

Heroes 2:
A Program Evaluation Based on Behaviour Change and Positive
Youth Development Literature

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Section 1: Program Description and Evaluation Process

General Program Description

Heroes 2 is a 12-week program aimed at enhancing students' social-emotional skills by building their sense of self and belonging within their communities. It employs a strengths-based approach to guide youth through the development of positive self-identity and an other-oriented mindset. In other words, the program aims to strengthen students' perceptions of self-worth while also encouraging them to reflect on other people's needs and circumstances. Throughout the program, participants engage with chapters that include story-based, reflective, and experiential activities to enhance developmental assets (e.g., confidence, character). Classes are structured to include interactions with peers and instructors, and programming is implemented to promote a psychologically safe environment where students can feel comfortable being vulnerable and speaking openly. Importantly, Heroes 2 goes beyond promoting the development of individual assets necessary for well-being and healthy growth by also highlighting how they position youth as potential actors of social change.

Because the program is designed for students aged 12 to 16, the ideal situation would be for students to have previously completed the Heroes Program, which aims to establish a foundation of confidence and resiliency. The Heroes 2 Program builds on these assets, especially emphasizing confidence by developing students' awareness of their capabilities and values and how these may be used to engage with and improve their communities. The program's main objective is to develop a *Passion 2 Action* project where students work in teams to brainstorm, design, and present a project that will lead from a place of strength to give back to a particular community.

The Heroes 2 program includes 12 chapters which can be broken into three sections—each of which is comprised of *learning chapters* and a *working chapter*. Aligned with the positive psychology literature, each *learning chapter* progresses through four phases of strength-based learning (i.e., feelings, thoughts, behaviours, convictions; Lopez & Louis, 2009). For example, students (a) read a story of an individual who has experienced hardship but chose to grow from it, (b) reflect on their own experiences, and (c) commit to the practical application of the chapter-specific behaviour. Each *learning chapter* provides an opportunity for group work to develop social-emotional skills (e.g., active listening, problem-solving, teamwork). The *working chapters* provide a structured environment for students to work on their *Passion 2 Action* projects.

Evaluative ‘White Paper’ Objectives

It has been increasingly acknowledged across the psychology literature that the development and implementation of interventions are enhanced when guided by established theoretical frameworks (e.g., Michie & Prestwich, 2010). Theories are scientifically acceptable principles that facilitate the understanding of complex phenomena by outlining why and under what conditions a given behavioural or psychological outcome may emerge. Interventions that are informed by a theory are expected to target outcomes better using activities deemed most likely to impact those outcomes. Conversely, they can also help us to better understand and refine theory based on the (in)effectiveness of the interventions. As such, within this evaluation ‘white paper,’ we explore the potential effectiveness of the Heroes 2 program by evaluating the alignment between its content and well-established theoretical frameworks pertaining to the positive youth development (PYD) literature and behaviour change theories.

We have divided the following report into two sections to best describe our evaluation of the program’s content and process. In each section, we (1) summarize the foundational theories/frameworks, (2) describe the evaluation process, (3) present our findings, and (4) advance some suggestions and considerations. We conclude with a summative section comprising closing thoughts and recommendations.

Section 2: Alignment Between Heroes 2 and PYD Literature

Positive Youth Development: A Process of Empowerment

PYD aligns with a strengths-based approach and suggests that all youth have assets to be developed (Roth & Brooks-Gunn, 2003). It suggests that development emerges from individual-context relationships and that it is possible to foster youth development by structuring environments in adaptive ways. Generally, PYD approaches emphasize three key aspects:

- (a) Young people's environments should be developmentally appropriate and responsive to their ever-changing needs.
- (b) Interpersonal relationships with knowledgeable and caring adults are the main assets that drive development.
- (c) Internal (e.g., empathy) and external (e.g., interpersonal relationships) assets that situate youth as contributing members of society and potential agents of social change should be emphasized.

PYD conceptualizes adolescence as a period of great plasticity (i.e., the capacity to change). For example, adolescents experience significant brain development and acquire more refined cognitive, behavioural, and social-relational skills (Steinberg, 2010). Moreover, this is when adolescents experience social and contextual changes, such as becoming more independent and being exposed to different peer influences (Gardner & Steinberg, 2005). As such, adolescence is a crucial period to promote youth development by facilitating adaptive relationships between adolescents and their contexts (i.e., peer group, family, school, and community). Herein, we briefly introduce the seminal 5Cs framework of PYD, the critical setting features that promote PYD, and a leadership theory conducive to PYD.

Lerner's 5 C's of PYD: The Road to Well-Being and Contribution

Lerner and colleagues' 5Cs of PYD was employed in the current evaluation to assess the content and activities within the Heroes 2 program relative to the general psychosocial qualities they may promote. Overall, the 5Cs represent the prevalent PYD theoretical framework (Lerner et al., 2005). Lerner and colleagues suggested that by creating adaptive developmental regulations, that is, aligning individual and ecological assets, youth would experience improved psychosocial qualities generally known as *competence, confidence, character, connection, and compassion* (see Table 1). Developing such qualities can lead to an important 6th C, *contribution*, which can relate to the self, family, community, and civil society. As such, promoting PYD can

set the stage for a healthy trajectory of youth development and societal well-being. In other words, empowered youth who are motivated to contribute and make a positive change in their community may establish adaptive developmental regulations for themselves and subsequent generations of young people.

Table 1
Description of Lerner’s 5 Cs

Description	
Competence	Positive view of one’s actions in domain specific areas including social, academic, cognitive, and vocational.
Confidence	An internal sense of overall positive self-worth and self-efficacy; one’s global self-regard, as opposed to domain specific beliefs.
Connection	Positive bonds with people and institutions that are reflected in bidirectional exchanges between the individual and peers, family, school, and community in which both parties contribute to the relationship.
Character	Respect for societal and cultural rules, possession of standards for correct behaviours, a sense of right and wrong (morality), and integrity.
Compassion	A sense of sympathy and empathy for others.

Note: Information in Table derived from Lerner et al. (2005)

Critically, it is possible to promote PYD by providing interventions (e.g., policy change, extracurricular activities) that align the strengths of individuals and the contexts in which they are embedded (Lerner et al., 2015). Thus, PYD may be facilitated through policies and programs that build adolescents’ skill sets (e.g., critical thinking), foster their ability to apply those skills and improve their contextual resources. Much of the support for Lerner’s 5Cs stems from the assessment of the 4-H program, which provided youth with out-of-school time for learning, leadership experiences, and adult mentoring (Lerner et al., 2015). Participating youth were more likely to engage in healthy behaviours, participate in out-of-school science programs, be civically active, and contribute to their communities. This work provided evidence that effective youth development programs should focus on: (a) building positive relationships between youth and caring adults, (b) creating opportunities for youth to develop important personal assets, and (c) encouraging youth to practice their newly developed interpersonal behaviours and assets within valued community activities.

Context Matters: Program Features that Promote PYD

As has become clear, the context in which youth are embedded must be considered in relation to how it can either promote or hinder PYD. In other words, we cannot consider individual development without considering the environment. Drawing from the developmental science literature, Eccles and Gootman (2002) issued a report outlining eight contextual features of community programs that may facilitate youth psychosocial development (see Table 2).

Table 2
NRCIM Features of Positive Developmental Settings

Features	Description
Physical and Psychological Safety	Safe facilities; practices that increase safe but decrease unsafe or confrontational peer interactions.
Appropriate Structure	Age-appropriate rules and expectations that are clear and consistent
Supportive Relationships	Closeness, good communication, caring, and support
Opportunities to Belong	Culturally sensitive opportunities for meaningful inclusion, social engagement, and identity formation.
Positive Social Norms	Rules of behaviour, expectations, values and morals
Support for Efficacy and Mattering	Empowerment and self-improvement practices that include enabling, responsibility granting, and meaningful challenge to make a real difference in one’s community.
Opportunities for Skill Building	Opportunities to learn physical, intellectual, psychological, emotional, and social skills
Integration of Family, School, and Community	Coordination among family, school, and community.

Note: Information in Table derived from Eccles and Gootman (2002)

Importantly, Catalano and colleagues (2002) argued that providing youth with structured programs that facilitate the development of one or more of these 8 features may not only promote the development of important psychosocial qualities, but also inhibit undesirable youth behaviours, such as substance abuse. As such, to complement the 5Cs that indicate general psychosocial qualities targeted by the program, the messaging of the program was also assessed to identify if and how it emphasized these 8 PYD-conducive features.

Transformational Leadership (TFL): Interpersonal Interactions that Facilitate PYD

Youth programs tend to be delivered by adults, which may significantly influence their effectiveness. In fact, caring and knowledgeable adults are crucial in the process of youth development (Eccles & Gootman, 2002; Lerner et al., 2015). PYD is facilitated through progressively more complex patterns of interpersonal interactions with adults that youth have a strong sense of attachment to and where the relationship gradually shifts toward the developing person (Bronfenbrenner, 1979). As such, relationships and interpersonal interactions are considered the main drivers of youth development (Bronfenbrenner, 1979; Lerner et al., 2015).

The Heroes 2 program emphasizes the role of instructors by providing them with a thorough training process coupled with teaching tips and recommendations scattered throughout the program. The role of adults within youth programs can be assessed through a transformational leadership lens. TFL conceptualizes a leader's interpersonal behaviours toward their followers (Bass & Riggio, 2006). Transformational leaders work to “elevate the follower’s level of maturity and ideals as well as concerns for achievement, self-actualization, and the well-being of others, the organization, and society” (Bass, 1999, p. 11). In this regard, transformational leaders are well-positioned to promote PYD and support behaviour change. As such, pieces of the program that prompted instructors to engage in specific interpersonal behaviours, for example, describing analogies or sharing their personal experiences, were assessed relative to TFL dimensions and behaviours. Table 3 displays the four dimensions and specific behaviours that characterize transformational leadership (Turnnidge & Côté, 2019).

Table 3
Transformational Leadership Dimensions and Behaviours

Leadership Dimensions (4I's)	Leadership Behaviours
Idealized Influence	<ul style="list-style-type: none"> • Discuss and modeling prosocial values and/or behaviours • Display vulnerability and humility
Inspirational Motivation	<ul style="list-style-type: none"> • Discuss goals and expectations • Express confidence • Implement collective vision • Provide meaningful and challenging tasks
Intellectual Stimulation	<ul style="list-style-type: none"> • Elicit follower input • Share decision-making and leadership • Emphasize the learning process
Individualized Consideration	<ul style="list-style-type: none"> • Demonstrate interest • Recognize followers' accomplishments

Note: Information in Table derived from Turnnidge and Côté (2019)

The PYD Evaluation Process

The first analysis consisted of an assessment of program content and activities relative to components of Lerner's 5Cs (see Table 1). During the first step of the process, the primary evaluators (KS and GC) and LM were put through the instructor training by members of Impact Society. This provided us with foundational knowledge of the content and was also critical for our understanding of the project's objectives and expected environmental features. From there, KS and GC examined the training manuals and program content, made notes regarding activities, and met weekly to discuss their initial impressions. Because the program's effectiveness is also contingent on an instructor's ability to create a supportive and structured learning environment and the display of positive interpersonal behaviours, we also evaluated for the NCRIM's list of setting features conducive to PYD (Eccles & Gootman, 2002; see Table 2) and the notion of Transformational Leadership drawing from the Full Range Leadership Model (2006) and Coach Leadership Assessment System (CLAS; Turnnidge & Côté, 2019; see Table 3). Therefore, for each chapter within the program, KS and GC individually assessed activities to determine what aspects of the 5Cs and NCRIM features were being targeted. In addition, parts of the program that prompted instructors to display interpersonal behaviours (e.g., teaching recommendations) were assessed based on TFL behaviours. Thereafter, weekly meetings were conducted to review evaluators' individually assigned codes. KS and GC gradually progressed through each chapter discussing the content of activities and their respective codes. Through these discussions and by

sharing their interpretation of program activities, evaluators could identify codes that had been overlooked and resolve eventual discrepancies. In cases where discrepancies could not be resolved and further discussion was required, LM was invited to the meeting to share his input.

PYD Content Evaluation Results

General Overview of 5Cs Content Alignment

There were 161 instances where the 5Cs were central in the program content. Specifically, instances of each C were identified (*connection* = 47, *confidence* = 35, *competence* = 27, *compassion* = 23, *contribution* = 22, and *character* = 7). The frequency of instances for each of the Cs in the chapters is shown in Table 4. Across these chapters, learning chapters (Ch 1, 2, 3, 4, 6, 7, 10) included more Cs content ($M = 18.43$; $SD = 3.87$) compared to the working chapters (Ch 5, 8, 11, 12; $M = 10.00$; $SD = 2.65$). Further, the average frequency of Cs was highest in section 1 ($M = 17.40$; $SD = 6.80$) and lowest in section 3 ($M = 10.33$; $SD = 8.62$), with chapters 1, 2 and 3, including the most instances of the 5Cs. Taken together, the Cs are nicely represented across the program, ideally suited for promoting PYD. There are, however instances where the Cs could potentially be emphasized to a greater extent (e.g., Ch 5, 11). Further, when looking at the specific Cs, *confidence* and *connection* are the most prioritized, with elements of *character* appearing less frequently.

Table 4
Lerner’s 5Cs Frequency by Chapter

Ch	Confidence	Competence	Character	Connection	Compassion	Contribution	Total
1	4	4	4	5	2	3	22
2	4	3	0	7	4	3	21
3	5	4	0	7	4	3	23
4	2	1	2	5	3	1	14
5	1	2	0	1	1	2	7
Total	16	14	6	25	14	12	87
6	3	3	0	7	3	2	18
7	4	4	0	5	0	0	13
8	3	2	0	3	1	2	11
Total	10	9	0	15	4	4	42
9	--	--	--	--	--	--	--
10	6	1	0	5	3	4	19
11	1	0	0	0	0	0	1
12	2	3	1	2	2	2	12
Total	9	3	1	7	5	6	31
Overall	35	27	7	47	23	22	161

We also thought it would be useful to take the Cs identified by chapter and break them down by activity (Table 5). When we look at these activities, we can see that overall, most learning chapters emphasize qualities of each C in multiple ways across the activities. For instance, chapter 1 shows that all Cs, apart from *compassion*, are identified in 3 separate activities each. A similar trend can be seen for chapters 2, 6, and 10, wherein each C is identified in 2 or more activities. In contrast, in chapter 3, 4, and 7 we found less variety in the Cs emphasized within activities, wherein 3+ Cs were identified in 0-1 activities. All working chapters were found to emphasize all Cs, except for *character*. Chapter 11 is another exception to this pattern, as this chapter principally allowed space for students to build confidence in their presentation skills, thus was the one C emphasized. When we consider the general findings by activity, most Cs were identified in the stories. It is also important to note the wide variety of Cs emphasized, depending on the content of that particular story. Finally, when we look at the program at large, most activities emphasize a combination of confidence, competence, and connection, while character is the least identified across all activities.

Table 5
5Cs Codes Identified by Activity, Separated Between Learning and Working Chapters

Ch	Activity	Confidence	Competence	Character	Connection	Compassion	Contribution
1	Water Bottle Analogy	X					
	Jesse's Story	X		X	X	X	X
	Reflective Questions	X	X				
	Live It Out!		X	X	X		X
	Passion 2 Action		X	X	X		X
2	Kelsey's Story	X				X	X
	Reflective Questions	X	X		X	X	
	Live It Out!		X		X	X	X
	Passion 2 Action	X	X		X	X	X
3	Walls Analogy	X	X		X		
	Alison's Story	X		X	X	X	X
	Reflective Questions	X	X				
	Live It Out!	X			X		
4	Passion 2 Action	X*	X		X		
	Joel's Story	X		X	X	X	X
	Reflective Questions		X	X*	X		
	Live It Out!					X	
5	Passion 2 Action				X		
	Working Chapter	X	X		X	X	X
	Passion 2 Action				X		
6	Taproot Analogy	X	X		X		
	Mikayla's Story	X	X		X	X	X
	Reflective Questions	X	X		X		
	Live It Out!				X	X	X
	Passion 2 Action				X		

7	Rilee's Story	X	X		X	
	Reflective Questions	X	X			
	Live It Out!	X	X	X*		
	Passion 2 Action	X	X	X		
8	Working Chapter	X	X	X	X*	X
	Minefield Activity	X	X	X		
9	--	--	--	--	--	--
10	Chris's Story	X		X	X	X
	Reflective Questions	X	X		X	X
	Live It Out!	X*		X		
	Passion 2 Action			X		
11	Working Chapter	X				
12	Presentations	X	X	X*	X*	X*
	Encouragement Activity	X	X	X	X	

Note: (*) highlights codes that were for the ideal outcome of the activity even if the actual instruction of the activity cannot be coded as such.

General Overview of NCRIM Settings Alignment

When examining the entire program, we identified 87 instances of NRCIM setting features. Of those, *support for efficacy and mattering* (SEM) was identified the most ($n = 17$ times), followed by *opportunities to belong* (OB; $n = 16$ times), *supportive relationships* (SR; $n = 13$ times), *opportunities for skill building* (SO; $n = 12$ times), *physical and psychological safety* (PS) and *appropriate settings* (AS; $n = 8$ times), *positive social norms* (PSN; $n = 7$ times), and *integration* (I; $n = 6$ times). Table 6 denotes the NRCIM codes for each activity, including the teaching and classroom expectations in the introduction. All 8 settings were noted in each section of the program. Teaching expectations, classroom expectations and Passion 2 Action working chapter activities emphasized the most settings in their instructions and design, with 7+ settings being present. Repeated activities found in the learning chapters (e.g., stories, Live It Out!) consistently identified the settings between chapters, while chapter-specific activities were evaluated for their specific content. In addition, there were 8 instances where activities were evaluated for the ideal outcome of an activity rather than the explicit instruction provided (noted by an asterisk in Table 6).

Table 6
NRCIM PYD Setting Codes

Section	Activity	PS	AS	SR	OB	PSN	SEM	OS	I
Intro	Teaching Expectations	X	X	X	X	X	X		X
	Classroom Expectations	X	X	X	X	X	X	X	X
	Teaching Tips		X*	X	X	X	X		
1-3	Story + Questions				X*	X	X	X*	
	Reflection Questions				X		X	X	
	Live It Out						X	X	X
1	Passion 2 Action	X		X	X		X	X	X
	Water Bottle Analogy			X	X		X		
	Giving Water Bottles			X	X	X	X		
2	Personality Quiz				X		X	X	
	Walls Analogy			X	X		X	X	
	Passion 2 Action Project	X	X	X	X	X	X	X	X
	Selection Activity								
	Tree and Taproot Analogy			X	X	X	X	X	
3	SMART Goals	X*	X*	X	X*		X	X	
	Minefield Exercise	X	X*	X	X		X	X	
	Passion 2 Action Presentation	X	X	X	X		X	X	X
	Planning								
3	Encouragement Journal	X	X	X	X*		X		

Note: () highlights codes that were for the ideal outcome of the activity even if the actual instruction of the activity cannot be coded as such.*

Teachers Role in Heroes 2 From A TFL Perspective

TFL behaviours were identified because of the importance of a quality teacher-student relationship in PYD programs. We believe appropriate training of teachers to build these quality relationships is of utmost importance in establishing a consistent environment to foster vulnerability and a willingness to learn. As such, TFL codes will only be discussed for the behaviours or instructions of the teachers and were specific to the teacher’s manual. Teaching tips included suggestions such as setting expectations for the class, prompts to share teachers’ own experiences, monitoring student participation in activities, and leading group discussion about course content. We found that the content surrounding course expectations and teaching responsibilities within the teacher’s manual identified TFL behaviours 7 times, evenly distributed across *individualized consideration* ($n = 3$), *inspirational motivation* ($n = 2$), and *idealized influence* ($n = 2$). Most TFL behaviours were noted within the chapter’s teaching tips and recommendations, with *individualized consideration* appearing 19 times, *intellectual stimulation* 3 times, *inspirational motivation* 9 times, and *idealized influence* 8 times. Therefore, it appears that instructors are consistently encouraged to display behaviours relating to TFL dimensions across the program.

Moving Forward with Heroes 2: Suggestions and Considerations from a PYD Perspective

Overall, the program does an exemplary job providing a safe and positive environment in which to foster youth development. The provision of explicit teacher tips and suggestions for classroom organization align well with the NRCIM features for PYD programming. The consistent structuring of the program also emphasizes a positive learning environment, as can be seen by the consistent coding of almost all 8 features being present throughout the program. A few inconsistencies from the program structure were noted and suggestions are provided below.

In terms of PYD, the program aligns very well with Lerner and colleagues 5Cs model. We noted extensive instances of activities targeting the 5Cs, and also found support for the 6th C, contribution. Across the chapters, these instances were implicit and explicit in nature. The goal of Heroes 2 is to encourage youth to become heroes, defined as ‘someone who uses their gifts and abilities to make a positive change in themselves and others.’ Accordingly, the program dedicates a large portion of its content to targeting important developmental assets, such as a positive self-identity and goal-setting skills, emphasizing how these may impact their individual well-being and be leveraged to promote social change. For example, this program seeks to improve an individual’s competence and confidence by building self-awareness. Moreover, connection and compassion are also central tenets of the program with the expectation set for students to develop an other-oriented mindset: to look outside of themselves and help those around them. As such, the Heroes 2 program objectives and overall content and structure largely overlap with Lerner and colleagues' (2005) underlying rationale. Namely, the program suggests that by developing assets related to competence, confidence, connection, character, and compassion, young people will experience an enhanced sense of well-being and be more likely to make significant contributions to the world around them.

The Heroes 2 program provides ample opportunities for experiential learning. In fact, there were several instances in which activities were found to target *contribution* directly, especially within the Live it Out! activities. This aspect is one of the program’s main strengths as experiential learning has been revealed to play a significant role in transferring psychosocial skills learned within a more structured environment to the ‘real world’ (Kruger et al., 2015). Importantly, for experiential learning to occur, students must first have experiences which are then transformed through reflection (Kolb, 2014). This is a strength of the program and something that will contribute to healthy youth development and potential future contributions.

While commonly overlooked, the ability to recognize one's own potential to enact social change and contribute to their community is a significant developmental achievement (Coakley 2011; Freire 2000). A laudable aspect of the Heroes 2 program is its social justice approach to PYD, which is particularly beneficial for at-risk youth. Ginwright and James (2003) argue that a social justice approach to PYD can potentially strengthen the democratic process and local communities, ultimately creating a more developmentally appropriate environment for all youth. Youth are subjugated to serious social problems such as racism, sexism, and homophobia, and it has been argued that by not addressing young people's current sociopolitical context, PYD programs risk simply reproducing the current status quo (Ginwright & James, 2003). As such, scholars have proposed that young people must develop the critical consciousness to identify oppressive societal structures and develop strategies to resist/challenge them (Freire, 2000; Spencer et al., 2015). Overall, several activities within the Heroes 2 program foster the development of an other- and community-oriented mindset. In particular, the Passion 2 Action project provides opportunities for extensive group discussions and reflection regarding how to effectively contribute to a given social issue. Doing so touches upon key aspects of a social justice approach to PYD by providing youth autonomy and decision-making power, building identity, and encouraging collective action (Ginwright & James, 2003).

PYD Suggestions to Enhance the Heroes 2 Program

Despite the numerous strengths previously described, it is our belief that there is always room for improvement. As such, we provide some suggestions for consideration, but emphasize that they are not necessary and would only serve to improve an already exceptional program.

- **A chapter on relationship building:** While the program chapters and activities provide opportunities for students to practice social skills due to the group activities and the teaching tips that prompt instructors to display positive interpersonal behaviours, connection is the only C that does not have a whole chapter devoted to it.
- **Teaching prompts regarding previous Live It Out!:** It may be worthwhile to prompt instructors to facilitate experiential learning by engaging students in significant reflections regarding their experiences. Instructors should be encouraged to use these instances to move beyond monitoring adherence and spark deeper discussions by probing students' experiences.

Section 3: Alignment Between Heroes 2 and Behaviour Change Literature

Behaviour Change: Promoting Adaptive Youth Behaviours

The Heroes 2 program helps adolescents develop a positive self-identity and gives them opportunities to engage in behaviours that will help them become proactive members within their communities. When attempting to promote certain behaviours with a given population, interventions that prioritize behaviour change theory are particularly useful (Michie et al., 2011). The process of designing a behaviour change intervention usually involves identifying a target behaviour, determining the broad approach that will be employed, and establishing the specifics of the intervention design (Michie et al., 2011). In other words, you need to know the behaviour you want to target and what activities will give participants the best opportunity to follow-through with them. When we want to understand how Heroes 2 is attempting to change behaviour, we can use the COM-B model of behaviour change and the behaviour change technique taxonomy.

The COM-B Model of Behaviour: A Process of Change

The COM-B model of behaviour acts as the starting point in developing behavioural interventions (Michie et al., 2011). This simple model suggests that an individual is more likely to engage in a given behaviour when provided with:

- **Capability:** An individual's physical (e.g., motor skills) and psychological (e.g., cognitive processes) capacity to engage in the behaviour.
- **Opportunity:** Aspects that lie outside the individual, that is, aspects of the physical and social environment that either facilitate or impede the performance of the behaviour.
- **Motivation:** Processes that energize and direct behaviour, not just goals and conscious decision-making, but also habitual processes, emotional responding, and analytical decision-making (Michie et al., 2011).

As such, to evaluate the potential for an intervention to promote behaviour change, it is crucial to assess aspects of the intervention that may enhance both young people's capability and motivation and provide opportunities for them to display a given behaviour.

Behaviour Change Technique (BCT): The Active Ingredients

Michie and colleagues (2011) also highlighted different functions an intervention might have in behaviour change, such as education, environmental restructuring, and enablement. They argued that following an assessment of the target behaviour and the components that influence its occurrence, it is necessary to select the most effective mode of delivery, *HOW* to bring about change. Michie and colleagues grouped various methods applied to modify behaviour (i.e., the active ingredients in an intervention) under an overarching taxonomy of BCTs (Michie et al., 2011, 2013). The BCT taxonomy includes 93 distinct techniques clustered into 16 larger categories (see appendix B) that can be employed to change behaviour. These categories are the active ingredients that influence one's capability, opportunity, and motivation to display a given behaviour.

Importantly, the techniques identified in the taxonomy are not always directly applicable to the activities provided in Heroes 2. For example, the taxonomy has previously been applied to identify and understand effective methods of changing health-related behaviours, such as physical activity (Michie et al., 2009), eating habits (Michie et al., 2009), and smoking (Lorenцatto et al., 2012). For the current evaluation of Heroes 2, we had to make some slight alterations or take certain liberties. Where activities did not follow an exact definition of a 'technique,' the intention of both the technique and activity were matched (e.g., Heroes 2 storytellers and the BCT technique *credible source* [9.1]). It should also be noted that Heroes 2 emphasizes flexibility in how it is delivered by teachers to allow for the individual consideration of the students and the pragmatic requirements of the class. This is a commendable asset of the program as it allows for the pragmatic implementation of classrooms; however, it was not always obvious if a code was applicable (e.g., *feedback on behaviour* [2.2] during group discussions or reflections). In these instances, codes were assigned based on the *actual instruction* provided as well as the *ideal outcome* of the instruction.

The Behaviour Change Evaluation Process

The second analysis involved evaluating the program's activities relative to the COM-B model and Behaviour Change Technique (BCT) taxonomy (Michie et al., 2011). In line with the first analysis, all program activities were evaluated to determine the extent to which they aligned with this behaviour change model.

The first step of this analysis consisted of identifying what behaviours were targeted by the Heroes 2 program, resulting in behaviours for both the sections and chapters based on their content. This decision was necessary because of the intertwined nature of each lesson. Subsequently, each chapter and its respective activities were assessed individually by KS and GC relative to the components that influence the chapter's target behaviour and the specific BCTs employed to achieve the objectives. Similar to the PYD analysis, several meetings were held whereby KS and GC went through chapter activities together, compared their initial analysis, and resolved potential discrepancies through extensive discussions. Where needed, insight was sought from LM during the weekly review meetings.

Behaviour Change Structure Evaluation Results

General Overview of COM-B Alignment

Table 7 shows the frequency of times that capability, opportunity, and motivation were found to be emphasized in the activities. We also compiled the totals within each section to see where they were adequately targeted and could be increased. For instance, capability, opportunity, and motivation were all generally represented throughout a chapter. An exception is chapter 4, wherein opportunity was not identified. Overall, the program appears to emphasize motivation strongly. However, across the three main sections, it appears that chapters 10, 11, and 12 provide fewer instances that promote COM, which could be an area to integrate additional activities or teaching prompts.

Table 7
Frequency of COM-B codes per chapter

	Capability	Opportunity	Motivation	Total
Ch 1	4	3	6	13
Ch 2	2	2	7	11
Ch 3	3	5	7	15
Ch 4	1	0	4	5
Ch 5	2	2	3	7
Total	12	12	27	51
Ch 6	5	4	6	15
Ch 7	7	6	7	20
Ch 8	3	3	4	10
Total	15	13	17	45
Ch 9	--	--	--	--
Ch 10	2	1	5	8
Ch 11	1	1	1	3
Ch 12	1	2	0	3
Total	4	4	6	14
Overall	31	29	50	110

General Overview of BCT Taxonomy Activity Alignment

Within Table 8, we provide a count for the frequency of BCT techniques in each chapter, as well as the overall totals and total by section. Techniques are clustered into the 16 groups to show which types of techniques are most prevalent in the program and which techniques are limited. It is important to note that there are no instances of scheduled consequences, which is more frequently seen in traditional medical models of behaviour interventions (e.g., smoking cessation), and we would not expect to see them in a youth development program. Overall, numerous BCTs were identified throughout the manual (259 instances) and spread between the remaining 15 groupings of BCTs. The most frequently used BCTs were *comparison of behaviour* ($n = 38$) and *repetition and substitution* ($n = 38$), which makes sense given the emphasis on experiential learning and practical application activities (e.g., Live It Out!, Passion 2 Action). The least identified BCTs were *antecedents and regulation*, which are again more commonly seen in medical interventions where behaviour generally tries to be removed (e.g., rehabilitation). Overall, the least amount of BCTs were identified in section 3, which may highlight an area where modifications to activities or prompts could be warranted.

Although the specific techniques for each activity will not be discussed (see Appendix C), general trends between the types of chapters were noted. Learning chapters showed a wider variety of techniques used, saw more *natural consequences*, *comparison of behaviour*, *repetition and substitution*, *comparison of outcomes*, and *identity* techniques when compared to the

working chapters. In line with the structure of the program, identity-related techniques were more commonly identified in section 1, while the other BCT groupings were more consistent between the sections. Alternatively, working chapters display activities that are distinct from learning chapters. For instance, chapters 5 and 8 prompt students to work in small groups to design and present a Passion 2 Action project by developing their interpersonal skills. These chapters saw a marked increase in the *number of goal and action planning, feedback and monitoring, and social support* BCTs.

There were four activities in which no BCTs were coded. These included the Live it Out and Passion 2 Action activities from chapter 4 and the Live It Out's from chapters 6 and 10. These activities could not be coded as they either did not align with the target behaviour of the chapter (e.g., create a team name, show empathy) or their description did not provide enough explicit instruction for students (e.g., write down questions, share purpose statement).

Table 8
BCT categories and frequency within chapters

	1. Goals and Planning	2. Feedback & Monitoring	3. Social Support	4. Shaping Knowledge	5. Natural Consequences	6. Comparison of Behaviour	7. Associations	8. Repetition & Substitution	9. Comparison of Outcomes	10. Reward & Threat	11. Regulation	12. Antecedents	13. Identity	14. Scheduled Consequences	15. Self-Belief	16. Covert Learning	Total
Ch 1	2	1	1	3	3	2	3	6	1	1	0	0	2	0	3	1	29
Ch 2	1	7	1	2	3	6	0	3	3	1	0	1	4	0	2	1	35
Ch 3	2	4	0	2	5	5	2	4	1	0	2	1	5	0	4	2	39
Ch 4	0	1	1	1	2	4	0	2	1	1	0	0	0	0	1	2	17
Ch 5	7	6	4	3	0	1	0	2	0	1	0	0	0	0	1	0	25
Section Total	12	19	7	11	13	18	5	18	6	4	2	2	11	0	11	6	145
Ch 6	0	0	4	2	3	5	2	2	1	0	0	0	1	0	0	2	22
Ch 7	1	2	3	2	3	7	2	9	1	1	1	0	2	0	1	2	37
Ch 8	6	1	3	1	3	1	1	3	0	1	1	1	0	0	1	2	25

Section Total	7	3	10	5	9	13	5	14	2	2	2	1	3	0	2	6	84
Ch 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ch 10	0	2	2	3	2	7	0	4	1	1	0	0	2	0	1	1	26
Ch 11	0	1	0	2	0	0	0	1	0	1	0	0	0	0	1	0	6
Ch 12	0	2	1	2	0	0	0	1	0	2	0	0	0	0	0	0	8
Section Total	0	5	3	7	2	7	0	6	1	4	0	0	2	0	2	1	40
Overall Total	19	27	20	23	24	38	10	38	9	10	4	3	16	0	15	13	269

Moving Forward with Heroes 2: Suggestions and Considerations from a Behaviour Change Perspective

Heroes 2 emphasizes a strength-based learning approach that includes both consistency in structure and flexibility in teaching or learning styles. This aligns well with the COM-B model of consistently providing the capability, opportunity, and motivation for behaviour change throughout a program. This was seen by the frequency and variety of behaviour change codes in every chapter, where all COM-B features were identified in almost all of them. Additionally, a distinction could be made about the codes identified in the learning versus working chapters, where the learning chapters focused more on positive self-identity and learning through other people’s experiences (e.g., demonstration, comparison, and vicarious consequences). On the other hand, working chapters focused more on instruction and behavioural rehearsal. There were also consistencies between the behaviour change codes at a section or program level and the curriculum structure. Each learning chapter transitioned from more feeling BCTs (e.g., identity, covert learning), to reflective BCTs (e.g., shaping knowledge), to behaviour-based BCTs (e.g., repetition and substitution), finishing with the conviction BCTs (e.g., goals and planning).

Overall, the program efficiently employs BCT to provide youth with the greatest likelihood of engaging in desired behaviours. As we have indicated in the PYD section, however, we nevertheless feel that there are growth opportunities. For example, some activities or questions did not align with the target behaviour for a chapter or required further clarification to be able to code for either COM-B or BCTs. The fact that they were difficult to code, means that

the desired behaviour was not clear, which means that determining the effectiveness of a particular activity could be difficult.

Behaviour Change Suggestions to Enhance the Heroes 2 Program

- **Chapter 3 – Passion 2 Action:** This activity focuses on the participant’s negative traits, which is at odds with a strengths-based approach. As such, you could consider reframing the instruction to the activity as “reframe what might initially be seen as a negative trait and discuss how it may benefit the group” or include a teaching tip that prompts the instructor to provide such an explanation.
- **Chapter 6 – Live It Out!:** The content appears to be about providing social support using the specific ‘taproot principle’ of empathy. However, the activities preceding the Live it Out! do not touch upon the notion of social support. As such, we suggest you provide more links between one’s ‘taproot principles’ and ‘support roots’ throughout the chapter. This could be done by providing a teaching tip that prompts the instructor to briefly explain how one’s support roots can help them stay true to their taproot principles, but also how knowing one’s taproot principles can make them a better support root to others.
- **Chapter 7 – SMART Goals Activity:** We felt that the structure of this chapter was inconsistent with other learning chapters. For instance, all others included extensive instructions or an analogy to explain the chapter learning outcome. As such, it may be worthwhile to consider either including additional information or a teaching tip that prompts the instructor to explain what SMART goals are and their importance prior to the first goal-setting activity with Rilee. In addition, using Rilee as the SMART goals example may be more impactful than the drinking water example. This would free up space that could be used to include additional information throughout the chapter, for example, explaining the link between goal notes and SMART goals: “goal note is the intention you are setting for yourself, SMART goals provide the blueprint for how you will succeed.”
- **Chapter 10 – Structure:** This chapter serves as a ‘wrap up’ chapter for the program. As such, there does not seem to be much space for an in-depth discussion that is required to review a complex and multidimensional concept such as leadership. It may be

worthwhile to consider developing chapter 9 with a focus on youth leadership, which would leave chapter 10 as a concluding chapter in which the main concepts and lessons learned throughout the program are reinforced, leading to a purpose statement.

- **Section 3 – COM-B:** It was noted that there were fewer instances of COM in section 3 compared to sections 1 and 2. This is partly due to two of the chapters being devoted to the practice and presentation of the Passion 2 Action projects. As such, it may be beneficial to tailor the creation of chapter 9 to include activities focused on providing explicit instructions about how to perform a behaviour (capability), when students can perform the behaviour outside of the classroom (opportunity), and why it is important to perform said behaviour (motivation). This could also be accomplished by adding teaching prompts throughout the chapters to make that link between *how*, *when*, and *why* more apparent (e.g., teachers telling their own experiences).

Behaviour Change Additional Considerations:

- **Teaching prompts regarding previous Live It Out!:** Instructors should be encouraged to use these instances to move beyond monitoring adherence and spark deeper discussions by probing students' experiences.
- **Chapter 1 – Reflections:** The specific third questions posed to participants seem somewhat decontextualized from the previous questions and the chapter behaviour (i.e., identify gifts and abilities). We feel it could be beneficial to clearly link the question to the chapter's target behaviour. For example, the question could be framed as: "what is one thing you would like to see changed in the world? How could you use your gifts & abilities to help and be a part of that change?"
- **Chapter 1 – Live It Out!:** The content of the activity did not appear to align with the chapter's target behaviour. We wonder if it could be useful to add a prompt like: "What is a simple way you could use your gifts & abilities to take the focus off yourself and onto someone else's needs?"
- **Chapter 3 – Passion 2 Action!:** The notion of 'working together to restore confidence' seems somewhat vague and consequently the activity does not perfectly align with the chapter's target behaviour (i.e., increased confidence). As such, it may be worthwhile to

consider including a teaching tip that prompts the instructor to provide an explanation regarding the link between overcoming challenges/barriers and confidence.

- **Chapter 4 – Live It Out!:** To provoke a deeper reflection, it may be beneficial to include examples of different strategies that could be used to obtain more information about their issue at heart. For example, they might consider talking to family members, teachers, and/or peers, watching the news, reading books, or internet searches. Alternatively, teaching tips could be included that prompt the instructor to share what strategies they employ when searching for information about their issue at heart.
- **Chapter 7 – Story-Based Reflective Questions:** There is a teaching tip with an optional discussion question which we suggest should be included in the sequence.
- **Chapter 7 – Goal Notes Activity:** Participants are initially prompted to establish a goal note. It may be helpful to provide students with actual sticky notes for them to write their goal notes and place them somewhere visible (similar to the *confidence statement* activity). This would allow for the activity to also be coded as BCTs 7.1 prompts/cues and 12.5 adding objects to the environment.
- **Chapter 8 – Minefield Activity:** You could consider reframing the activity to focus on ‘overcoming challenges and barriers to achieve your goals’ (i.e., problem solving) rather than ‘listening to the right people’ to better align with the chapter target behaviour.

Section 4: General Considerations and Recommendations

Regarding the PYD literature, the HEROES2 program largely aligns with important PYD tenets (Lerner et al., 2015). First, the HEROES2 program aligns with the notion of being responsive to students' individual needs. For example, the program consists of different activities that provide diverse experiences and opportunities for reflection, experiential learning, and teamwork. In addition, several activities grant the student's a considerable degree of autonomy to "personalize" activities according to their level of comfort and ability. For example, most Live it Out activities prompt students to reflect and choose a way to apply the lessons learned within a given chapter in the real world. Second, the training sessions prior to the intervention and the thoughtful teaching tips/recommendations scattered throughout the *instructor's guide* provide youth with mentors that may display transformational leadership behaviours, creating a developmentally appropriate and responsive social environment. Finally, similar to Lerner and colleagues' notion that the development of psychosocial assets (i.e., 5 Cs) may make youth more inclined to contribute to their communities, the ultimate goal of Heroes 2 is to guide youth through a learning process that empowers them to make a positive change in their lives and community. As such, the program aligns well with a full conceptualization of PYD by emphasizing the development of external and internal assets and how these situate youth as potential agents of social change.

Regarding behaviour change theories, the program seems to largely align with Michie and colleagues' (2011) COM-B model as all chapters target each component. Moreover, the program employs a diverse set of BCTs throughout the program, reinforcing each chapter's target behaviour and more inclusive of different preferences for learning approaches. Nevertheless, to enhance the effectiveness of any intervention and make good use of available resources, it may be worthwhile to conduct a behavioural diagnosis, that is, evaluate the specific underlying factors that control the target behaviour.

The evaluations indicate that the HEROES 2 program aligns with the general PYD literature and Michie and colleagues' (2011) COM-B model and BCT taxonomy. As indicated in the introduction of this white paper, interventions are enhanced when guided by well-established theoretical frameworks (e.g., Michie & Prestwich, 2010). As such, it is expected that students that engage with HEROES 2 are likely to have important developmental experiences that provide opportunities to acquire healthy behaviours and psychosocial qualities that may enhance their individual well-being and situate them as agents of social change in their communities.

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Appendices

Appendix A

Coding Chart

Framework	Code	Name	Definition
Behaviour Change Codes			
COM-B	C	Capability	Instruction on how to perform a behaviour
	O	Opportunity	Instruction on when/where to perform a behaviour outside of classroom
	M	Motivation	Instruction on why behaviour is important/meaningful
BCT Taxonomy	See Appendix B		
PYD Codes			
Lerner's 5 C's		Competence	Capability in specific areas
		Confidence	Sense of self-efficacy and/or self-worth
		Connection	Positive and reciprocal relationships
		Character	Morality, integrity, and adherence to societal and cultural norms
		Caring/Compassion Contribution	Empathy/sympathy towards others Giving back, enhancing both the community and their own ongoing development
NRCIM PYD Settings	P.S	Physical/Psychological Safety	Safe and health-promoting facilities; safe peer interactions
	A.S	Appropriate Structure	Clear and consistent rules/expectations; continuity and predictability; clear boundaries; age appropriate
	S.R	Supportive Relationships	Warm, closeness, connectedness, good communication, caring, support, secure attachment, responsiveness
	O.B	Opportunities to Belong	Opportunity and support for meaningful inclusion, belonging, identity formation
	P.S.N S.E.M	Positive Social Norms Support for Efficacy/Mattering	Rules of behaviour, expectations, values/morals Empowerment, autonomy, making a real difference, taken seriously. Practice includes enabling, responsibility, meaningful challenge. Focus on improvement, not performance
	O.S.	Opportunities for Skill-Building	Opportunities to learn, intentional learning experiences, preparation, development
	I	Integration of family, school, and community efforts	Concordance, coordination and synergy
TFL	I.I.	Idealized Influence	Discussing and modelling prosocial values/behaviours Showing vulnerability and humility
	I.M.	Inspirational Motivation	Discussing goals and expectations Expressing confidence Implementing a collective vision
	I.S.	Intellectual Stimulation	Providing meaningful and challenging tasks/roles Eliciting input Sharing decision making and leadership
	I.C.	Individualized Consideration	Emphasizing the learning process Showing interest Recognizing accomplishments

Appendix B

BCT Taxonomy Chart

Full Taxonomy with definitions can be found here:

http://www.bct-taxonomy.com/pdf/BCTTv1_PDF_version.pdf

Grouping	BCT Code	BCT Name
1. Goals & Planning	1.1	Goal setting (behaviour)
	1.2	Problem-solving
	1.3	Goal setting (outcome)
	1.4	Action planning
	1.5	Review behaviour goal(s)
	1.6	Discrepancy between current behaviour and goal
	1.7	Review outcome goal(s)
	1.8	Behaviour contract
	1.9	Commitment
2. Feedback & Monitoring	2.1	Monitoring of behaviour by others without feedback
	2.2	Feedback on behaviour
	2.3	Self-monitoring of behaviour
	2.4	Self-monitoring of outcome(s) of behaviour
	2.5	Monitoring of outcome(s) of behaviour without feedback
	2.6	Biofeedback
	2.7	Feedback on outcome(s) of behaviour
3. Social Support	3.1	Social support (unspecified)
	3.2	Social support (practical)
	3.3	Social support (emotional)
4. Shaping Knowledge	4.1	Instruction on how to perform the behaviour
	4.2	Information about antecedents
	4.3	Re-attribution
	4.4	Behavioural experiments
5. Natural Consequences	5.1	Information about health consequences
	5.2	Saliency of consequences
	5.3	Information about social and environmental consequences
	5.4	Monitoring of emotional consequences
	5.5	Anticipated regret
	5.6	Information about emotional consequences
6. Comparison of Behaviour	6.1	Comparison of behaviour
	6.2	Social comparison
	6.3	Information about others' approval
7. Associations	7.1	Prompts/cues
	7.2	Cue signalling reward
	7.3	Reduce prompts/cues
	7.4	Removes access to the reward
	7.5	Remove adverse stimulus
	7.6	Satiation
	7.7	Exposure
	7.8	Associative learning
8. Repetition & Substitution	8.1	Behavioural practice/rehearsal
	8.2	Behaviour substitution
	8.3	Habit formation
	8.4	Habit reversal
	8.5	Overcorrection
	8.6	Generalization of target behaviour

	8.7	Graded tasks
9. Comparison of Outcomes	9.1	Credible source
	9.2	Pros and cons
	9.3	Comparative imagining of future outcomes
10. Reward & Threat	10.1	Material incentive (behaviour)
	10.2	Material reward (behaviour)
	10.3	Non-specific reward
	10.4	Social reward
	10.5	Social incentive
	10.6	Non-specific incentive
	10.7	Self-incentive
	10.8	Incentive (outcome)
	10.9	Self-reward
	10.10	Reward (outcome)
	10.11	Future punishment
11. Regulation	11.1	Pharmalogical support
	11.2	Reduce negative emotions
	11.3	Conserving mental resources
	11.4	Paradoxical instructions
12. Antecedents	12.1	Restructuring the physical environment
	12.2	Restructuring the social environment
	12.3	Avoidance/reducing exposure to cues for behaviour
	12.4	Distraction
	12.5	Adding objects to the environment
	12.6	Body changes
13. Identity	13.1	Identification of self as role model
	13.2	Framing/reframing
	13.3	Incompatible beliefs
	13.4	Valued self-identity
	13.5	Identity associated with changed behaviour
14. Scheduled Consequences	14.1	Behaviour cost
	14.2	Punishment
	14.3	Remove reward
	14.4	Reward approximation
	14.5	Rewarding completion
	14.6	Situation-specific reward
	14.7	Reward incompatible behaviour
	14.8	Reward alternative behaviour
	14.9	Reduce reward frequency
	14.10	Remove punishment
15. Self-Belief	15.1	Verbal persuasion about capability
	15.2	Mental rehearsal of successful performance
	15.3	Focus on past success
	15.4	Self-talk
16. Covert Learning	16.1	Imaginary punishment
	16.2	Imaginary reward
	16.3	Vicarious consequences

Appendix C

BCT Taxonomy Codes

BCTs per activity

Ch	Activity	Code	Ch	Activity	Code
1	Water Bottle Analogy	4.1, 5.6*, 7.1*, 7.8, 13.2, 15.1*, 15.4*	6	Tree and Taproot Analogy	3.1, 4.1, 5.3, 5.6, 7.1
	Water Bottle Reward	5.2, 7.1, 10.1		Empathy vs. Sympathy	4.1
	Story (Jesse) + Q's	5.3*, 6.1*, 6.2*, 9.1*, 16.3*		Story (Mikayla) + Q's	5.3*, 6.1*, 6.2*, 9.1*, 16.3*
	Reflection Q's	8.1, 8.7, 13.4, 15.4		Mikayla's Taproot	6.1, 8.1*, 16.3
	4 Types of Gifts	4.1*		Reflection Q's (Taproot)	3.1*, 7.1, 13.4
	Teaching Tips	2.2, 4.1		Teaching Tip	6.1
	LIO (Help someone else)	1.9*, 8.1*, 8.6*		Teaching Tip	3.2
	P2A (Help someone else)	1.9, 3.1, 8.1, 8.6		Teaching Tip	6.1
2	LIO Check In	2.1, 10.3, 15.3		LIO (show empathy)	
	Story (Kelsey) + Q's	5.3*, 6.1*, 6.2*, 9.1*, 16.3*		P2A (identify mentor)	3.1, 8.1*
	Teaching Tip	6.1	7	LIO Check In	2.1, 10.3, 15.3
	Personality Quiz + Results	2.2, 2.4, 4.1, 4.2, 13.4		Story (Rilee) + Q's	5.3*, 6.1*, 6.2*, 9.1*, 16.3*
	Teaching Tip	6.1		Teaching Tip	13.2
	Reflection Q's	2.3*, 5.3, 5.6, 8.7, 13.4, 15.4		Rilee SMART Goals	2.2, 3.2, 4.1, 8.1*, 8.7
	Teaching Tip	6.2		Goal Note	4.1, 5.3, 7.1*, 8.1, 11.2, 13.2, 6.1, 8.7
	LIO (Live out personality traits)	1.9, 8.1, 8.6, 13.4		Teaching Tip	6.1
	P2A (Group strengths by animal)	2.2, 3.1, 6.2, 9.2, 9.3, 13.4		Teaching Tip	7.1
	Teaching Tip	12.2		SMART Goals Example	6.1, 8.7
	Teaching Tip	2.1, 2.2*		SMART Goals	8.1, 8.7*
3	Walls	4.1, 4.2, 5.2, 5.3, 5.6, 6.1*, 7.1, 11.2, 13.2*, 16.3		LIO (Accountability Buddy)	1.9, 3.1, 5.3
	LIO Check In	2.1, 10.3, 15.3		Teaching Tip	6.1*, 16.3
	Story (Alison) + Q's	5.3*, 6.1*, 6.2*, 9.1*, 16.3*		P2A (Team goal note)	8.1, 8.6
	Reflection Q's	5.3, 8.1, 13.4, 15.4		Goal Note Example	6.1
	LIO ("I am" mirror statement)	1.9*, 8.1, 13.4, 15.4		Teaching Tip	3.2
	Teaching Tip	6.1	8	Minefield Exercise	1.2*, 3.2, 5.2, 5.3, 5.6*, 7.1, 8.1, 11.2, 16.2**
	Teaching Tip	7.1, 8.2, 8.3, 11.2, 12.5, 13.4, 15.4		LIO Check In	2.1, 10.3, 15.3
	P2A (Overcoming challenges)	1.2, 2.2*, 6.2, 13.2*		Reflection Q's	3.1, 16.3
	Teaching Tip	2.1, 2.2*		Team Goals Example	6.1
4	LIO Check In	2.1, 10.3, 15.3		Team Goals	1.1, 1.3, 1.4, 1.8, 1.9
	Story (Joel) + Q's	5.3*, 6.1*, 6.2*, 9.1*, 16.3*		Presentation Styles	3.2, 4.1, 8.1, 8.7
	Teaching Tip	3.1*, 4.1, 16.3*		Teaching Tip	12.1

	Reflection Q's	8.1, 8.7	10	LIO Check In	2.1, 10.3, 15.3
	Teaching Tip	5.4		Story (Chris) + Q's	5.3*, 6.1*, 6.2*, 9.1*, 16.3*
	Teaching Tip	6.1		H2 Review	4.1, 4.2*, 5.3
	LIO (Q's re: passion)	8.1		Teaching Tip	2.2*, 3.1*, 8.1
	P2A (make team names)			Reflection Q's (Leadership)	4.1, 13.4
	Teaching Tip	6.1		Teaching Tip	6.1
5	Teaching Tip	2.2, 2.7, 3.1, 3.2		Purpose Statement	6.1, 8.1, 8.7, 13.4
	LIO Check In	2.1, 10.3, 15.3		H2 Review	6.1, 6.2
	Step 1 + 2	1.2, 2.2*, 2.7*, 3.1, 4.1, 8.7		Teaching Tip	6.1
	Teaching Tips	3.2, 4.1		LIO (Share purpose statement)	
	Teaching Tip	1.8*, 1.9*, 2.1		P2A (Group purpose statement)	3.2, 8.1
	Step 3	1.2, 1.3, 1.4, 1.9, 6.1, 8.7	11	LIO Check In	2.1, 10.3, 15.3
	Teaching Tip	4.1		Teaching Tip	4.1
				Practice Instruction	4.1, 8.3
			12	Chapter Purpose	4.1
				Critical Feedback	2.2, 2.7, 4.1, 10.4, 10.6
				Presentation	8.1
				Encouragement Journal	3.3

Appendix D

Full Breakdown of BCT Codes

BCTs per chapter

	BCTs
Chapter 1	1.9; 2.2; 3.1; 4.1; 5.2; 5.3; 5.6; 6.1; 6.2; 7.1; 7.8; 8.1; 8.6; 8.7; 9.1; 10.1; 13.2; 13.4; 15.1; 15.4
Chapter 2	1.9; 2.1; 2.2; 2.3; 2.4; 3.1; 4.1; 4.2; 5.3; 5.6; 6.1; 6.2; 8.1; 8.6; 8.7; 9.1; 9.2; 9.3; 10.3; 12.2; 13.4; 15.3 15.4; 16.3
Chapter 3	1.2; 1.9; 2.1; 2.2; 4.1; 4.2; 5.2; 5.3; 5.6; 6.1; 6.2; 7.1; 8.1; 8.2; 8.3; 9.1; 10.3; 11.2; 12.5; 13.2; 13.4; 15.3; 15.4; 16.3
Chapter 4	2.1; 3.1; 4.1; 5.3; 5.4; 6.1; 6.2; 8.1; 8.7; 9.1; 10.3; 15.3; 16.3
Chapter 5	1.2; 1.3; 1.4; 1.8; 1.9; 2.1; 2.2; 2.7; 3.1; 3.2; 4.1; 5.4; 6.1; 8.7; 10.3; 15.3
Chapter 6	3.1; 3.2; 4.1; 5.3; 5.6; 6.1; 6.2; 7.1; 8.1; 9.1; 13.4; 16.3
Chapter 7	1.9; 2.1; 2.2; 3.2; 4.1; 5.3; 6.1; 6.2; 7.1; 8.1; 8.6; 8.7; 9.1; 10.3; 11.2; 13.2; 15.3; 16.3
Chapter 8	1.1; 1.2; 1.3; 1.4; 1.8; 1.9; 2.1; 3.1; 3.2; 4.1; 5.2; 5.3; 5.6; 6.1; 7.1; 8.1; 8.7; 10.3; 11.2; 12.1; 15.3; 16.2; 16.3
Chapter 9	
Chapter 10	2.1; 3.2; 4.1; 4.2; 5.3; 6.1; 6.2; 8.1; 8.7; 9.1; 10.3; 13.4; 15.3; 16.3
Chapter 11	2.1; 4.1; 8.3; 10.3; 15.3
Chapter 12	2.2; 2.7; 3.3; 4.1; 8.1; 10.4; 10.6

Appendix E

BCT Category, Technique and Frequency

BCT Category	BCT Technique
1. Goals & Planning (19)	1.1 Goal setting (behavior) (1); 1.2 Problem solving (4); 1.3 Goal setting (outcome) (2); 1.4 Action planning (2); 1.8 Behavioural contract (2); 1.9 Commitment (8)
2. Feedback & Monitoring (27)	2.1 Monitoring of behaviour by others without feedback (11); 2.2 Feedback on behaviour (11); 2.3 Self-monitoring of behaviour (1); 2.4 Self-monitoring of outcome(s) of behaviour (1); 2.7 Feedback on outcome(s) of behaviour (3)
3. Social Support (20)	3.1 Social support (unspecified) (11); 3.2 Social support (practical) (8); 3.3 Social support (emotional) (1)
4. Shaping Knowledge (23)	4.1 Instruction on how to perform behaviour (20); 4.2 Information about antecedents (3)
5. Natural Consequences (24)	5.2 Salience of consequences (3); 5.3 Information about social and environmental consequences (15); 5.4 Monitoring of emotional consequences (1); 5.6 Information about emotional consequences (5)
6. Comparison of Behaviour (38)	6.1 Demonstration of the behaviour (27); 6.2 Social comparison (11)
7. Associations (10)	7.1 Prompts/cues (9); 7.8 Associative learning (1)
8. Repetition & Substitution (37)	8.1 Behavioural practice/rehearsal (19); 8.2 Behaviour substitution (1); 8.3 Habit formation (2); 8.6 Generalisation of target behaviour (4); 8.7 Graded tasks (11)
9. Comparison of Outcomes (10)	9.1 Credible source (7); 9.2 Pros and cons (1); 9.3 Comparative imagining of future outcomes (1)
10. Reward & Threat (10)	10.1 Material incentive (behaviour) (1); 10.3 Non-specific reward (7); 10.4 Social reward (1); 10.6 Non-specific incentive (1)
11. Regulation (4)	11.2 Reduce negative emotions (4)
12. Antecedents (3)	12.1 Restructuring the physical environment (1); 12.2 Restructuring the social environment (1); 12.5 Adding objects to the environment (1)
13. Identity (16)	13.2 Framing/reframing (5); 13.4 Valued self-identity (11)
14. Scheduled Consequences (0)	
15. Self-Belief (15)	15.1 Verbal persuasion about capability (1); 15.3 Focus on past success (8); 15.4 Self-talk (6)
16. Covert Learning (13)	16.2 Imaginary reward (1); 16.3 Vicarious consequences (12)