievement but also show how access to new stories of learning and achievement can influence positively and change attitude and behaviour, and so achievement over time. Greta's story was one of a very negative learning experience through primary school continued for the most part into secondary and feeling that school was *"pointless".* Greta's story was one of increased motivation, goal setting and challenge over the time of the intervention. She said, "*Motivation is a lot better … I have set reminders on my phone"* and she was now handing course work in on time. Greta's attendance increased from 68.10% to 86.38% and her reported levels for reading and numeracy both increased 2 levels which was a marked improvement.

4. Life Skills

a. Physical Health, Psychological Wellbeing and Motivation

Greta was an obese student, with a real spark, loves reading and tells it how it is: quick to criticise what she doesn't like about her school, and experience of the education system, she talks readily about her emotions and her emotional reactions, mainly negative in past learning experiences. She is candid when she expresses that she can't concentrate, be motivated or learn when she is tired and hungry which is before lunch, the afternoon and yes before break and sometimes in the morning. *"Part of me wants to motivate myself, part of me can't do it."* Yes she struggles with her physical health and yes that is directly co-related to her mental health. She is one of the 34% in her age range (12-15) not of a healthy weight (SHeS, 2017). "The impact of overweight and obesity upon quality of life and health is felt across the life course. Childhood obesity is associated with … negative psychological effects during the childhood years" (The Scottish Government, 2017). After just 2 sessions Greta's psychological wellbeing and motivation were greatly improved: *"what can I say, ta-da, it is true, my motivation is a lot better now."* For Greta her reflection turned to self-regulation and she started making a daily list of goals. Her increased physical and psychological wellbeing connected to her motivation is illustrated by a sample of comments: *"If one thing is achieved at least the day is not wasted", "If I do good things, good things come back … It's karma I know", "Do you want to hear my biggest positive achievement? I walked 2 miles with my cousin to the park, 2 miles for the first time in years" and "I have learned not to be grumpy, to lie in bed all day like a slug and go on my phone…."* Her improved physical and psychological health are linked. Parental data reported a decrease in the amount of time spent on devices and screens and instead a time spent in more active activities, one girl had joined her mum in a daily walk, and others were spending time on art work or music instead. One parent, who had two children involved in the intervention, stated: *"I have noticed that the children are spending more time on furthering their skills. Such as spending less of their spare time playing computer games, but balancing it with spending more time on learning music, languages and practicing art."* This increase in activity, psychological wellbeing and motivation is a life skill and linked to the other life skills discussed as follows.

b. Social Skills, Peer Interaction and Team Work

Emotional intelligence builds social skills and this was further fostered and facilitated by the fun interactive style of the provision. Unanimously the pupils, and the parents, spoke about how they enjoyed this learning and that *"it was fun helping each other in a group", "I enjoyed the group tasks" and "I liked the group activities".* The observational data evidenced a real development of cohesion and team work in the final session as some of the pupils had changed from being reserved and holding back to being fully engaged and jumping up to hard tasks *"Let's do this!"* and *"we can do it!"* Focus group data illustrates an example of a girl who was very quiet but wanted to explain how the provision had helped her value herself more, be able to communicate effectively and build a new friendship group. She was more resilient as evidenced by her self-respect, self-confidence and self-efficacy which empowered her to move away from her former social circle who *"didn't treat me right"* and find more supportive friends whom she was a lot happier with.

c. Creative Problem Solving and Persistence

The data evidenced an increase ability to approach hard tasks with zest and enthusiasm and on the final task of the intervention there was not a fear of a failure but a working together, looking for demonstration, trying a variety of strategies and wanting to continue with the task when the time was complete. One parent said: *"My son has chose a picture he wanted to draw and told me he was going to keep drawing the same picture over and over until he gets it right. He asked me for a critical*

opinion after his first attempt, and accepted my honest view of the piece and he agreed on the areas for improvement." Other pertinent comments included *"if at first you don't succeed, try…don't give up, try" and "don't distract yourself with something else if it is hard. Try harder…"* This life skill enhancement is part of offering protective factors to promote whole-child well-being and this evaluation underlines the link between resiliency, emotional and social skills, and life skills such as communication, co-operation, problem solving and persistence which of course directly relates back to intrinsic motivation(Ryan & Deci,2017; Roffey, 2016).

Conclusion

This intervention improved resiliency(mastery) and reduced reactivity(vulnerability), in a case study versus comparison group, measured quantitatively. The qualitative data supported an increase in resiliency and emotional intelligence. The narrative interviews demonstrate improvements in educational attainment, particularly numeracy, and attendance and enjoyment of school. The qualitative data demonstrated improvements in health and wellbeing, physical and psychological, linking to further increased motivation. This evaluation recommends a consistent, long-term and whole-school approach to mindset and other theoretically sound interventions to improve health and wellbeing and attainment for all. This whole-child approach offers a proactive and protective strategy to the stressing stimulating environment of the 21st century child and is in line with current education reform (Scotland Government, 2018). This evaluation offered the framework of narrative theory to effectively measure and enhance the impacts of the intervention. Longitudinal research is recommended to further assess and evaluate long term impacts and the processes involved.

References

Bandura, A. (1997). Self- efficacy: The exercise of control. United States of America: W.H. Freeman and Company Brackett, M. A., Rivers, S. E., Bertoli, M. C., & Salovey, P. (2016). "Emotional intelligence." In L. Feldman Barrett, M. Lewis, & J. Haviland-Jones (Eds.) *Handbook of Emotions* (4th Edition). (pp. 513–531). New York: Guilford Press.

Bailey, S. and Baines, E. (2012) The impact of risk and resiliency factors on the adjustment of children after the transition from primary to secondary school, Educational and Child Psychology, 29,(1).

Bedford, S. (2017) Growth mindset and motivation: a study into secondary school science learning, Research Papers in Education, 32(4).

Blackwell, L., Trzesniewski, K. and Dweck, C. (2007) 'Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention', Child Development, 78(1).

Brackett, M. A., Rivers, S. E., Bertoli, M. C., & Salovey, P. (2016). "Emotional intelligence." In L. Feldman Barrett, M. Lewis, & J. Haviland-Jones (Eds.) *Handbook of Emotions* (4th Edition). (pp. 513–531). New York: Guilford Press.

Braveman, B., Helfrich, C., Kielhofner, G., & Albrecht, G. (2003). The narratives of 12 men with AIDS: exploring return to work. Journal of Occupational Rehabilitation, 13(3).

Brougham, L. & and Kashubeck-West, S. Impact of a Growth Mindset Intervention on Academic Performance of Students at Two Urban High Schools, Professional School Counseling, 21(1).

Castella, K.D. & Byrne, D. (2015) My intelligence may be more malleable than yours: the revised implicit theories of intelligence (self-theory) scale is a better predictor of achievement, motivation and student disengagement. European Journal of Psychology of Education, 30(1).

Cresswell, J.W. (2005). Educational research: Planning, conducting and evaluating quantitative and qualitative approaches to research. Upper Saddle River, NJ: Merrill/ Pearson Education.

Crossley, M. L. (2000), Introducing narrative psychology: self, trauma and the construction of meaning, Open University Press, Buckingham, UK.

DeBacker, T. K., Heddy, B. C., Kershen, J. L., Crowson, M., Looney, K., & Goldman, J. A. (2018). Effects of a one-shot growth mindset intervention on beliefs about intelligence and achievement goals. Educational Psychology, 38(6).

Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. New York: Plenum.

Deci, E.L. and Ryan, R.M. (2002), "Overview of self-determination theory: an organismic dialecticalperspective", Handbook of Self-Determination Research, University of Rochester, New York, NY, pp. 3-33.

Denzin, N.K. (2002). Reading race. London: Sage.

Donohoe, C., Topping, K. and Hannah, H (2012) The impact of an online intervention (Brainology) on the mindset and resiliency of secondary school pupils: a preliminary mixed methods study. Educational Psychology,37(5).

Dweck, C. S. (2007). Mindset: The new psychology of success. New York, NY: Random House.

Dweck,C.S. (2000). Self-theories: Their role in motivation, personality and development. Taylor & Francis: Philadelphia, PA

Dweck, C. (1999) Self-Theories: Their Role in Motivation, Personality and Development. Philadelphia, PA: Psychology Press / Taylor and Francis.

Eames, V., Shippen, C. and Sharp, H. (2016) The Team of Life: A narrative approach to building resilience in UK school children. Educational and Child Psychology, 33(2).

Frank, A. W. (2005). What is dialogical research, and why should we do it? Qualitative Research, 15(7), 964-974. Frank, A. W. (1995). The wounded storyteller. Chicago: University of Chicago Press.

Fraser, D.M. (2017) An exploration of the application and implementation of growth mindset principles within a primary school, The British Psychological Society, 1–14.

Goleman, D. (1998). Working with emotional intelligence. New York: Bantam Books.

Good, C., Aronson, J. and Inzlicht, M. (2003) 'Improving adolescents' standardized test performance: An intervention to reduce the effects of stereotype threat', Journal of Applied Development Psychology, 24(6).

Hong, Y., Chiu, C., Dweck, C., Lin, D. and Wan, W. (1999) 'Implicit theories, attributions, and coping: A meaning system approach', Journal of Personality and Social Psychology, 77(3).

Learning and Teaching Scotland. (2009). A Curriculum for Excellence.

Lieblich, A., Tuval-Mashiach, R., & Zilber, T. (1998). Narrative research: reading, analysis and interpretation. London: Sage.

Muris, P. (2001, 2002). Self-Efficacy Questionnaire for Children (SEQ-C). Key references: A brief questionnaire for measuring self-efficacy in youths. Journal of Psychology and Behavioral Assessment, 23.

McLeod, J. (1997), *Narrative and psychotherapy*, Sage, London.

Ng, B. (2018) The Neuroscience of Growth Mindset and Intrinsic Motivation. Brain Sciences, 8(2).

Paunesku, D., Walton, G.M., Romero, C., Smith, E.N., Yeager, D.S., & Dweck, C.S. (2015). Mind set interventions are a scalable treatment for academic underachievement. Psychological Science, 1 -10.

Prince-Embury, S. (2010). Psychometric properties of the resiliency scales for children and adolescents and use for youth with psychiatric disorders. Journal of Psychoeducational Assessment, 28.

Prince-Embury, S. (2006). Resiliency scales for children and adolescents: A profile of personal strengths. San Antonio, TX: Harcourt Assessment.

Roffey. S. (2016) Building a case for whole-child, whole-school wellbeing in challenging contexts. Educational & Child Psychology, 33(2)

Salovey, P. & Mayer, J. D. (1990). Emotional intelligence. Imagination, Cognition, and Personality, 9.

Ryan, R. M., & Deci, E. L. (2017). Self-determination theory: Basic psychological needs in motivation, development, and wellness. New York, NY, US: Guilford Press.

Smith, B. (2007). The state of are in narrative inquiry. Some reflections, Narrative Inquiry, 17(2).

Smith, B., & Sparkes, A. C. (2006). Narrative inquiry in psychology: exploring the tensions within. Qualitative Research in Psychology, 3, 169–192.

Sparkes, A. C., & Partington, S. (2003). Narrative practice and its potential contribution to sport psychology: the example of flow. The Sport Psychologist, 17(3).

The Children's Society. (2018) The Good Childhood Report, No Child Should Feel Alone.

The Government. (2016) Department for Education Strategy 2015-2020 World-class education and care.

The Scottish Government. (2019). Pupil Equity Funding National Operational Guidance 2019.

The Scottish Government. (2018). Draft Education (Scotland) Bill.

The Scottish Government. (2017) The Scottish Health Survey.

Williams, C.A. (2018), Mindsets May Matter In Nursing, Nursing Education Perspectives, 39(6)

Yeager, D. S., Romero, C., Paunesku, D., Hulleman, C. S., Schneider, B., Hinojosa, C. and Dweck, C. S. (2016). Using design thinking to improve psychological interventions: The case of the growth mindset during the transition to high school. *Journal of Educational Psychology, 108*(3).

Yeager, D. S., & Dweck, C. S. (2012). Mindsets that promote resilience: When students believe that personal characteristics can be developed. Educational Psychologist, 47.

Yin R K (2003) *Applications of case study research.* 2nd ed. London: Sage.

Appendix

Focus Group Guide

What was the best part of the Live-N-Learn workshops? What did you enjoy most?

What were the most rewarding aspects of the experience?

What do you think was the purpose of the provision?

What do you think you learned from it?

What were the hardest/most difficult parts of the experience?

What do you think Live-N-Learn could have done differently?

What do you think the school could have done differently?

Would you like to see the program continue and be available in the future? Why/why not?

Who is the most intelligent person you know? What does intelligent mean? Are you intelligent?

What can you do to improve your learning?

Discussion points:

School work, homework, mood, energy, motivation, attitude, happiness, confidence, team working, group working, problem solving, focus, emotions, determination, hard work, effort, goals, ambitions, achievement, competition, performance, sports, music, art, lifestyle, choices.

Quantitative Data & Resiliency Scores available upon request.

For details of Live-N-Learn's programmes visit www.live-n-learn.co.uk or call 0333 2000 443.