PRINCIPAL'S SABBATICAL REPORT

A Self-Control Programme for Students with Special Education Needs and Complex and Challenging Behaviours

> JANINE HARRINGTON Term 3, 2018

ACKNOWLEDGEMENTS

I would like to thank the Ministry of Education for granting me this sabbatical, which became a time of quiet, allowing a space for reflection and programme development. The day-to-day demands of a principal are high, especially for a principal of a residential school who is on-call 24/7. Consequently, this work would not have been undertaken without a sabbatical. Students with special education needs and complex and challenging behaviours deserve to be provided with programmes that will assist their development. As those in special education know, many programmes need to be adapted to meet our students' needs, because programmes for our specific cohort are limited. Time to investigate innovative ideas is paramount, but competing demands mean it is not always prioritised.

At the beginning of my sabbatical I was fortunate to attend a leadership course for principals at Harvard University. Graduates who presented at it said it had been a life-altering programme and while I considered their feedback with scepticism at the time, I now concur with that opinion.

I would like to thank the combined Board of Halswell Residential College (HRC) and Westbridge Residential School (WRS) for supporting me to undertake this study, and the course at Harvard University. In particular, David Turnbull (Chair) who initially suggested the sabbatical and provided unwavering encouragement and enthusiasm throughout the process.

Thank you to Jon Purdue who acted effectively as principal in my absence. It was a relief to know the College was in safe hands and enabled me to put my focus unreservedly elsewhere. Also, to the team of staff who ensured the College not only ran smoothly, but also maintained the professional, supportive and reflective culture that we pride ourselves on and grow our students from.

Thanks goes to Residential Manager, Ken Joblin for a conversation we simply had in passing about how he was using the Monopoly card game to teach a student skills when losing a game and how this was being generalised in other areas. He may not remember the conversation, but it certainly helped me to join the dots and guided the direction of this sabbatical.

I know the HRC leadership team join me in gratitude towards Graeme Daniel (MNZM) for the support he provides as a clinical supervisor and wise counsel to our school.

Thanks also to David Pluck, National Manager of the Intensive Wraparound Service (IWS), and Dr Lisa Parker (Service Manager) for their genuine enthusiasm on how residential schools could deliver programmes that impact positively on the outcomes of IWS students in residence. Thanks to Toni Hyde (Principal Advisor) for willingly sharing the research she had gathered on life predictor outcomes.

Finally, I would like to thank those outside of this area of education who have taken time to share their knowledge and wisdom, in the hope that we may introduce a programme and make a difference to our cohort's life outcomes. In particular, Professor Richie Poulton (CNZM, FRSNZ), Director of the National Centre for Lifecourse Research, University of Otago, and Dr Dione Healey of the University of Otago, who so generously shared her wisdom and the ENGAGE programme that she has developed for pre-schoolers with ADHD. Dione shared the programme at no cost and trusted me to modify it as I saw appropriate for our cohort; sharing a genuine hope that the exciting results she has already seen could be replicated elsewhere.

EXECUTIVE SUMMARY

The intention of my sabbatical was to undertake research into national and international evidencebased programmes, for students with special education needs and complex and challenging behaviour that:

- 1. improve the self-control of behaviours and emotions,
- 2. develop social competence and interpersonal skills, and
- 3. develop positive attitudes, values and perceptions.

However, as the research was undertaken it became apparent that self-control is arguably the most important area to focus on for this cohort of students, and that there was no one programme that could be acquired and rolled out at Halswell Residential College (HRC). Consequently, the focus then became finding a self-control programme and adapting it for the HRC cohort, as well as planning the programme's implementation.

After investigation into programme options, the ENGAGE programme was identified. The programme has been modified to meet the nature of HRC and with this cohort in mind. It remains flexible enough to be adapted to best meet the needs of a specific student. A plan for implementation has been prepared.

SECTION 1: APPROACH TO THE REVIEW OF PROGRAMMES

Introduction and Background

I am the principal of Halswell Residential College (HRC) in Christchurch, which is the only coeducational residential school for intellectually impaired students with complex and challenging behaviours, in New Zealand. Intellectual impairments may include but are not limited to a diagnosis of intellectual disability, developmental delay, severe learning difficulties, traumatic brain injury, and/or autistic spectrum disorder.

HRC is part of the Ministry of Education (MoE) Intensive Wraparound Service (IWS). Special Education regions prioritise students to the IWS, whom have the greatest unmet needs in each region. These students are amongst those in New Zealand who are at the highest risk of having poor long-term life outcomes. Students enter the service because they are struggling to stay at school and/or learn. In most cases, the resources and support available through school, home or community, haven't met their needs, and the student continues to have unmet needs that require support across all settings.

IWS builds on the collective actions from a variety of sources resulting in the creation of a plan of care that is the best fit between the family vision and story, team mission, strengths, needs, and strategies. Attendance at a residential special school (RSS) can be part of this plan. Students may stay up to a maximum of two years at an RSS and are aged between 8-18 years.

IWS recently (June 2017) developed the 'IWS Life Predictors' based on the Predictors of Life Outcomes from the Dunedin Longitudinal Study. Amongst other things, the Dunedin Study found adolescent social connectedness was a better predictor of adult well-being than academic achievement (Moffitt, T., et al., 2011). Predictive factors can be considered either static (i.e., do not change, like historic family experiences), or dynamic (i.e., subject to change like future family experiences).

IWS now targets and measures five dynamic factors that predict poor or good life outcomes and influence these to improve long-term life outcomes. These include:

- 1. Self-control of behaviour and emotion.
- 2. Social competence and interpersonal skills.
- 3. Attitudes, values and perceptions.
- 4. Relationships with family and/or caregivers; and
- 5. Access to, and achievement in, safe and pro-social environments.

IWS want students in their service to experience improvements in each of these five areas, and, as such, students who come to an RSS should also make these improvements.

Two of the five areas focus on the whanau and community; that is relationships with family and/or caregivers and access to and achievement in safe and pro-social environments. Being a national school where students often travel outside of the city the school is in, an RSS is limited in as far as the impact it can have in these two areas. We can teach a student anger management skills that may improve a relationship with a family member, however, parental development, through mentoring or courses is run by IWS. We can provide a safe, pro-social environment at an RSS, however once a student leaves,

transition into other schools is managed by IWS. Consequently, I propose that the other three areas are ones RSSs could more meaningfully impact upon and enhance while a student is in residence.

Early interim results suggest that RSSs can assist IWS to influence these goals. David Pluck (National Manager, Te Kahu Toi, Intensive Wraparound Service) noted in a paper to the combined HRC/WRS Board in 2018; 'There is strong overseas evidence that high-fidelity wraparound programmes work for young people with high needs. One US study has shown that residential treatment works best within a high-fidelity wraparound model. (Bruns, Suter, Force & Burchard; 2005). With this one case exception, there are no studies showing that combining a wraparound and residential school programme works! However, we (MoE) are pleased to have recently informed the Minister and Associate Minister of Education, that initial IWS student outcome data is showing that high-fidelity wraparound and wraparound combined with a residential school programme is successful and effective.'

However, given the newness of the focus on these areas, RSSs have not based their curriculum on this focus. The 24/7 nature of an RSS provides an ideal environment to assist students to develop skills in these areas however.

I anticipated that one or several programmes needed to be identified (although I will refer to it in the singular 'programme' going forward) and embedded at HRC. Identifying a programme for the student cohort would be a time-consuming process. The programme needed to meet a number of requirements. That is, the programme must be appropriate for:

- students with intellectual impairments (for example, cognitive behavioural programmes require a certain level of cognitive functioning to be effective),
- students who display complex and challenging behaviours (that may impact on their ability to sit in a typical formal educational setting),
- students who have mental health issues (that may impact on their ability to concentrate, have stamina, interact with others, etc.).

HRC students require the curriculum to be adapted as most work at Level 1 of the NZ Curriculum. Most have had negative experiences of learning and are reluctant to engage in learning. The Ministry of Education Briefing Note to the Incoming Minister 2017 states that 94% of students in IWS were recorded as having mental health symptoms when they entered the service. These factors mean mainstream programmes are not appropriate. For example, at HRC it recently took a new student several weeks to enter a classroom and sit at a desk. Previously, he had not attended school for two years and had experienced high levels of anxiety that prevented him from entering a classroom. He also has oppositional defiant disorder and this impacts on how he reacts to a teacher's encouragement to enter a classroom. Despite being 11, he is an emergent reader and struggles to grasp new concepts. New concepts need to be as concrete as possible.

Almost all of the students at HRC have multiple comorbidity or multiple chronic conditions. Consequently, the right programme is absolutely essential.

A programme also needs to meet HRC's strategic priorities. The HRC Charter, 2018 states:

• All students have opportunities to develop skills that will support integration within the community and lead to an enhanced quality of life.

- High quality evidence-based programmes must be delivered.
- A sound working relationship exists with IWS.
- Practices reflect those that are best internationally.

Consequently, any programme should develop skills that lead to an enhanced life, be evidence-based, reflect what is being undertaken internationally and align with IWS goals and philosophy.

HRC is committed to working closely with IWS to support their goals and achieve student outcomes. All New Zealand residential special schools faced closure in 2012. It became apparent that the HRC Board needed to rethink the purpose and develop measurable outcomes. It is essential that HRC align their strategic direction with that of IWS. Being able to deliver programmes viewed essential in the development of students' learning outcomes provides an additional purpose for RSS, and a service that may not be able to be achieved by wraparound in the students' communities alone.

Determining the What

The intention of my sabbatical was to undertake research into national and international evidencebased programmes for students with special education needs and complex and challenging behavioural problems, that address three of the five predictive factors we could target while a student is at a residential school:

- 1. Improve self-control of behaviours and emotions. This is made up of:
 - Self-control of aggression/reserve.
 - Frustration tolerance/emotional stability.
 - Compliance.
 - Self-control across time, delaying gratification, planning.
 - Activity levels.
 - Attention.
 - Persistence.
 - Autonomy.
 - Mental health.
- 2. Develop social competence and interpersonal skills. This is made up of:
 - Knowledge of social norms.
 - Social perception and attribution.
 - Peer support skills.
 - Sustained peer relationships.
 - Skills for different peer groups.
 - Conflict resolution, negotiation and compromise skills.
 - Honesty.
 - Interactions with teachers and other authority figures.
 - Responsiveness to others' reactions.
- 3. Develop positive attitudes, values and perceptions. This is made up of:
 - Pro-social attitudes and values.
 - Responsibility for behaviour.

- Acceptance of authority.
- Empathy, guilt, and remorse.
- Self-esteem.
- Self-efficacy.
- Help seeking behaviour.
- Attitudes to and use of illicit drugs.
- Trust in others.

The first step was to identify a programme for each of the three areas, but this turned out more difficult than I anticipated. A literature review on these areas for students with special needs drew many blanks.

Lichtenstein (2016) argues that social-emotional learning (SEL) programmes have not traditionally targeted students with psychiatric or developmental disabilities and that very few have been specifically tested with these students in mind, let alone as the primary target. He notes that it is not uncommon for SEL programmes to require extensive writing assignments, or long classroom discussions, tasks that may be impractical for students who have trouble writing or sitting still.

McClure, Halpern, Wolper and Donahue (2009) note despite the plethora of published studies on emotional regulation, relatively few have discussed their applicability to individuals with intellectual disability. The authors highlight that while the body of literature on emotion and emotion regulation expands rapidly, the understanding of their application to the intellectually disabled population falls behind and essential questions continue to remain unanswered. For example, for those with an intellectual disability, what is normative emotional development, how does it develop, does emotion regulation develop later in life, and how can it be enhanced? They note that reliable and valid methods of assessing emotion regulation in persons with intellectual disability is essential.

Likewise, I struggled to identify evidence-based programmes for students with both intellectual impairments and complex and challenging behaviours. Consequently, I decided to focus on one particular area and spend time adapting a programme for implementation at HRC.

When considering which of the three areas (self-control, social competence and interpersonal skills, or attitudes, values and perceptions) I should focus on, I anticipated self-control of behaviours and emotions would have the most significant positive impact. MacKenzie (2010) quotes the following key research findings that indicate improved self-regulation can produce: (in 'The Autistic Child's Guide To How To Behave' (pg 5)):

- Improved mental health and happiness (Tangney, Baumeister and Boon, 2004), higher psychological wellbeing (Levesque, Zuehlke, Stanek and Ryan, 2004) and increased positive emotions with reduced anxiety and tension (Ryan, Connell, and Plant, 1990; Black and Deci, 2000).
- More successful interpersonal relationships (Baumeister, DeWall, Ciarocco and Twenge, 2005).
- Greater intrinsic motivation (Deci, Koestner and Ryan, 2001).
- Higher sense of competence (Deci and Ryan, 1985).

- Increased interest and enjoyment in learning (Reeve, Jang, Harde and Omura, 2002) and better engagement in learning (Reeve, Deci and Ryan, 2004; Assor, Kaplan, Kanat-Maymon and Roth, 2005).
- Higher creativity (Amabile, 1983).
- Higher effort in learning (Patrick, Skinner and Connell, 1993; Reeve, Jang, Harde and Omura, 2002) with more determination and will to succeed (Ryan and Connell, 1989).
- Greater persistence (Harde and Reeve, 2003; Noels, Pelletier, Clement and Vallerand, 2000), perseverance (Pelletier, Fortier, Vallerand and Briere, 2001) and less procrastination (Senecal, Julien and Guay, 2003).
- Improved learning performance and outcomes (Boggiano, Flink, Shields, Seelbach and Barrett, 1993).
- Greater use of adaptive metacognitive strategies, such as planning and time management (Vansteenkiste, Zhou, Lens and Soenens, 2005).

I felt it important to speak to Professor Richie Poulton (CNZM, FRSNZ), Director of the National Centre for Lifecourse Research, University of Otago and a key individual in the management of the Dunedin Study for the past 15 years, to gather further information. I was grateful to be able to speak with him personally. I asked him several questions after explaining the specifics of the HRC student cohort and the nature of their stay at the College:

1. 'If you were the principal of HRC and you could focus on one of the three predictors (selfcontrol, social competence and interpersonal skills, or attitudes, values and perceptions), which would you choose?'

Professor Poulton stated he would focus on self-control as he believed this would have the most significant impact on the outcome for HRC students.

2. 'What national or international programmes would you suggest I implement to increase self-control in the HRC cohort?'

Professor Poulton recommended I investigate the ENGAGE (Enhancing Neuro-behavioural Gains with the Aid of Games and Exercise) programme and said he would discuss this further with the programme's developer, Dr Dione Healey of the University of Otago. He believed that research into the programme has now shown an increase in self-control of at-risk preschoolers and the programme had the potential to successfully increase self-control in HRC students.

Determining Which Programme

Poor self-regulation is commonly evidenced by hyperactivity, inattention, impulsivity, emotional liability, and difficulties with delayed gratification and is often associated with poor executive functioning (Moffitt et al., 2011). The Multidisciplinary Health and Development Study by Poulton, Moffitt and Silva (2015) states that 'self-control in childhood is more important than socioeconomic status (SES) or IQ in predicting adults' physical health, wealth, life satisfaction, addiction, crime, and parenting of the next generation'.

Children with low self-control had poorer health, more wealth problems, more single-parent child rearing, and more criminal convictions than those with high self-control. A gradient of childhood self-control predicts health, wealth, and public safety. (Moffitt, et al., 2010). A cohort of 1,000 children

from birth to the age of 32 years showed that childhood self-control predicts physical health, substance dependence, personal finances, and criminal offending outcomes, and these factors follow a gradient of self-control. Effects of children's self-control could be disentangled from their intelligence and social class, as well as from mistakes they made as adolescents. In another cohort of 500 sibling-pairs, the sibling with lower self-control had poorer outcomes, despite shared family background. Interventions addressing self-control might reduce a panoply of societal costs, save taxpayers' money, and promote prosperity and fortune. Evidence shows that self-control is not fixed and can change (Roberts, Walton and Viechtbauer, 2006).

In addition to asking Professor Poulton for programme recommendations and searching for articles and programmes; I searched a variety of catalogues and asked for input from:

- The HRC/WRS Combined Board of Trustees. Several of our Minister-appointed Board work in education, psychology and/or at universities. In turn they asked their colleagues, including a psychologist based overseas and a programme developer.
- A variety of psychologists.
- SEPANZ (Special Education Principals' Association of New Zealand) principals via a group email.
- Several international principals; several based in residential schools and one at an autism charter school.
- Dr Dione Healey (University of Otago).

When asking this question, my international and national peers highlighted the high number of ad hoc efforts being undertaken to build the social and emotional skills in special needs students by special education specialists. The majority of these are being done in isolation in New Zealand special schools or learning support units. No two schools identified that they were delivering the same self-control programme, and some were not attempting to address this area at all. The international schools asked were unable to offer programme suggestions, other than using reading books (via audiobooks for students who are unable to read) to identify and discuss emotions.

These are the programmes that were suggested from all sources:

- ENGAGE (Enhancing Neuro-behavioural Gains with the Aid of Games and Exercise) programme: Dione Healey.
- The Zones of Regulation: Leah Kuypers.
- Dialectical Behaviour Therapy Skills Training (DBT).
- Secret Agents Society (SAS) Computer Programme.
- Tuning in to Kids (TIK): Sophie Havighurst and Ann Harley.
- Anger Coping Programme: John Lochman.
- Promoting Alternative Thinking Strategies (PATHS): Channing-Bete Company.
- Stop Think Do: Lindy Petersen.
- Skillstreaming: Arnold Goldstein.
- Self-Regulation Program of Awareness and Resilience in Kids (Spark): Heather MacKenzie.
- Rock and Water Programme: Rock and Water NZ Ltd.
- Mindfulness.
- Meditation.
- Yoga.

Each of the programmes was investigated and measured against the determined criteria mentioned previously. In addition, it was essential that the programme:

- 1. Is appropriate for the HRC cohort and is fun and will engage students; many of whom have anxiety regarding learning difficulties, a reluctance to attempt new activities and an aversion to formal learning situations.
- 2. Can be delivered across the whole residential school. That is, students at HRC receive evidence-based programmes from psychologists, speech language and occupational therapists. The new programme is not intended to replace these programmes and will be delivered by all frontline staff, including residential staff most of whom have not undertaken formal teacher training.
- 3. Is manageable within current constraints on time, staff, staff clinical supervision and student workload.
- 4. Is culturally appropriate for Maori and Pasifika students.
- 5. Is obtainable within current budget restrictions, and preferably does not require on-going fee payments/retraining costs.
- 6. Has a parental/caregiver component that is manageable for out-of-town parents (and requires minimal training and on-going support).
- 7. Is able to be integrated into the IWS student transition process.

The ENGAGE programme met each of these requirements. Quite by chance, the day prior to speaking to Dr Dione Healey about the ENGAGE programme I had a conversation with HRC Residential Manager, Ken Joblin. Ken has extensive experience in residential schooling and has dedicated most of his social work career to working in RSSs.

Ken described how he was using the Monopoly card game to teach a student how to manage her anger. Opportunities for practising new skills presented each time she lost a game. He described the steps he was artfully undertaking while the student remained oblivious to this being a teaching and learning session - she was simply enjoying one-to-one time with an adult. He also enabled the student to become the teacher at one point, asking for reminders on what he should and shouldn't do when he lost a game. The student proudly repeated what she had been taught.

This approach appealed to me for several reasons. Firstly, the informality meant the child was unaware this was 'teaching' time, so typical classroom anxieties were non-existent. Furthermore, most students will engage in a game, particularly if it is one-to-one and they get to select the game that is played.

In addition, I had noticed something interesting about playing a board game during HRC's 'café time'. During café time students attend the in-school café and learn a myriad of skills including social skills, (such as how to conduct yourself in a social setting, converse with others, play board games, order drinks and food, etc.), to work skills (being a barista, preparing food, taking drink and food orders, serving food and drinks, etc.). The week prior to the conversation with Ken, I had played Connect 4 with a student at café time. He engaged readily in the game, but soon began to cheat. Surprisingly, he was not losing when he changed tact. I noticed that by 'calling-out' his actions in a gentle way but continuing to play, we engaged in a teaching moment about cheating and its consequences on me as his playing buddy and on himself. I noted that while he did participate in the conversation, he stopped making eye contact. I deemed this as a typical shame-response. I mirrored his non-eye contact and

both of us looked at the Connect 4 game we were playing instead of each other's faces. This reminded me how some of the most in-depth conversations our staff have with students are rarely when we are sitting looking at each other but most often when eye contact is not possible. For example, in the car on the way back to HRC, one student disclosed to a staff member all of what he had not shared in a therapy session he just completed with his ACC counsellor regarding sexual abuse by his stepfather. The staff member believed that having their eyes on the road as they drove helped the student to open-up. The conversation with the student at café time continued on to other topics and as we packed it up, eye contact was naturally regained. The next week we played again and this time he did not cheat. This experience further highlighted just how games could be used to teach valuable social skills.

It seemed that HRC may have unconsciously discovered many of the underlying concepts of the ENGAGE programme and been applying them in an adhoc manner. Structuring what we were currently doing should not be an onerous undertaking.

ENGAGE Programme

After outlining the HRC cohort to Dr Dione Healey (Department of Psychology, University of Otago) and the nature of a student's stay at the College, I asked whether she thought the Enhancing Neurobehavioural Gains with the Aid of Games and Exercise (ENGAGE) programme would be appropriate and whether she had come across other programmes during her study that may also be appropriate for students at HRC.

Dr Healey thought that with adaption the ENGAGE programme could be appropriate and that it is most likely to be the most appropriate programme of those she had come across.

ENGAGE aims to improve children's skills across a broad range of areas including their ability to regulate their behaviour and emotions, as well as their memory, concentration and co-ordination. The theory behind the programme is borne out of decades of research into the possible causes of hyperactivity, impulsivity and inattention in young children. ENGAGE has been designed to enhance the skill areas known to be weaker in children who are hyperactive, impulsive and/or inattentive. The overarching goal is for the programme to be fun and interactive, and skills are taught in the form of games.

Healey and Halperin (2014) note that while playing games that develop behavioural, cognitive and emotional regulation, and encourage physical exercise, ENGAGE also develops the internal skills of self-regulation. Games are chosen to focus on specific areas. For example, musical statues has a focus on behavioural regulation. Puzzles and other games that require focused-attention have a focus on cognitive regulation. Relaxation and deep breathing have a focus on emotional regulation. Ball games and skipping provide exercise.

ENGAGE shows promise as an intervention for developing self-regulation in at-risk, difficult to manage pre-schoolers (Healey and Halperin, 2014). Parent reports and results indicated that following five weeks in the ENGAGE programme, improvements in the children's self-regulation, that is hyperactivity, attention problems, and aggression were evident and maintained for 12 months after the programme finished. They also showed improvements in working memory and fine motor and inhibitory control. Healey and Healey, (2016) noted that ENGAGE was as effective in improving

children's behaviour as the Triple P (Positive Parenting Programme) programme. Triple P is a strongly evidence-based, highly effective behaviour management programme.

ENGAGE is an eight-week programme. The first five weeks involve attendance at a once weekly group session that runs for 90 minutes. Here children spend time in one room learning new games for the week. At the same time parents meet in an adjacent room and are taught the new games for that week. Parents are also encouraged to share their experiences and raise issues. Parents and children play games for 30 minutes per day at home. The next two weeks involve phone calls instead of meetings and then a final meeting in the last week.

Pre/post-test measures for the ENGAGE programme included:

- 1. The Behaviour Assessment System for Children (BASC-2) and in particular the hyperactivity, aggression, and attention problem ratings. HRC will replicate this. The HRC psychologist will undertake the assessment.
- 2. The Stanford Binet (SB-5) to estimate IQ as children with an IQ under 80 were not permitted to participate. Given the majority of students at HRC have an IQ under 80 this will not be replicated.
- 3. The Developmental Neuropsychological Assessment (NEPSY-2) used to assess neuropsychological functioning, and specifically the Statue subtest, which measures inhibitory control, Comprehension of Instructions, which assess language and working memory, and Vasomotor Precision, which assess motor and inhibitory control. HRC will not replicate this.

Compliance and implementation of the programme was documented by parents who were asked to complete daily diaries throughout the five-week intervention. The games played, and the length of time spent on each game was also recorded.

SECTION 2: PROGRAMME MODIFICATION

Improving self-control through the use of joint play remains the aim of the programme that will be implemented at HRC. Overall, the implementation of the programme will follow a similar path to that in the manual with the following exceptions:

- 1. In other school settings where students live locally, parents could remain as the key project manager, delivering the programme in a similar format to the ENGAGE programme. At HRC the sessions will be delivered by staff, not parents. The HRC staff will be referred to as subject matter experts (SMEs). Parents will be encouraged to manage the sessions in the school holidays, however, because students are located throughout New Zealand, staff will only be able to offer support via phone. Ideally, IWS staff will support parents to implement the programme in the home. This will be explored with IWS management before the pilot commences.
- 2. The programme should be delivered seven days per week; however, staff only work five days per week. Two ways of managing this will be investigated and evaluated. The first is that the programme is only delivered to students five days per week, not seven. The other will see two staff (on different shifts) share the delivery of the programme and it will be delivered seven days per week. The two arrangements will be evaluated at the end of the programme pilot.
- 3. The games will be adapted to ensure they are applicable to the student (8-18 year olds not pre-schoolers) and engage the HRC cohort. At times that may mean adapting the actual game (for example, snap or card memory may be more appealing to a teenager if the cards were of their favourite pop-stars). At times the game may be replaced entirely with one that addresses the same area of self-regulation (for example, swapping Simon Says for the Back to Back Drawing game). The adapted programme has additional programme suggestions and this list will continue to be added to. SMEs undertaking the parent role will be responsible for narrowing suitable options to those that meet the student's academic and interest level.
- 4. This programme requires adult-child interaction, and skills such as turn-taking and reciprocity. Staff will need to be skilled in these areas and at making the most of 'teachable moments' and scaffolding. While the original programme does not deliver specific training around skills that can be taught in teachable moments, this will be part of the adapted programme. These will include appropriate behaviours to be a good winner, a good loser, and being a good sport (turn-taking, co-operating, patience, compromise, following instructions, not cheating, etc.). It is essential that these are not delivered as 'formal teaching sessions' but instead incorporated as subtle guidance during teachable moments. The children should feel that the game sessions are a fun and enjoyable time, not a rigid or formal learning environment.

Please refer to Appendix 2 for the adapted HRC programme.

SECTION 3: PLAN FOR IMPLEMENTATION AT HRC

This whole project has been developed using these four phases:

- 1. Initiation Phase: Identify programme need and research options.
- 2. Planning Phase: Determining the what, why and how of implementation.
- 3. Implementation Phase: Execution framework/project plan of the pilot.
- 4. Embedding Phase: Programme modification as a result of pilot. Ensuring programme content and standards are maintained as the programme is embedded.

Of particular interest to others wanting to implement this programme at their school will be the 'Implementation Phase'. I list the implementation phase steps below.

Initially only a few staff will be trained as Subject Matter Experts or SMEs. Eventually it would be valuable for all frontline staff who have the opportunities to play games with students (i.e.: IEP Coordinators, Youth Workers, Teachers and Teacher Assistants) to be trained.

Implementation Phase: Execution Framework for the ENGAGE Programme

ACTION

PREPARATION

- Copy manuals.
- Discuss with IWS the management of the parental component in the school holidays.
- Develop training material (in-depth for SMEs and informative for parents/caregivers, IWS and other staff).
- Inform Board, staff and IWS.
- Select staff 'Subject Matter Experts' (SMEs), minimum of one per residential house and two in day school.
- Train SMEs.
- Inform parents.
- Train other staff, IWS and parents/caregivers.
- Select first students.
- Students undertake pre-tests.

EXECUTION

- Staff commence programme delivery.
- Weekly feedback/trouble-shooting meeting held with SMEs.
- In preparation for term holidays, SMEs contact parents/caregivers and discuss how the programme could continue at home.
- During holidays, SMEs check in with parents/caregivers and troubleshoot issues.
- SMEs gather feedback from parents/caregivers after holiday break.

REVIEW

- Post-test.
- Gather feedback from SMEs, students, parents/caregivers and IWS.
- Review feedback, develop plan of changes required, plan next phase of implementation. Once confident with pilot programme, move to embedding.

Healey, D. and Halperin, J. (2014). Enhancing Neuro-behavioural Gains with the Aid of Games and Exercise (ENGAGE): Initial open trial of a novel early intervention fostering the development of preschoolers' self-regulation. *Child Neuropsychology: A Journal on Normal and Abnormal Development in Childhood Adolescence*.

Healey, D. and Healey, M. (2017). Randomized Controlled Trial comparing the effectiveness of structured-play (ENGAGE) and behaviour management (TRIPLE P) in reducing problem behaviours in pre-schoolers.

Lichtenstein, D. (2016). How to Bring SEL to Students with Disabilities. *Greater Good Magazine*. Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H., ... Caspi A. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. Proceedings of the National Academy of Sciences, 108, 2693–2698. doi:10.1073/ pnas.1010076108.

McClure, K. S., Halperin, J., Wolper, P. A. and Donahue, J. J. (2009). Emotion regulation and intellectual disability. *Journal on Developmental Disabilities*, 15: 38–44.

MacKenzie, H. (2010). The Autistic Child's Guide to How to Behave – Introducing *Spark: Self Regulation Program of Awareness and Resilience in Kids.

Pluck, D. (2018). Information sharing with Combined Board of Halswell and Westbridge Residential Schools, meeting notes.

Poulton R., Moffitt T. E., Silva P.A. (2015). The Dunedin multidisciplinary health and development study: overview of the first 40 years, with an eye to the future. Soc Psychiatry Psychiatr Epidemiol. 2015;50:679. doi: 10.1007/s.

Roberts B. W., Walton K. E., Viechtbauer W. (2006). Patterns of mean-level change in personality traits across the life course: A meta-analysis of longitudinal studies. *Psychol Bull* 132:1–25.

- Appendix 1: Glossary of Abbreviations used in this Report.
- Appendix 2: Adapted ENGAGE Programme for Halswell Residential College.

Appendix 1: Glossary of Abbreviations used in this Report

ASD	Autistic Spectrum Disorder (including both Autism and Asperger Syndrome)
HRC	Halswell Residential College
IWS	Intensive Wraparound Service
MoE	Ministry of Education
RSS	Residential Special School
SME	Subject Matter Expert
WRS	Westbridge Residential School

Appendix 2: Adapted ENGAGE Programme for Halswell Residential College

ADAPTED ENGAGE PROGRAMME FOR HALSWELL RESIDENTIAL COLLEGE

This document has been produced to provide the SMEs with programme details.

Structure of the Programme

- This is an eight-week programme.
- The first five weeks involve the SMEs' attendance at once weekly group sessions.
- During these sessions you will be encouraged to share experiences of the programme and raise any issues that have come up. You will also be taught incidental teaching concepts and how to teach the skills of being a good winner, loser, and good sport, as well as how to teach relaxation.
- A copy of these teaching concept sessions and a planning document for games is attached. An electronic copy is also on eTAP.
- Games are played for 30 minutes per day. During this time, focus should be entirely on the game being played. Staff should not be responsible for managing other students, and parents/caregivers will be encouraged to have the television off and their phone aside.
- The programme will be run through a term without a break for the holidays. SMEs will encourage parents/caregivers to continue the programme during the holidays and SMEs will provide telephone support.

Game Selection

- SMEs need to plan the games you will offer to your students in the coming week.
- The suggested games in the attached games list have been selected so they can operate with only two people, but at times it may be appropriate and even beneficial to include other students.
- Students should be offered two games from a focus area and they select the one they would like to play. At times it may be appropriate to take turns choosing the game so that staff can select games that target a weakness.
- It is important to pitch games at the appropriate level. Ball games should be complex enough to be challenging but not too hard. The complexity may need to increase as the skill level improves.
- Leaders in the game should be switched so the student has a turn at being the leader but is not always the leader.
- Staff need to be mindful that students should neither win nor lose all the time as both provide teachable moments.
- If a student does not like doing puzzles they can be completed over a week. Reinforce longer period of attention spent on this activity.

Record Keeping

- After Week 1 the staff member will encourage the student to set a SMART goal. This is to be recorded on the Daily Diary. See attachments. An electronic copy of this is also on eTAP.
- SMEs/parents/caregivers will complete a daily diary recording how much time was spent playing each game. These will be collected weekly at the weekly group session.

Student Feedback

- Feedback should be specific and focused on the skills that are being developed. For example, instead of saying 'Well done!' say 'Well done! I noticed you...:
 - o handled that loss well.'
 - o didn't give up.'
 - were a good sport by not making me feel stupid when I lost.'
 - o helped another student understand the game.'
 - o tried a new strategy.'
 - o showed you had learned from a mistake.'

Games List

The programmes target three main areas of self-regulation:

- Behavioural self-regulation.
- Cognitive self-regulation.
- Emotional self-regulation.

See attachments for the game list which is divided into the three categories above. Within these, skill areas are targeted in each game. These include:

- Attention and memory.
- Inhibitory control.
- Motor co-ordination.
- Emotional control.

Sustaining Engagement in Game Playing

Like any new skill acquisition, children may play a short while but then lose interest in the task relatively quickly. It is important for you to measure engagement on the task and sustain attention. Here are some ideas:

- Maintain novelty by manipulating the factors or the games including changing the rules, changing the environment (for example, play the game at the top of the fort instead of at a table in the living room, or play Simon Says in the swimming pool), or change who is playing.
- Minimise distractions.
- Check if the game is too complex or they don't understand the rules. Use scaffolding and break steps down.
- Check the balance between roles and decision-making. Did they get to select the game? Would they enjoy the responsibility of being the 'banker', etc.?
- Get it wrong on purpose and let them take a teaching role.

Go with the Flow

- You don't have to schedule the 30 minutes all at the same time and can break it up.
- If a child wants to participate in another activity at the time you had scheduled (i.e.: go to the pool with other students instead of playing the game at the time you had scheduled), allow this to happen. The time needs to be fun, not an enforced activity that they must be excluded from other activities to undertake at an adult's insistence.
- Incorporate activities into everyday activities. For example, play the Copy Me Game when setting the table or following the order of the clothes when getting dressed. Some games can be played when walking between the residence and day school. For example, the animal speed activity for younger children.
- As always, reflection is important. Regularly note down what helped your student to control their emotions in which situation. What didn't work? How do you think it could be changed for the future?
- Be flexible. If one method doesn't work, try another. What doesn't work one day may work the following week. Keep trying!

Generalising the Skills

- Although these skills will be developed in the context of the games, optimally they will be transferred to everyday activities with time and practise.
- To help your student transfer the skills it is important to:
 - Learn to recognise when your student is getting frustrated, angry, worked up or hyperactive so you can assist them to identify it in themselves.

- Teach the student to be aware of the signs or triggers that their emotions are running too high and to apply the new skills. This can be different for different ages. For example, an 8-year-old who is becoming too energetic might be told to move into 'turtle-mode'. Whereas a teenager might have a key word for when their anger is increasing that reminds them to take themselves to their room and run themselves through a relaxation or meditation exercise.
- Encourage students to practise relaxation/meditation as part of their bedtime routine.
- Put in the notices the skill the student has learned that week, so other staff can reinforce demonstrations of it. For example, a student who is learning how to lose may be reinforced in the playground or a P.E. game when they model being a good loser.
- Link skill acquisition into the student's reward programme and reinforced demonstration of the skill.
- Children who struggle with self-control, typically find it challenging to begin an interaction with another child or group, start or maintain a conversation including taking turns, sustain interest, ask about others' ideas or feelings, resolve conflict and share with others. Together, these mean that children who struggle with self-control tend to find it difficult to make and keep friends. Positive interactions with peers should also be reinforced and opportunities to build on these skills identified (for example during café time in the day school). It is also useful to have cues for specific skills and remind your student of these cues before social interactions with peers. Role-model greetings, manners, entering and exiting social interactions. For example, appropriate ways to say when you are finished playing a game, consideration of feelings (i.e.: asking if you are enjoying the game), conflict resolution, etc. Teach these specific social skills and talk to the student about why they are important.
- Remember practise makes perfect try and use these skills as often as possible as they will become easier for the student with regular practise.

Intrinsic Motivation

- When a student initiates play or involvement in an activity they are motivated to complete the activity or game internally, and as such this is intrinsic motivation. When they are intrinsically motivated they are more likely to sustain in play and remain interested in the task for a longer period of time.
- Encourage your student to play independently or with other students. Teach your student how to ask another student if they want to play.
- To help your student engage in independent play, ensure that they have access to the tools they need to play the games whenever they decide to play (for example, have hopscotch drawn outside or ready access to game equipment).
- Review progress with your student. Talk about the gains they have made. Are they on task for meeting their goal? Has their goal changed?

Reflective Questions

At the 'issues' meetings you will be asked the following questions. You can also ask these to parents/caregivers participating in the programme in the holidays:

- Are you playing the games and for how long?
- What has been working well?
- Are there any issues or concerns that have arisen over the past week?
- Are there any skill areas that you would like to be working on?
- Are there any games which are problematic? What about them is difficult?
- What do you think might help to overcome the challenges?

Encourage parents/caregivers who are participating in the programme to review progress as this can be motivational in itself. Parents/caregivers could be asked the following questions:

- What did you want your child to get better at?
- How do you think they went with this?
- What was the worst thing?
- What was the best thing?
- What were your goals for yourself and your child for this programme?
- How do you think you went with these goals?
- What worked well for you?
- What worked well for your child?
- What can you work on in the future?

Maintaining Progress

- Ideally, after the completion of the programme, students will continue to engage in game play. It is important to think about how you can assist your student to do this.
- The most suitable option will vary from student to student but need not be limited to the student who has been part of the programme alone. For example, staff could set aside time for playing board games.
- Allowing the programme graduate to teach new students a game may also encourage maintenance.
- Rotating different board games around the houses would see students being introduced to new games on a regular basis.
- You and your student will have many ideas on how to ensure play continues.

OVERVIEW OF EIGHT WEEKS

FOCUS AREA	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Staff Training Sessions and Topics	Incidental teaching concepts What if my student doesn't want to play? Teaching relaxation and mindfulness	Issues Student goal setting Teaching following instructions	Issues Teaching winning	Issues Teaching Iosing	Issues Teaching being a good sport (including cheating, teamwork and grit)	No meeting	No meeting	No meeting

FOCUS AREA	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Possible Behavioural Games (Planned games for your student – select three or more)								
Possible Cognitive Games (Planned games for your student – select three or more)								
Possible Emotional Games (Planned games for your student – select three or more)								

GAME LIST

1. Games targeting Behavioural Self-Regulation

- Musical Statues Move around while music is playing. Freeze when the music stops.
- Sneak Up One person with back to other turns each time they think the person is moving up to touch them. Moving person must freeze or go back to beginning if caught moving.
- Animal Speeds Regulate the speed of your activity between small, moderate, and fast speeds.
- Skipping Regulate the speed at which skipping occurs.
- Ball and Spoon Race Hold a spoon with a ball on it and move from one place to another at varying speeds.
- Simon Says Repeat an action if Simon says to do "this" but do not repeat an action when Simon says do "that".
- Snap Card game where if identical cards are placed down in a sequence, you place your hand on the cards and say "Snap".
- Hop Scotch Aim a token for the correct number in the sequence and hop to that number.
- Drawing Improve fine motor control through drawing.
- Leap Frog Remain still while others jump over you and wait until it is your turn to jump over others.
- Back-to-Back Drawing Pair sit back-to-back, one following the instructions of what they are drawing. Compare sketches at the end.
- Water games in summer (including swimming pool and water pistols).

2. Games targeting Cognitive Self-Regulation

- Copy Me Watch a sequence. Then repeat the sequence from memory.
- Object Copy Observe a structure being built. Re-create the structure from memory.
- Ball Games Various games that involve having to focus on the ball and catch it.
- Substitute ball games for balloon or pompoms.
- Puzzles Complete puzzles.
- Cups Memory Remember which cups have been picked up and the token underneath removed.
- Card Memory Remember where the matching card is and turn over two matching cards to collect a pair.
- Beading Thread beads either from memory of a sequence or according to various changing rules.
- Tracking Memory Watch cups being moved around on a table and afterward identify which one has the token under it.
- List Memory Remember a list that is continually being added to.

- Sorting Sort various materials according to different rules.
- Cup Ping-Pong Ball Throw ping bong balls into cups.
- Board Games including Connect 4, Cards Monopoly, Chess, etc.

3. Games targeting **Emotional Self-Regulation**

- Relaxation Various exercises involving tension and relaxation of muscles.
- Deep Breathing Learn to breathe in by filling your stomach with air (like a balloon) and then breath out slowly.
- Yoga exercises.
- Rhythmic drawing.
- During relaxation sessions, students receive reinforcement for length of time on task, following instructions etc.

Student's Name:

Student's SMART Goal:

Please complete each day after the session. List each different game on a separate line.

Date	Time	Game Played	Time Spent Playing	Fun Rating 1 (low) - 10 (high)	Comments
28 February	3.45 pm	Back-to-Back Draw	7 minutes	6	Difficult to keep engaged.