Centre for Technology Enhanced Learning | Lancaster University

Getting Ahead: Resilience and digital practices

Development of a research and practice toolkit: Report from the pilot group

Don Passey

Professor of Technology Enhanced Learning
Department of Educational Research, Lancaster University
Lancaster, LA1 4YD, UK

Contents

1.   Executive summary

Getting Ahead offers 'a series of interventions taking place outside of the school environment'[1]. Getting Ahead is one of the delivery elements of HeadStart Wolverhampton[2], which has developed and provided programmes to develop stronger resilience in young people. An initial pilot programme was run in 2016. Evidence provided by the Learning Technologies Services, from project personnel, teachers and pupils involved in the programme, highlighted a number of key points about their experiences. Overall, the outcomes reported in this evidence were strongly positive; both pupils and teachers recognised ways in which the programme had developed their resilience, and this evidence was strongly aligned by reports from both pupils and teachers.

Findings from the pilot programme enabled an identification of 21 attributes that were crucial elements of resilience. It was felt that to explore the development of resilience more carefully, these could be measured at specific times, as they were developed over the period of the programme. To enable project personnel, teachers and pupils to report on these attributes at specific times during a programme, to measure the changes occurring, and to provide means to support the development of resilience, it was proposed that four tools could be developed. This report defines these tools, but more specifically shows how the first two of those four tools were developed, indicates how they might be used by tutors, teachers and pupils, illustrates how results might be presented and analysed, and details how the profiling tool was tested by the Learning Technologies Service with a trial group and how analyses of data provided allowed findings to be identified.

A research background is provided, and presents some details about each of the 21 attributes identified. This review of the research literature indicates clearly that there is an existing awareness of the importance, contribution and influence of these attributes. From this review, recommendations are drawn out about elements or features of practice that tutors or counsellors should consider when programmes of this nature are developed and provided.

Getting Ahead ran a trial programme group in 2017, and the profiling tool was used prior to and after activities that were run at an outdoor pursuits centre. The results from the pupils completing the profiling tool before and after these activities showed changes in attitudes, communication, behaviours and emotions (in some cases substantial). When analysed statistically, some of these changes were at significant levels. However, it was found that the statistically significant changes for all pupils were not the same in all instances as those for pupils from each of the two individual schools. Statistical tests showed that the influence of changes from one school could have a strong effect on the overall pupil reported changes.

Results were not gathered from teachers, but it was clear from project personnel involved and from the pupil responses that changes did occur as a result of the programme and its activities. Further research to substantiate these findings by gathering and analysing evidence from other groups and from a wider range of personnel (teachers and tutors) would clearly be of value. From the evidence to date, the programme in place appears to adhere to the recommendations of how to effectively support young people in building resilience, and this has been demonstrated by teacher (in the trial group) and pupil (in the trial and pilot group) responses.

---

[1] http://www.headstartonline.co.uk/gettingahead/

[2] http://www.headstartonline.co.uk/

2.   Background: Key points from the initial pilot

This report documents developments undertaken during the trial stage of the Getting Ahead Programme in 2017. This trial stage followed a pilot that was run in 2016. From that pilot, pupil and teacher responses were gathered, and these suggested that four tools could be produced as a toolkit to support the Getting Ahead Programme and similar programmes. The four tools proposed are:

- A profiling tool
- A developmental tool
- A diagnostic tool
- An evaluation tool

The initial design and development of these tools and this toolkit were generated from key outcomes that arose from the previous pilot programme in 2016. Discussions and meetings with project personnel in August and September 2016, with pupils and teachers in four pilot schools in November 2016, raised a number of key points, from their experiences of the initial pilot programme.

Points raised indicated that:

- The programme had clearly been successful.
- Pupils and teachers were very happy with the pilot programme of activities that was run in 2016.
- Even after several months, pupils remembered specific activities, such as the T-shirt activity, the positive mottos they created, and they still recalled these when they were faced with challenges.
- They remembered personalities they met, the difficulties they faced, and how those personalities moved beyond the difficulties they faced.
- The day at the Woodlands Centre presented them with real challenges; a number of these were described as perceptual obstacles that they faced, but they moved through them in many cases.
- On the day they spent at the Civic Centre, many pupils were surprised that they were allowed to talk to 'strangers'; some found the questioning task difficult, but would then do it again.
- Many pupils gained in confidence on that day, and felt they were being listened to by 'important people'.
- On the 'Safe Side day', pupils enjoyed using the technologies.
- The 'Kingswood day' offered challenges that pupils needed to overcome; some described how they needed to overcome challenges that they felt were put in place by the actions of other pupils.
- Some pupils referred to the programme experiences as being life changing. Many referred to their self-confidence being enhanced, as were their abilities to work in teams. Many pupils stated that they were then doing what they had not done before, whether undertaking challenging physical activities, giving presentations, talking to others, communicating with others in the school and at home, having greater emotional stability, trusting peers, understanding strengths and weaknesses of self and others more, or holding greater mutual respect.
- Pupils seemed to come to a 'switch point' when they felt different about themselves and their relationships to others; indeed, some pupils were able to pinpoint these 'switch points'.
- Many pupils who were involved afterwards supported and worked with other pupils in their schools.
- Teachers appreciated the opportunities for well-being that were provided, as these were much harder for them to access in schools than had been the case previously.
- From a teaching and learning perspective, it seemed that resilience could not be taught like a subject, but it could be learned through experience and activity; this programme clearly achieved that.

- In terms of making any changes to the programme, the use of the Yammer facility was not regarded as being useful. Some pupils were concerned about privacy when using it, because of possible teacher monitoring.
- Some pupils felt that team building should come earlier in the programme.

In terms of measuring outcomes arising:

- Given the findings from the pilot stage, it is recommended that as a part of direct observation of activities by tutors or counsellors, evaluation of social and emotional attributes should be considered.
- In this respect, there are 21 attributes to identify, aligned with features reported by teachers and pupils. Means to identify uses, presence and levels of the following should be put in place: positive and negative attitude; personal mottos; role models; concern with fears, challenges, obstacles or unease; confidence with strangers; confidence in speaking publicly; handling anger; problem-solving ability; acts of withdrawal; taking a pragmatic approach; communicating with teachers, parents or guardians; assertiveness; emotional stability; perseverance; understanding each other's strengths and weaknesses; trust of others; communicating with strangers; team working; understanding one-self; having shared experiences; discussing and accommodating the ideas of others; and having respect.
- Other outcome measures to record are: gaining roles and positions in school that support others; and identification of 'switch points'.

Taking these findings forward:

- It is clear from responses from teachers and young people involved in the pilot programme of activities, that the young people gained in particular ways.
- When considering young people who might be involved in future programmes, the sorts of characteristics that have been identified by young people and teachers as positive outcomes can be used to both profile young people initially, and monitor their development throughout the trials being set up in 2017.

At the time this report was initially drafted (December 2017), a pilot profiling tool and a pilot developmental tool had been developed, and the profiling tool had been trialled in a trial programme of activities that ran in May 2017.

3.   Factors affecting resilience

Schools and teachers have increasingly, over the past 20 years, been expected to become more conversant with social, emotional and psychological needs of their pupils. The relationship of these needs to learning has been highlighted through a range of studies and initiatives. Whilst there have been school-based, government-supported programmes and initiatives in the past to support these needs (such as the Social and Emotional Aspects of Learning (SEAL) initiative[3]), the current curriculum[4] focuses heavily on cognitive (subject) needs of pupils. Teachers are reporting that they are finding it increasingly difficult to find the time and the funds to support social, emotional and psychological needs. At the same time, the focus of lessons on cognitive (subject) needs means that focusing on social, emotional and psychological needs in lessons or in formal education (in-school lesson or class time) is increasingly challenging. In this context, a focus on social, emotional and psychological needs is worthy of consideration within additional elements of education - the informal (out-of-school groups) and non-formal (out-of-school clubs or organised activities). Having run a successful pilot in 2016, Getting Ahead has clearly placed these needs, and looks to supports appropriate practices to do this, within the informal and non-formal domains.

From the key points made by teachers and young people who experienced the pilot programme of activities (see Section 2), twenty-one factors affecting resilience were identified. A background discussion of these factors, and how they relate to learning, linked to key research in the field, is provided in Table 1.

Factor	Brief discussion of the research
Positive attitude	It has been shown that positive attitude can be built through a supportive environment. The authors of this research showed that a regular practice of loving-kindness meditation 'produced increases over time in daily experiences of positive emotions, which, in turn, produced increases in a wide range of personal resources (e.g., increased mindfulness, purpose in life, social support, decreased illness symptoms). In turn, these increments in personal resources predicted increased life satisfaction and reduced depressive symptoms' (p. 1045)[5].
Having role models	Role models are important to young people, but research has shown that a positive attitude to achieving goals is related to how young people take positive role models on board. This researcher summarises it as follows: 'young people are more likely to be inspired by positive role models when they have *growth mindsets* – when they see themselves as active learners and achievers who accomplish goals through hard work and perseverance. With this type of mindset, youth strive to achieve their best selves. And they look toward role models to show them the way. A *growth mindset* can be contrasted to a *prevention mindset*. When youth approach life with a desire to prevent or avoid disasters and negative outcomes, they are more likely to gravitate toward role models who will help them learn avoidance strategies' (p. n.p.)[6].

---

[3] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/181718/DFE-RR049.pdf

[4] https://www.gov.uk/government/collections/national-curriculum

[5] Fredrickson, B. L., Cohn, M. A., Coffey, K. A., Pek, J., & Finkel, S. M. (2008). Open hearts build lives: Positive emotions, induced through loving-kindness meditation, build consequential personal resources. *Journal of Personality and Social Psychology, 95*(5), 1045-1062. https://dx.doi.org/10.1037%2Fa0013262

[6] Price-Mitchell, M. (2014). How Role Models Influence Youth Strategies for Success. Accessed on 10 December 2017 at: http://www.rootsofaction.com/role-models-youth-strategies-success/

Factor	Brief discussion of the research
Facing fears, challenges, obstacles or concerns	Research offers suggestions for how to support children in overcoming fears, challenges, obstacles or concerns. As this author says: '*Emphasize effort over ability*. …One way to encourage effort is to provide specific feedback to students that recognizes and praises effort. Studies have shown that students who receive this kind of feedback are not only more motivated to succeed, but also believe that they can succeed. …*Encourage students to practice self-compassion when they fail*. …When we do that, it is easier for us to extend compassion to ourselves when we fail. …*Build positive relationships with students*. …talk with students about how the fear of failure might be impacting their lives' (p. n.p.)[7].
Confidence with strangers	Starting a conversation with a stranger can be daunting prospect. However, as these authors conclude: 'As we go about our daily lives, we are surrounded by opportunities to talk to strangers. Although these interactions may be enjoyable, the prospect of initiating a conversation with a stranger is often daunting. The current results highlight the benefits of transforming instrumental conversations that we are already having—such as placing a coffee order—into more sociable encounters' (p. 440)[8].
Confidence in speaking publicly	Confidence in speaking publicly can be developed. This author provides material to develop confidence in a range of different public speaking situations. He suggests as a key point: 'Remember, nervousness is normal and can enhance a speaker's ability. The key is not to eliminate the butterflies, but get them to fly in formation' (p. 11)[9].
Handling anger	There are three strategies that are suggested for handling anger. These are summarised by this author as: '*progressive relaxation* …[to] quickly use personal cues, such as words, phrases or images, …*Cognitive therapy* [to] see alternative ways of thinking and reacting to anger', and *developing skills*, so as an angry learner, you need safe learning skills, which need to be practiced (p. 54)[10].
Problem-solving ability	Problem-solving can be developed, but researchers tend to agree that this development needs to be phased over time. As this author concludes, 'To improve the problem solving skills of students, instructors must first focus on developing students' knowledge base and skills base. Without these tools, students will never succeed in true problem solving. Heavy emphasis should be placed on conceptual understanding of topics; secondary emphasis should be placed on carrying out and completing drills and exercises' (p. 15)[11].

[7] Zakrzewski, V. (2013). How to Help Kids Overcome Fear of Failure. The Greater Good Science Center at the University of California, Berkeley. Accessed on 10 December 2017 at: https://greatergood.berkeley.edu/article/item/how_to_help_kids_overcome_fear_of_failure

[8] Sandstrom, G.M. and Dunn, E.W. (2014). Is Efficiency Overrated?: Minimal Social Interactions Lead to Belonging and Positive Affect. Social Psychological and Personality Science, 5(4), 437-442

[9] Lewis, S.R. (n.d.). Speaking with Confidence: A teaching guide to improve public speaking in youth. University of Nevada, Reno. Accessed 10 December 2017 at: https://www.unce.unr.edu/publications/files/cd/2000/cm0008.pdf

[10] Holloway, J.D. (2003). Advances in anger management: Researchers and practitioners are examining what works best for managing problem anger. Monitor on Psychology, 34 (3), 54

[11] Finney, R. (n.d.). Research in Problem-Solving: Improving the Progression from Novice to Expert. Accessed 10 December 2017 at: http://www.colorado.edu/physics/phys4810/phys4810_fa06/4810_readings/finney.pdf

Factor	Brief discussion of the research
Engaging rather than withdrawing	Engaging rather than withdrawing is an issue that has been explored in the field of sports and outdoor activities. In that respect, these authors highlight, 'the critical influence of significant others during the adolescent years, and the fragility of athletes' relationships with these individuals. In particular, the findings of this study underline the importance of parents, coaches, and peers' changing roles during adolescence. While dropout and engaged athletes recounted similar significant other influences during childhood, differences began to emerge during adolescence as athletes faced new challenges and obstacles. This study highlighted the importance of open communication with parents and coaches, leading to healthy reciprocal relationships. As Horn et al. (2001) suggest, coaches must make an effort to interact frequently with all their athletes and to solicit information concerning their athletes' perceptions, opinions, and attitudes regarding their sport involvement. Further, findings emphasize the importance of parents "backing-off" in their practice and performance involvement as their child moves into adolescence' (p. 660)[12].
Taking a pragmatic approach	Taking a pragmatic approach requires an understanding of facts that relate to the specific context and situation in which an individual finds themselves. As a classic text on this field states, 'When a person thinks about uncertainty, the first notion that usually comes to mind is that it destabilizes things. Any decision made under uncertainty, which effects future events, has some to it, and people are typically averse to risk. Since practically all aspects of human behaviour involve explicit decisions, it is easy to imagine how even the smallest amount of uncertainty can have a significant effect on the total of social, business, organizational, and personal activity' (p. 3). The author goes on to say that, 'There are two necessary but not sufficient items of information that are needed to handle uncertainty. The first item is the collection of indicators in the real world. …The second item is the belief in what the indicators mean' (p. 7)[13].
Communicating with teachers and parents or guardians	Pupils vary enormously in terms of their ways and willingness to communicate with teachers, parents and guardians. These ways and willingness can be greatly influenced by the approaches and demeanour of the adults themselves. As one author stated with regard to pupil and teacher communication: 'Teachers working with quiet pupils are faced with a dilemma. Allowing pupils to be passive observers deprives them of important learning experiences, but these pupils may appear to be so nervous that even the gentlest persuasion seems like a violation. As has already been recognised, it can be difficult for teachers to know how to handle extremely quiet pupils even in a one-to-one situation. As one nursery nurse has found, earning the trust of quiet pupils can be a painfully slow process' (p. n.p.)[14].

[12] Fraser-Thomas, J., Côté, J. and Deakin, J. (2008). Understanding dropout and prolonged engagement in adolescent competitive sport. Psychology of Sport and Exercise, 9, 645–662

[13] Katzan, H., Jr. (1992). Managing uncertainty: a pragmatic approach. Chapman and Hall/CRC: Boca Raton, FL.

[14] Collins, J. (1997). Barriers to Communication in Schools. Paper presented at the British Educational Research Association Annual Conference, September 11-14: University of York, York.

Factor	Brief discussion of the research
Assertiveness	Developing assertiveness has not always been felt to necessarily lead to positive outcomes. However, as these authors conclude from a recent study in the context of a student population: 'The results showed that with increasing assertiveness and self-efficacy, aggression would be reduced. Researchers believe that certain people act fair and in a reasoning manner and are committed to mutual respect in social communication, also having appropriate skills in resolving the conflict. Thus, outcomes in aggressive behavior are seen less' (p. 228)[15].
Emotional stability	The importance of emotional stability has been highlighted, but few studies have explored this from an adolescent perspective. These authors, conducting a study with adolescents, concluded that: 'Emotionally stable adolescents have better emotional regulation skills, enabling them to modulate and cope with powerful affective states. More importantly, we found that emotional stability moderated the association between witnessing violence and symptoms of anxiety and depression. Emotional stability is protective for adolescents' emotional health – perhaps through coping or regulating their emotions in spite of stressful situations (i.e., witnessing violence). Although psychological symptoms were linked to experiences of witnessing violence, emotionally stable adolescents may have the capacity to adjust their emotional responses in spite of stressful situations; therefore, they showed better emotional functioning (fewer symptoms of anxiety and depression)' (p. 637)[16].
Perseverance	In terms of perseverance, as these authors conclude: 'these findings provide a source of optimism that grit, tenacity, and perseverance can be teachable or transferable' (p. xi). Their report stated that, 'Learning environments can be designed to promote grit, tenacity, and perseverance. …First, students need opportunities to take on "optimally challenging" goals that, to the student, are worthy of pursuit. …Second, students need a rigorous and supportive environment to accomplish these goals and/or develop critical psychological resources' (p. vii). One of the approaches they suggest is, 'Interventions that address mindsets, learning strategies, and resilience. There is growing research demonstrating that brief interventions (e.g., 2 to 10 hours) can significantly impact students' mindsets and learning strategies, and, in turn, academic performance' (p. x)[17].
Understanding the strengths and weaknesses of others	Understanding the strengths and weaknesses of others requires an understanding of the strengths of oneself. As HandsOnScotland state, 'Focus on character strengths instead of achievement. This will have a more positive effect on a child's confidence. …every child has the potential to develop their character strengths, for example, to use their sense of humour, to be braver, to be kinder or to be more grateful' (p. n.p.)[18].

---

[15] Khademi Mofrad, S.H. and Mehrabi, T. (2015). The role of self-efficacy and assertiveness in aggression among high-school students in Isfahan. Journal of Medicine and Life, 8(4), 225-231.

[16] Ho, M.Y., Cheung, F.M., You, J., Kam, C., Zhang, X. and Kliewer, W. (2013). The moderating role of emotional stability in the relationship between exposure to violence and anxiety and depression. Personality and Individual Differences, 55, 634–639.

[17] Shechtman, N., DeBarger, A.H., Dornsife, C., Rosier, S. and Yarnall, L. (2013). Promoting Grit, Tenacity, and Perseverance: Critical Factors for Success in the 21st Century. U.S. Department of Education - Office of Educational Technology: Washington, DC.

[18] HandsOnScotland (n.d.). Character Strengths. Accessed on 11 December 2017 at: http://www.handsonscotland.co.uk/flourishing_and_wellbeing_in_children_and_young_people/character_strengths/character_strengths.html

Factor	Brief discussion of the research
Trust of others	The ways that trust in others is developed in adolescents can depend upon a range of factors. These authors have recently found that there are, 'paths between children's reliability trust beliefs in parents and behavior-dependent reliability trust on peers. …that children's reliability trust beliefs in parents served as a mediator between those two variables. …children's trust beliefs in parents, as part of their IWM, provide the cognitive structure for their trust beliefs in peers and thus affect their trusting behavior with peers as a form of peer competence. The current findings confirmed the expectation that girls demonstrate greater reliability trustworthiness towards peers than do boys' (p. 7)[19].
Communicating with strangers	Factors that lead to avoidance of communicating with strangers have been researched fairly broadly. This author has brought out the important influence of social acceptance, concluding that, 'The current research proposes that one way to understand WOM [word of mouth] behavior among strangers and friends is through social acceptance. Social acceptance rests upon initiating and maintaining existing social relationships. Accordingly, when communicating with strangers, people self-enhance in order to attract others; when communicating with friends, people attempt to emotionally connect to maintain existing ties. …WOM [word of mouth] may be used strategically to achieve social acceptance: when people are at the initiation stages of a relationship (strangers), they attempt to self-enhance by sharing positive WOM. However, as the relationship progresses (friends), they seek to emotionally connect by sharing negative WOM' (p. 628)[20].
Team working	Team working is known to be an important practice that can support resilience, through sharing and trust. These authors state, however, that, "Unfortunately, youth sport participation begins to decline after the age of 12. This finding is especially worrisome because that age is also a crucial time for the development of children's social skills and self-esteem. …One way that coaches can improve the sporting environment is through group activities that promote team building' (p. 44)[21].
Understanding one-self	The difficulties of understanding one-self at an adolescent age are well framed by these authors, who say, 'The early adolescent is subjected to multiple changes and developments, which do not necessarily occur at the same time or complete their trajectories at the same rate. While he or she is equipped with an increasingly complex sense of self or identity, the early adolescent has yet to fully live in these "new clothes". As our brief review shows, this period is characterized by increased self-consciousness, introspection, inner conflict, stress, uncertainty, and disorientation. Taken together, the combination of cognitive, social, and physical changes makes early adolescence a critical time for the consideration of self- and identity-related applications and interventions' (p. 7)[22].

[19] Rotenberg, K.J., Petrocchi, S., Lecciso, F. and Marchetti, A. (2013). Children's Trust Beliefs in Others and Trusting Behavior in Peer Interaction. Child Development Research, Article ID 806597, 8 pages. http://dx.doi.org/10.1155/2013/806597

[20] Chen, Z. (2017). Social Acceptance and Word of Mouth: How the Motive to Belong Leads to Divergent WOM with Strangers and Friends. *Journal of Consumer Research*, 44(3), 613–632.

[21] Bloom, G.A., Loughead, T.M. and Newin, J. (2008). Team Building for Youth Sport. JOPERD, 79(9), 44-47.

[22] Brinthaupt, T.M. and Lipka, R.P. (2002). Understanding Early Adolescent Self and Identity: Applications and Interventions. State University of New York Press: Albany, NY.

Factor	Brief discussion of the research
Having shared experiences	The importance of shared experiences in developing resilience is becoming highlighted in the literature. As these authors state, 'Every person perceives the world in his or her own way and describes the past through the lens of individual history, selecting different details or themes as most important. However, memories do not seem to be entirely idiosyncratic; for example, after seeing the same list of pictures, there is considerable inter-subject similarity in which items are remembered. The capacity to share memories is essential for our ability to interact with others and form social groups' (p. 115)[23].
Discussing and accommodating the ideas of others	Tolerance is a key factor in discussing and accommodating the ideas of others. The contrary feature, intolerance, has been examined in some depth. This author summarises reasons for intolerance as, 'The first root cause is ignorance – a lack of knowledge, of understanding, or a tendency to see the world in black and white with no grey zones. With this attitude, you are convinced that what you know is the truth and that everyone else is wrong. …Another cause is bias and prejudice and, if we are really honest with ourselves, we are all biased, because we receive this bias as we are growing up. …Fortunately today, the youth are in a somewhat more favourable situation with internet and modern communication technology as other sources of information to draw on, in addition to what a teacher or their local environment tells them. Bias has to be broken by questioning attitudes - but at the same time we have to recognise that the tools of questioning, like the internet, themselves provide a huge amount of misinformation and bias as well. Another cause of intolerance is fear of things we are not familiar with. …We are fearful of "otherness", but by breaking that cycle – by knowing about other cultures and religions and being exposed to new ideas – you break that fear. Another cause is a threat to the status quo – a threat to stability. …And of course we want to place responsibility for this on someone, and that is where the intolerant attitude will come from. …Stress is another factor. We are more likely to be intolerant when we are stressed, so we should learn to manage this' (p. n.p.)[24].
Having respect	Respect and use of language are critically intertwined. As this author states, 'language simultaneously performs *ideational* functions (communicating information, ideas, thoughts and opinions) and *interpersonal* functions (expressing and sustaining relations between or among individuals and groups). [A third, 'textual' function, need not concern us here.] For example, a bullying adult manager hurling verbal abuse at a younger employee is both expressing ideas or opinions and enacting a particular kind of unequal relationship' (p. 14)[25].

Table 1: A brief research discussion of the factors that affect resilience in young people

These research findings highlight features that young people identified as being critical to their positive development of resilience. For tutors and counsellors, these findings indicate that any programme should:

- Foster positive attitudes through a positive supportive environment.
- Provide role models when young people are actively striving to achieve.

[23] Chen, J., Leong, Y.C., Honey, C.J., Yong, C.H., Norman, K.A. and Hasson, U. (2017). Shared memories reveal shared structure in neural activity across individuals. *Nature Neuroscience*, 20(1), 115-125.

[24] Beekman, K. (2008). Promoting a culture of tolerance. International Federation of Red Cross and Red Crescent Societies. Accessed on 19 December 2017 at: http://www.ifrc.org/en/news-and-media/opinions-and-positions/speeches/2008/promoting-a-culture-of-tolerance/

[25] Devlin, M. (2006). Inequality and the Stereotyping of Young People. The Equality Authority: Dublin.

- Help overcome fear through positive feedback, self-compassion, and relationships with others.
- Enable confidence in speaking to others by using everyday interactions as a means of initiating conversation.
- Enable confidence in speaking publicly by using nervousness as a feature offering positive potential.
- Offer ways to handle anger through a variety of strategies.
- Seek to develop problem-solving in a phased way over time.
- Build engagement through open communication.
- Develop a pragmatic approach through greater understanding of and belief in indicators.
- Support and develop communication over a period of time, especially with quiet individuals.
- Build assertiveness alongside the development of self-efficacy.
- Support the development of emotional regulation skills.
- Provide short-term opportunities to develop perseverance, which young people feel are worthy of undertaking.
- Allow an understanding of strengths more than weaknesses of others to be recognised.
- Develop trust between young people and parents/guardians, as well as between young people themselves.
- Support communication with others by focusing on concepts of social acceptance.
- Provide opportunities for team building and team working.
- Provide opportunities for young people to understand their ongoing developments of self and identity.
- Support ways to enable shared experiences.
- Develop tolerance, accommodated by an understanding of how to address features of intolerance.
- Develop respect through use of appropriate language.

4. The activity programme for 2017-18

Following the successful pilot programme that was run in 2016, an initial trial was undertaken in January 2017, with 2 cohorts of young people, at the Towers Centre, Snowdonia, involving a primary school class during the first half of the week, and a secondary school class during the second half of the week.

From reflections on this initial trial, a further trial was run from 3rd-5th May 2017, with 12 young people in year 7 (11 to 12 years of age), from two secondary schools. The trial involved school staff, Learning Technologies staff, Getting Ahead and Towers Centre staff. The timetable was, in outline:

- From lunch on Day 1, the programme started with Towers Centre activities, involving outside wires, ropes, etc., orienteering in the evening, a night walk and the T-shirt activity (the latter taking about 1 hour, being a condensed form of the day activity from the pilot programme).
- Day 2 started with an expedition, using Ordnance Survey (OS) maps on iPads, so that the young people could navigate for themselves, as the system told them if they were off-route, meaning they needed minimal supervision. This system allowed them to navigate to points to undertake a mental/physical activity/challenge (manned by Towers Centre staff), with instructions coming via the Global Positioning System (GPS) signal. There were 5/6 challenges on the expedition, which in total was about 7 miles in length, with the final activity requiring the young people to abseil to the minibuses. The evening provided opportunity for reflection, using a blog, with photographs gathered from across the day, supplemented with some video.
- Day 3 involved activities during the morning only.

Following this full trial:

- In September 2017, there will be a programme run for 2 cohorts of primary school pupils (year 6), spending half a week in the Towers Centre each, followed by 5 day-long activities, one per month, finishing in February 2018. Online activities will be run between the monthly activity days.
- In January 2018, there will be a programme for 2 cohorts of secondary school pupils (year 7), following the same pattern as above, and finishing in July 2018.
- In September 2018, another programme for 2 primary school cohorts will be run, as above.
- In January 2019, another programme for 2 secondary school cohorts will be run, as above.

5. A profiling tool

Taking the key factors affecting resilience of young people that were highlighted from the pilot programme, the profiling tool below is designed for teachers to record a starting profile and end profile of young people selected to take part in the Getting Ahead programme of activities starting in May 2017. The features that teachers assess are based on those factors where there was recognised change in the young people after their participation in the initial pilot programme. In the matrix (Figure 1), teachers can tick what they feel is a starting position for each young person.

School:
Reference code for the young person:
Initial/final:

	Very weak	Weak	So, so - neither weak nor strong	Strong	Very strong
Positive attitude					
Having role models					
Facing fears, challenges, obstacles or concerns					
Confidence with strangers					
Confidence in speaking publicly					
Handling anger					
Problem-solving ability					
Engaging rather than withdrawing					
Taking a pragmatic approach					
Communicating with teachers and parents or guardians					
Assertiveness					
Emotional stability					
Perseverance					
Understanding the strengths and weaknesses of others					
Trust of others					
Communicating with strangers					
Team working					
Understanding one-self					
Having shared experiences					
Discussing and accommodating the ideas of others					
Having respect					

Figure 1: Matrix for a teacher to record an individual pupil's starting and finishing positions

Taking this teacher profiling tool, the profiling tool below uses language designed for young people in the 10-13-year-old age range, so that those selected to take part in the Getting Ahead programme of activities from May 2017 can also record a starting profile, and their profile at different stages of the programme. In the matrix (Figure 2), young people can tick what they feel is their position for each factor at each stage of the programme (I – initially before the programme starts; TC – following the

Towers Centre activities; 1C – after the first additional day; 2C – after the second additional day; 3C – after the third additional day; 4C – after the fourth additional day; F – after the fifth and final additional day).

School:
Reference code for the young person:
Initial/interim/final: I/TC/1C/2C/3C/4C/F

	Very weak	**Weak**	**So, so - neither weak nor strong**	**Strong**	**Very strong**
Being positive					
Having an idol I admire					
Facing fears, or concerns					
Confident with people I don't know					
Confident in speaking in assembly					
Handling my anger					
Problem-solving					
Keeping working with others					
Being practical					
Talking to teachers and parents or guardians					
Saying what I mean					
Keeping calm					
Keeping on trying					
Understanding strengths and weaknesses of others					
Trusting others					
Talking with strangers					
Working in a team					
Understanding myself					
Remembering things I did with others					
Taking other people's ideas on board					
Respecting others					

Figure 2: Matrix for a pupil to record positions at various stages of the programme

5.1 Presenting the outcomes

In the teacher and young person profiling tools above, the factors that affect resilience are ordered randomly. However, these factors can be grouped into four main categories: Attitudes (A); Behaviours (B); Communications (C); and Emotions (E). The factors grouped in this way, with each factor described in outline, are shown in Table 2.

Group	Factor	Description
Attitudes (A)	Positive attitude	Willing to be involved and to engage with problems and situations that might be initially uncomfortable
	Facing fears, challenges, obstacles or concerns	Willing to try to engage, even if the situation initially indicates possible difficulty or the need to explore alternatives
	Problem-solving ability	Willing to look at a situation as a problem that needs to be solved, and to explore ways to do this
	Assertiveness	Willing to voice an opinion or to state feelings or ideas or suggestions
	Perseverance	Willing to try again, even if at first it is not possible to find a positive approach or outcome
Behaviours (B)	Handling anger	Staying calm, using anger control strategies, doing something creative, and talking about how you feel
	Engaging rather than withdrawing	Staying with the situation, looking for ways to engage and communicate, rather than stepping aside and withdrawing
	Taking a pragmatic approach	Staying practical, looking for ways around things, and trying different approaches that seem reasonable and sensible
	Having shared experiences	Staying with others, sharing thoughts and ideas, and reflecting on experiences with others later
Communications (C)	Confidence with strangers	Starting a conversation, but being conscious of keeping safe
	Confidence in speaking publicly	Starting a presentation, staying calm, speaking clearly and enjoying sharing with others
	Communicating with teachers and parents or guardians	Starting a discussion, perhaps asking questions, or sharing some thoughts or ideas about your experiences
	Communicating with strangers	Starting a discussion, perhaps asking a question, with someone you don't know
	Team working	Starting to work with others, listening to them as well as sharing your thoughts and ideas for a common good or goal
	Discussing and accommodating the ideas of others	Starting to listen to others, as well as sharing your thoughts with them, and trying to understand their ideas more
Emotions (E)	Having role models	Seeing others as an idol or model you admire, whom you would like to follow for good, positive reasons
	Emotional stability	Seeing your own emotions as something that you can accept and understand
	Understanding the strengths and weaknesses of others	Seeing how others do things, and especially seeing the things that they might do better than you, or those things you can do better
	Trust of others	Seeing that others are trying to help and support rather than being critical or unhelpful
	Understanding one-self	Seeing how you do things, and why you do them in that way, and what you would like to develop in yourself
	Having respect	Seeing others in the way you would like them to see you, being courteous, friendly and sincere

Table 2: Factors affecting resilience with brief definitions

The level that a teacher or young person places in the profile matrix can be used to create different profiles, a profile of the single factors, and a profile of grouped factors. The latter can then generate quantitative levels of attitudes, behaviours, communications and emotions. These can be presented in output tables and on a radar chart. For example, if a teacher marked a sheet as shown in Figure 3, then individual levels, grouped levels, and a radar chart can be generated (shown in Figures 4 to 6).

	Very weak	Weak	So, so - neither weak nor strong	Strong	Very strong
Positive attitude	√				
Having role models			√		
Facing fears, challenges, obstacles or concerns		√			
Confidence with strangers				√	
Confidence in speaking publicly			√		
Handling anger		√			
Problem-solving ability			√		
Engaging rather than withdrawing		√			
Taking a pragmatic approach				√	
Communicating with teachers and parents or guardians			√		
Assertiveness				√	
Emotional stability		√			
Perseverance	√				
Understanding the strengths and weaknesses of others		√			
Trust of others			√		
Communicating with strangers				√	
Team working			√		
Understanding one-self		√			
Having shared experiences	√				
Discussing and accommodating the ideas of others		√			
Having respect		√			

Figure 3: Example matrix of a teacher's record of an individual pupil's position

Individual levels can be shown as follows (Figure 4), where factors are scored (1=very weak; 2=weak; 3=so, so – neither weak nor strong; 4=strong; 5=very strong).

	Very weak	Weak	So, so - neither weak nor strong	Strong	Very strong
Positive attitude	1				
Having role models			3		
Facing fears, challenges, obstacles or concerns		2			
Confidence with strangers				4	
Confidence in speaking publicly			3		
Handling anger		2			
Problem-solving ability			3		
Engaging rather than withdrawing		2			
Taking a pragmatic approach				4	
Communicating with teachers and parents or guardians			3		
Assertiveness				4	
Emotional stability		2			
Perseverance	1				
Understanding the strengths and weaknesses of others		2			
Trust of others			3		
Communicating with strangers				4	
Team working			3		
Understanding one-self		2			
Having shared experiences	1				
Discussing and accommodating the ideas of others		2			
Having respect		2			

Figure 4: Example matrix of a teacher's record of an individual pupil's position, quantified

Grouped levels can be shown as follows (Figure 5).

	Very weak	Weak	So, so - neither weak nor strong	Strong	Very strong	Group average
Positive attitude	1					2
Facing fears, challenges, obstacles or concerns		2				
Problem-solving ability			3			
Assertiveness				4		
Perseverance	1					
Handling anger		2				2.25
Engaging rather than withdrawing		2				
Taking a pragmatic approach				4		
Having shared experiences	1					
Confidence with strangers				4		3.2
Confidence in speaking publicly			3			
Communicating with teachers and parents or guardians			3			
Communicating with strangers				4		
Team working			3			
Discussing and accommodating the ideas of others		2				
Having role models			3			2.3
Emotional stability		2				
Understanding the strengths and weaknesses of others		2				
Trust of others			3			
Understanding one-self		2				
Having respect		2				

Figure 5: Example matrix of a teacher's record of an individual pupil's position, quantified and grouped

A form of radar plot can be created based on Figure 5 (Figure 6).
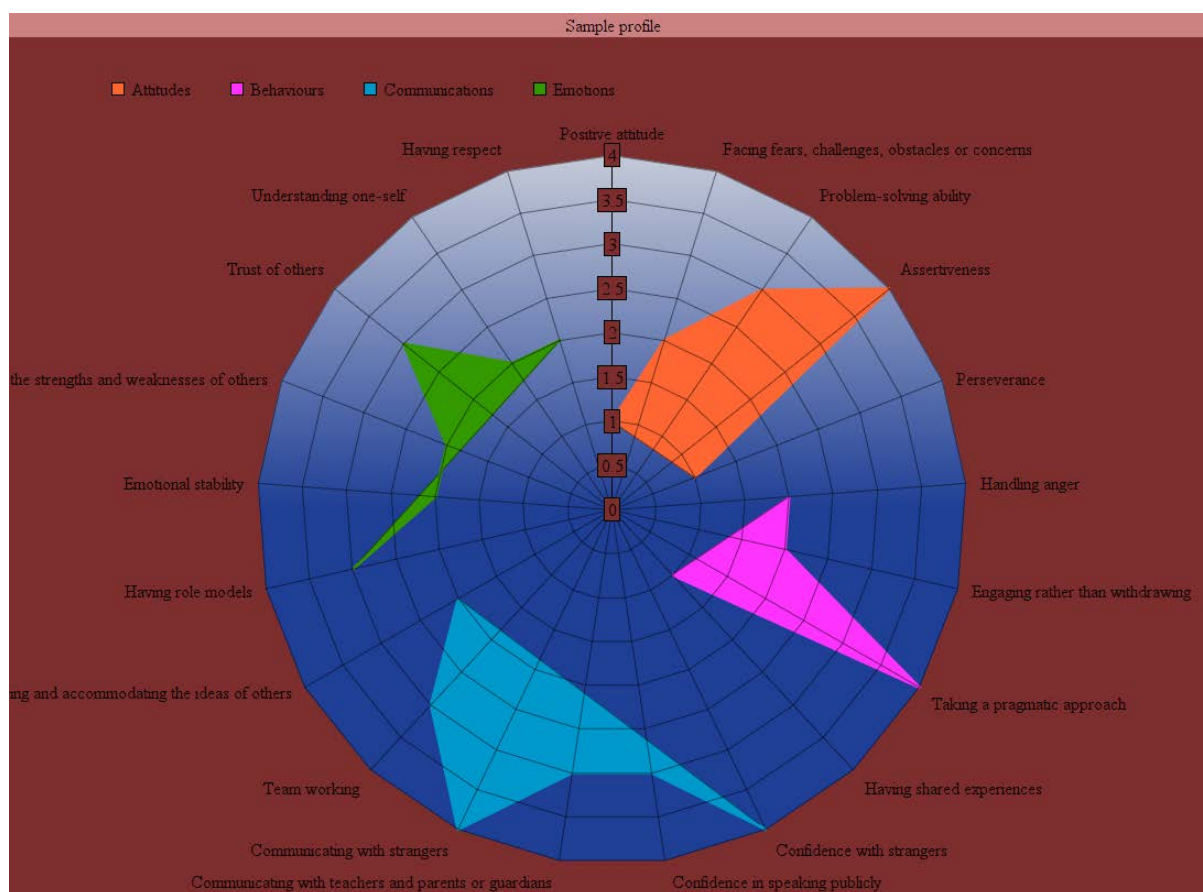
Figure 6: Example radar plot of a teacher's record of an individual pupil's position, quantified and grouped (Source: http://www.onlinecharttool.com/graph?selected_graph=radar)

Similar presentations can be produced for each young person, and the full range of matrix profiles completed by teachers (two from across the period of the programme) and young people (seven from across the period of the programme) can show:

- Difference between the start and finish from the teacher's perspective.
- Difference between the start, end of each activity and the finish from the young person's perspective.
- Difference between the teacher's and young person's perspectives.

Additionally, aggregated values can also be generated to show differences over time for a complete cohort of young people. The differences in specific factors and grouped factors can be quantified.

5.2 Results from the May 2017 trial group

Background

From the pupil self-reporting questionnaires, completed by the trial group of 12 pupils in May 2017 prior to the Towers Centre activities (I) and after these activities (TC), responses were collated together:

- For all pupils; and
- By individual school group.

Overall findings of change at a statistically significant level

Overall findings of change from self-reports by pupils were explored through paired t-tests. To create the scores for the analysis, pupil reports for each of the features concerned with resilience were scored from 5 as 'very strong' to 1 as 'very weak'. For each pupil a 'before' and 'after' score was created for all features, and for features within each of the four categories comprising the full range of characteristics – attitudes; behaviours; communication; and emotions. The analysis was undertaken using SPSS version 23. The results of the paired sample t-tests are shown in Table 3.

	Paired Samples Test							
		Paired Differences						
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	Before all – After all	-11.333	10.129	2.924	-17.769	-4.897	-3.876	11	.003
Pair 2	Before attitudes – After attitudes	-4.167	2.368	.683	-5.671	-2.662	-6.096	11	.000
Pair 3	Before behaviours – After behaviours	-2.000	3.303	.953	-4.099	.099	-2.098	11	.060
Pair 4	Before communications – After communications	-2.833	3.538	1.021	-5.081	-.586	-2.774	11	.018
Pair 5	Before emotions – After emotions	-2.333	4.418	1.275	-5.140	.473	-1.830	11	.095

Table 3: t-test paired results for all pupils by group

For all pupils, these results show that there was a statistically significant difference (at a level of $p<0.05$) in their reports before and after the Towers Centre experiences:

- Across all features.
- For attitudinal features.
- For communication features.

There was no statistically significant difference at the same level:

- For behavioural features.
- For emotional features.

For School A, similar t-tests were conducted. The results of the paired sample t-tests are shown Table 4.

		Paired Differences							
				Std. Error Mean	95% Confidence Interval of the Difference				
		Mean	Std. Deviation		Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	Before all – After all	-10.000	11.349	4.633	-21.910	1.910	-2.158	5	.083
Pair 2	Before attitudes – After attitudes	-4.333	3.077	1.256	-7.562	-1.104	-3.450	5	.018
Pair 3	Before behaviours – After behaviours	-1.500	3.332	1.360	-4.996	1.996	-1.103	5	.320
Pair 4	Before communications – After communications	-3.000	4.775	1.949	-8.011	2.011	-1.539	5	.184
Pair 5	Before emotions – After emotions	-1.167	2.229	.910	-3.505	1.172	-1.282	5	.256

Table 4: t-test paired results for all pupils in School A by group

For this group of pupils, these results show that there was a statistically significant difference (at a level of $p<0.05$) in their reports before and after the Towers Centre experiences only:

- For attitudinal features.

There was no statistically significant difference at the same level:

- Across all features.
- For behavioural features.
- For communication features.
- For emotional features.

As these results are different from those for all pupils, this suggests that the changes indicated by this group might be less strong than those of the other school group.

For School B, similar t-tests were conducted. The results of the paired sample t-tests are shown in Table 5.

| | | Paired Differences | | | | | | | |
| | | | | | 95% Confidence Interval of the Difference | | | | |
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	Before all – After all	-12.667	9.626	3.930	-22.769	-2.564	-3.223	5	.023
Pair 2	Before attitudes – After attitudes	-4.000	1.673	.683	-5.756	-2.244	-5.855	5	.002
Pair 3	Before behaviours – After behaviours	-2.500	3.507	1.432	-6.181	1.181	-1.746	5	.141
Pair 4	Before communications – After communications	-2.667	2.160	.882	-4.934	-.400	-3.024	5	.029
Pair 5	Before emotions – After emotions	-3.500	5.891	2.405	-9.682	2.682	-1.455	5	.205

Paired Samples Test

Table 5: t-test paired results for all pupils in School B by group

For this group of pupils, these results show that there was a statistically significant difference (at a level of $p<0.05$) in their reports before and after the Towers Centre experiences:

- Across all features.
- For attitudinal features.
- For communication features.

There was no statistically significant difference at the same level:

- For behavioural features.
- For emotional features.

These results are the same as those for all pupils in both school groups. This suggests that the reported changes by this school group are indeed stronger than those of the other school group.

To explore the differences in change for each of these school groups, a different analysis was undertaken, focusing on the individual features within each of the grouped elements. The outcomes of these analyses follow, for each school.

Findings for School A

The collation of results for School A is presented in Table 6, which shows the number of pupil responses in each category.

Feature	I					TC				
	Very weak	Weak	So, so - neither weak nor strong	Strong	Very strong	Very weak	Weak	So, so - neither weak nor strong	Strong	Very strong
Being positive	0	2	2	2	0	0	0	0	3	3
Having an idol I admire	1	0	0	4	1	0	0	1	2	3
Facing fears, or concerns	1	0	2	0	3	0	0	1	0	5
Confident with people I don't know	0	0	3	2	1	0	0	1	1	4
Confident in speaking in assembly	1	2	1	1	1	0	0	2	3	1
Handling my anger	0	0	3	1	2	0	0	1	2	3
Problem-solving	0	1	1	3	1	0	0	2	2	2
Keeping working with others	0	0	1	2	3	0	0	2	1	3
Being practical	0	1	3	2	0	0	0	1	3	2
Talking to teachers and parents or guardians	0	0	1	3	2	0	0	2	0	4
Saying what I mean	0	0	3	3	0	0	0	2	2	2
Keeping calm	0	1	0	3	2	0	0	0	3	3
Keeping on trying	0	0	3	2	1	0	0	0	2	4
Understanding strengths and weaknesses of others	1	0	2	1	2	0	2	1	1	2
Trusting others	0	0	1	3	2	0	1	2	2	1
Talking with strangers	0	0	3	2	1	0	0	1	3	2
Working in a team	0	0	1	2	3	0	0	0	2	4
Understanding myself	0	0	2	1	3	0	0	2	1	3
Remembering things I did with others	0	0	0	3	3	0	0	1	2	3
Taking other people's ideas on board	0	0	3	1	2	0	0	2	2	2
Respecting others	0	0	1	2	3	0	0	0	1	5

Table 6: Collation of before and after results for all pupils in School A by feature

From these data, totals, differences and extents of self-reported change were identified for School A. In Table 7, totals refer to the added frequencies times score (5 'very strong' to 1 'very weak').

	I						TC							
	Very weak	Weak	So, so - neither weak nor strong	Strong	Very strong	Total	Very weak	Weak	So, so - neither weak nor strong	Strong	Very strong	Total	Difference	Comment
Trusting others	0	0	1	3	2	25	0	1	2	2	1	21	-4	Strong decrease
Keeping working with others	0	0	1	2	3	26	0	0	2	1	3	25	-1	No real difference
Remembering things I did with others	0	0	0	3	3	27	0	0	1	2	3	26	-1	No real difference
Understanding myself	0	0	2	1	3	25	0	0	2	1	3	25	0	No real difference
Understanding strengths and weaknesses of others	1	0	2	1	2	21	0	2	1	1	2	21	0	No real difference
Taking other people's ideas on board	0	0	3	1	2	23	0	0	2	2	2	24	1	No real difference
Talking to teachers and parents or guardians	0	0	1	3	2	25	0	0	2	0	4	26	1	No real difference
Problem-solving	0	1	1	3	1	22	0	0	2	2	2	24	2	Small increase
Working in a team	0	0	1	2	3	26	0	0	0	2	4	28	2	Small increase
Handling my anger	0	0	3	1	2	23	0	0	1	2	3	26	3	Small increase
Keeping calm	0	1	0	3	2	24	0	0	0	3	3	27	3	Small increase
Respecting others	0	0	1	2	3	26	0	0	0	1	5	29	3	Small increase
Saying what I mean	0	0	3	3	0	21	0	0	2	2	2	24	3	Small increase
Talking with strangers	0	0	3	2	1	22	0	0	1	3	2	25	3	Small increase
Having an idol I admire	1	0	0	4	1	22	0	0	1	2	3	26	4	Strong increase
Confident with people I don't know	0	0	3	2	1	22	0	0	1	1	4	27	5	Strong increase
Being practical	0	1	3	2	0	19	0	0	1	3	2	25	6	Strong increase
Confident in speaking in assembly	1	2	1	1	1	17	0	0	2	3	1	23	6	Strong increase
Facing fears, or concerns	1	0	2	0	3	22	0	0	1	0	5	28	6	Strong increase
Keeping on trying	0	0	3	2	1	22	0	0	0	2	4	28	6	Strong increase
Being positive	0	2	2	2	0	18	0	0	0	3	3	27	9	Dramatic increase

Table 7: Differences of before and after results for all pupils in School A by feature

For these pupils, there was:

- A strong decrease in trusting others.
- A strong increase in having an idol they admire, being confident with people they don't know, being practical, being confident in speaking in assembly, facing fears or concerns, and keeping on trying.
- A dramatic increase in being positive.

Whether the staff involved would agree with this pupil self-reported change pattern would be worthy of further exploration.

Findings for School B

Similarly, totals, differences and extents of self-reported change were identified for School B. Again, in this table, totals refer to the added frequencies times score (5 'very strong' to 1 'very weak').

	Total I	Total C	Difference	Comment
Respecting others	24	20	-4	Strong decrease
Facing fears, or concerns	25	24	-1	No real difference
Problem-solving	27	26	-1	No real difference
Keeping on trying	24	24	0	No real difference
Saying what I mean	18	18	0	No real difference
Talking with strangers	26	26	0	No real difference
Working in a team	22	22	0	No real difference
Having an idol I admire	24	25	1	No real difference
Understanding strengths and weaknesses of others	21	22	1	No real difference
Handling my anger	26	29	3	Small increase
Trusting others	22	25	3	Small increase
Keeping working with others	19	23	4	Strong increase
Talking to teachers and parents or guardians	18	22	4	Strong increase
Being positive	24	29	5	Strong increase
Taking other people's ideas on board	20	25	5	Strong increase
Understanding myself	12	17	5	Strong increase
Confident in speaking in assembly	18	25	7	Strong increase
Keeping calm	18	25	7	Strong increase
Confident with people I don't know	13	21	8	Strong increase
Remembering things I did with others	17	28	11	Dramatic increase
Being practical	18	30	12	Dramatic increase

Table 8: Differences of before and after results for all pupils in School B by feature

For these pupils, there was a different pattern:

- A strong decrease in respecting others.
- A strong increase in keeping working with others, talking to teachers and parents or guardians, being positive, taking other people's ideas on board, understanding themselves, being confident in speaking in assembly, keeping calm and being confident with people they do not know.
- A dramatic increase in remembering things they did with others, and being practical.

Again, whether the staff involved would agree with this would be worthy of exploration.

Totals, differences and extents of self-reported change were identified for all pupils (shown in Table 9).

	Total I Moreton	Total TC Moreton	Total I Colton Hills	Total TC Colton Hills	Total I	Total TC	Total difference	Comment
Respecting others	24.00	20.00	26.00	29.00	50.00	49.00	-1.00	No real difference
Trusting others	22.00	25.00	25.00	21.00	47.00	46.00	-1.00	No real difference
Problem-solving	27.00	26.00	22.00	24.00	49.00	50.00	1.00	No real difference
Understanding strengths and weaknesses of others	21.00	22.00	21.00	21.00	42.00	43.00	1.00	No real difference
Working in a team	22.00	22.00	26.00	28.00	48.00	50.00	2.00	Small increase
Keeping working with others	19.00	23.00	26.00	25.00	45.00	48.00	3.00	Small increase
Saying what I mean	18.00	18.00	21.00	24.00	39.00	42.00	3.00	Small increase
Talking with strangers	26.00	26.00	22.00	25.00	48.00	51.00	3.00	Small increase
Facing fears, or concerns	25.00	24.00	22.00	28.00	47.00	52.00	5.00	Strong increase
Having an idol I admire	24.00	25.00	22.00	26.00	46.00	51.00	5.00	Strong increase
Talking to teachers and parents or guardians	18.00	22.00	25.00	26.00	43.00	48.00	5.00	Strong increase
Understanding myself	12.00	17.00	25.00	25.00	37.00	42.00	5.00	Strong increase
Handling my anger	26.00	29.00	23.00	26.00	49.00	55.00	6.00	Strong increase
Keeping on trying	24.00	24.00	22.00	28.00	46.00	52.00	6.00	Strong increase
Taking other people's ideas on board	20.00	25.00	23.00	24.00	43.00	49.00	6.00	Strong increase
Keeping calm	18.00	25.00	24.00	27.00	42.00	52.00	10.00	Dramatic increase
Remembering things I did with others	17.00	28.00	27.00	26.00	44.00	54.00	10.00	Dramatic increase
Confident in speaking in assembly	18.00	25.00	17.00	23.00	35.00	48.00	13.00	Dramatic increase
Confident with people I don't know	13.00	21.00	22.00	27.00	35.00	48.00	13.00	Dramatic increase
Being positive	24.00	29.00	18.00	27.00	42.00	56.00	14.00	Dramatic increase
Being practical	18.00	30.00	19.00	25.00	37.00	55.00	18.00	Dramatic increase

Table 9: Differences of before and after results for all pupils by feature

Overall, there was yet a different pattern:

- No strong decrease in any feature.
- A strong increase in understanding themselves, handling their anger, keeping on trying, and taking other people's ideas on board.
- A dramatic increase in keeping calm, remembering things they did with others, being confident in speaking in assembly, being confident with people they didn't know, being positive and being practical.

It appears that specific changes, focused more on their own, personal concerns and features, have brought about the statistically significant changes at a whole cohort level. Perhaps future elements of the programme will enable more of a focus on the features that are concerned with intercommunication and relationship, while not reducing concerns with their own, personal features.

6.   A developmental tool

The same background factors and grouped factors can be used to create a developmental tool, where observers can identify specific outcomes that young people achieve at different points in times while young people are undertaking programme activities. Staff involved in the programme can record the presence of these outcomes for each individual young person at various points. An example is shown in Figure 7. However, it should be noted that details within this matrix need to reviewed and appropriately revised when details of any programme are finalised.

School:
Reference code for the young person:
Initial/interim/final: I/TC/1C/2C/3C/4C/F

	Physical	Mental	Virtual
ATTITUDES			
Positive attitude	Going forward to try a physical challenge, even though this generates fear or concern	Putting forward ideas and responses during reflections or mental activities	Unrequested creation of a text, blog entry, image library, video, etc.
Facing fears, challenges, obstacles or concerns	For a difficult physical challenge, recognising the fear or concern that one has, and how this might be overcome	During reflection or discussion sessions, putting forward ideas and thoughts even though this is a challenge	Coming to a problem, and seeking help and support, rather than leaving it for someone else to solve
Problem-solving ability	For a difficult physical challenge, finding a way to solve a particular problem that is beneficial to others and oneself	For a difficult mental challenge, finding a way to solve a particular problem that is beneficial to others and oneself	Seeing someone else with a problem, and being willing to look at the problem and to solve it in a positive way
Assertiveness	For a physical team activity, offering your own view and giving reasons for it	For a reflective or mental team activity, offering your own view and giving reasons for it	Working with other young people in developing a digital outcome and being able to express individual ideas positively
Perseverance	In a physical activity, trying again even though success was not achieved initially or others were well in front	In a reflection or mental activity, trying again even though success was not achieved initially or others were well in front	Continuing to explore and find a solution, even though at first a technical or technological problem does not appear to be resolved easily

BEHAVIOURS			
Handling anger	During a physical activity, recognising when anger rises, and talking about the ways that that anger has been handled	In reflection sessions, recognising when anger rises, and talking about the ways that that anger has been handled	Being frustrated when unable to use the digital technologies in some way, but being able to handle this situation positively
Engaging rather than withdrawing	In a stressful physical situation, continuing to engage rather than stepping away	In a stressful reflection situation, continuing to engage rather than stepping away	Being willing to join one or more other young people in developing a blog, image library or video that is shared online
Taking a pragmatic approach	When confronted with a physical challenge, using a pragmatic approach to take things forward	When confronted with a mental challenge, using a pragmatic approach to take things forward	Finding a technical problem and working out a practical or pragmatic way to solve it
Having shared experiences	Reflecting on physical activities, and recognising how one's own involvement was related to the involvement of others, and what emotions arose from those activities	Reflecting on mental activities, and recognising how one's own involvement was related to the involvement of others, and what emotions arose from those activities	Reflecting on technological activities, and recognising how one's own involvement was related to the involvement of others, and what emotions arose from those activities
COMMUNICATIONS			
Confidence with strangers	Meeting with young people and tutors who are unknown during physical activities, and being willing to talk to them about a range of issues	Meeting with young people and tutors who are unknown during reflection times, and being willing to talk to them about a range of issues	Handling online responses confidently, but considering safety and how to handle any such issues
Confidence in speaking publicly	As part of a physical activity, presenting verbally about a key issue	Standing up in front of a group, and presenting verbally about a key issue	Making a text, image or video accessible for others to see it so that they can view and respond to it
Communicating with teachers and parents or guardians	Discussing outcomes and concerns about physical challenges with teacher, parents or guardians	Discussing outcomes and concerns about mental challenges with teacher, parents or guardians	Creating a text, image or video that is shared with a teacher, parent or guardian, that leads to an online discussion in an appropriate medium
Communicating with strangers	In physical activities, communicating with other young people and tutors who are not known to you	In reflection or mental activities, communicating with other young people and tutors who are not known to you	Communicating with a stranger online, maintaining communication in an iterative way, but putting into place appropriate actions to ensure safety

Team working	At the end of a physical team activity, recognising what your contribution has been and the contributions made by others	At the end of a mental team activity, recognising what your contribution has been and the contributions made by others	Working with a team to produce a technological product, both offering ideas or input, and integrating this with the offering and inputs from others
Discussing and accommodating the ideas of others	When working on a physical group activity, recognising how ideas of others were balanced with one's own ideas, and how final actions were decided upon and the role taken by the individual in achieving this outcome	When working on a reflection or mental group activity, recognising how ideas of others were balanced with one's own ideas, and how final actions were decided upon and the role taken by the individual in achieving this outcome	When working in a team on a technological product, recognising how ideas of others were balanced with one's own ideas, and how final actions were decided upon and the role taken by the individual in achieving this outcome
EMOTIONS			
Having role models	Seeing how others are attempting physical challenges, and being inspired by them to try	Seeing how others are attempting mental challenges, and being inspired by them to try	Using another's digital outcome as an exemplar which is then used or developed for the young person's own purposes
Emotional stability	In a stressful physical situation, being able to maintain calm and balance even though this is difficult	In a stressful reflection situation, being able to maintain calm and balance even though this is difficult	Responding positively to messages and requests through online media, demonstrating emotional balance under stress
Understanding the strengths and weaknesses of others	In a physical team activity, recognising the strengths that others bring, and also the weaknesses the team has	In a reflection or mental team activity, recognising the strengths that others bring, and also the weaknesses the team has	Seeking support and involvement from those with specific technological understanding, or supporting those with technological weaknesses
Trust of others	In a physical group activity, relying on others for their support and recognising this afterwards	In a mental group activity, relying on others for their support and recognising this afterwards	Using advice of others to develop a technological solution or product, and recognising the value of this afterwards
Understanding one-self	After a physical activity, recognising what you have achieved, in terms of attitudes, behaviours, communications and emotions	After a reflection or mental activity, recognising what you have achieved, in terms of attitudes, behaviours, communications and emotions	From a technological product, recognising the input that was provided, and how this related to one's own strengths and weaknesses, in terms of attitudes, behaviours, communications and emotions

Having respect	When responding to others in physical activities, recognising that the responses being given are respectful, even though the circumstances might be stressful or difficult	When responding to others in reflection or mental activities, recognising that the responses being given are respectful, even though the circumstances might be stressful or difficult	When responding online, recognising that the responses being given are respectful, even though the circumstances might be stressful or difficult

Figure 7: Example of a developmental tool

7.   Beyond this

It is envisaged that two further tools could be produced to add to this toolkit:

- A diagnostic tool
- An evaluation tool

The diagnostic toolkit would be developed to quantify outcomes, using the developmental tool as a guide, and linked to ways to provide evidence for appropriate badging.

The evaluation tool is envisaged as a tool linked to a version of My iPlan, to gather and allow evidence of outcomes to be accessible to peers and parents. This element would record qualitative outcomes of a programme for each young person.

8th February 2018

Any correspondence about this report should be addressed to the author:

Don Passey
Professor of Technology Enhanced Learning
Department of Educational Research
Lancaster University
Lancaster, LA1 4YL

Tel: 01524 592314
Email: d.passey@lancaster.ac.uk