Development of Student and Teacher Measures of **Happiness Curriculum Factors**

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"When we are feeling hot and really tired, we bring air conditioning to our homes, and we feel happy and relaxed about it. The Happiness Curriculum is doing exactly the same thing. If I am feel tired and stressed in other classes, the Happiness Curriculum is like an air conditioner to me."

Grade 5, Delhi Student

ABSTRACT

This report is designed to contribute to an understanding of the goals and realities of the Happiness Curriculum, as well as describing an approach to its evaluation. The report is divided across four sections. The first section describes the theoretical framework for understanding the elements of the Happiness Curriculum. The second section provides an overview of how these elements are represented in actual lesson plans and learning objectives. The third section describes the process of development of surveys together with some general cautions, and the fourth section provides a stepped outline for thinking about evaluation of the Happiness Curriculum more broadly.

The function of the developed surveys is to provide information to schools, non-government organisation implementers and government agencies concerning student and teacher adoption of the desired outcomes of the curriculum. The two surveys developed—one for students and one for teachers—reflect factors which are aligned with the Happiness Curriculum objectives and anticipated learning outcomes. For use in evaluation studies, the two surveys provide a basis for the capture of student and teacher functioning on the factors of interest.

In summary, the study on which this report is based was designed to:

- Analyse the Happiness Curriculum to identify its alignment with its goals;
- Identify measurable components of those goals; and
- Explore and develop a survey approach to the measurement of these contributing components of the Happiness Curriculum.

The study included three steps:

1. The factors that contribute to happiness within the HC framework were identified. A literature review provided an overview of conceptual models of wellbeing and happiness.
2. Observations of happiness classes were undertaken and interviews carried out with school leaders, teachers and students in order to understand how the HC is implemented.
3. Approaches to the measurement of the factors were considered, and surveys were developed - one for students and one for teachers - with each reflecting the same factors.

Contents

SECTION 1

Happiness: Theoretical Context

Introduction

Education systems around the world are facing a learning crisis as they struggle to provide high quality education that will prepare students to succeed in an increasingly interconnected and rapidly changing world (Desai, 2018). Developing literacy and numeracy skills is no longer sufficient. Students need to learn how to think critically, interact effectively and work collaboratively. At the same time, growing challenges—such as income inequality, poverty, intolerance and student suicide rates—have sharpened the need to focus on the importance of fostering student happiness and wellbeing (Twenge, Cooper, Joiner, Duffy, & Binau 2019).

Background

In 2011, happiness was recognized as a fundamental human right in a United Nations General Assembly resolution. Countries are measuring levels of happiness and wellbeing through indices such as the World Happiness Report and the "Happy Planet Index," and education systems are implementing programs to promote these qualities in schools. For example, UNESCO Bangkok launched the Happy Schools Project in 2014 to foster happiness in schools by enhancing "learner wellbeing and holistic development" (UNESCO, 2017). In 2010, the Happy Classrooms program was launched in Spain to enhance "the personal and social development of students" and promote "happiness in students, teachers and families alike" (Lombas et al., 2019).

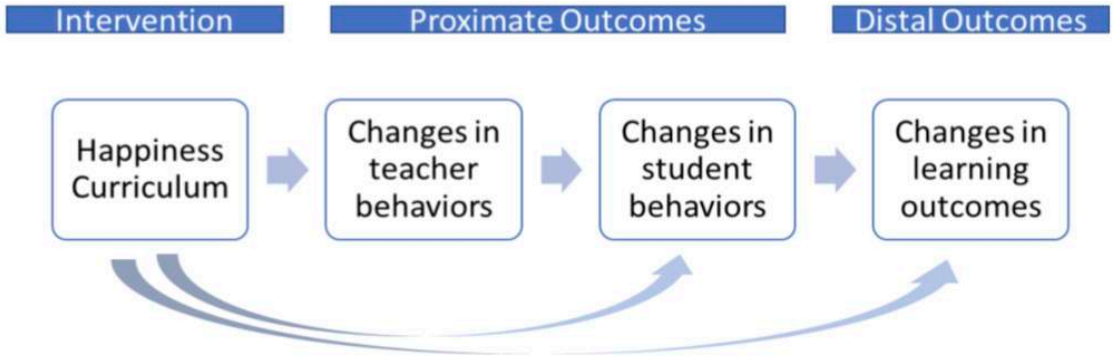
As education systems around the world grapple with how to prepare students to deal with the demands and challenges of life in a highly unpredictable environment, the Delhi government has launched the Happiness Curriculum (HC), a first step in expanding the formal public education system to include a focus on the holistic development of all learners. This approach is consistent with the vision of India's education system as outlined in the draft National Education Policy 2019 (Government of India, 2019), as well as in the global Sustainable Development Goal 4 for education. The premise of the HC is that helping students to develop the essential skills associated with happiness will improve their learning and life outcomes (State Council of Educational Research and Training, 2014).

The HC is being implemented from kindergarten through Grade 8 across 1024 government schools. Children attending classes in Delhi government schools spend 35 minutes (one class period) in the first half of the school day in Happiness Classes. In these classes, the students engage in joyful exercises, indoor games, reflective conversations, storytelling, guided practice for mindfulness, role playing and presentations. These Happiness Classes are intended to influence the improvement of learning outcomes in school.

Figure 1.1 outlines the hypotheses that: (1) The HC will have a direct impact on students and an indirect impact mediated by changes in teacher behaviour and that; (2) Changes in behaviour will positively impact student learning outcomes. The notion that changes in teacher behaviour will lead to changes in student behaviour and learning outcomes relies on evidence captured at every point in the model, as well as on controlling for external factors that are not explicitly included in the figure. The model provides the framework for the design and activities undertaken for this study. The model is logical, although contestable. The theory of change argument described by the model appears widely in the academic literature, but it is rarely demonstrated empirically. Nevertheless, it provides a logical and useful framework to understand the essential steps in change processes within school interventions. Research indicates that a positive school environment provides several benefits to the learning and development of students (Poulou, 2014).

Children who have supportive relationships with their teachers are more likely to have positive academic and social-emotional outcomes (Patrick, Kaplan, & Ryan, 2011). Based on the findings of the Program for International Student Assessment (PISA), teachers play a significant role in the academic success and the emotional wellbeing of their students (OECD 2013). For example, students who have a positive relationship with their teachers and friends are less likely to report arriving late for school or skipping class. Students who have a positive relationship with their teachers are more likely to feel connected to their schools and to have a positive attitude to learning (Chory-Assad & Paulsel, 2004).

Figure 1.1 Theory of change model driving the study



Happiness & **Education**

Happiness means different things to different people, and this diversity is reflected in the research literature. For the purposes of this study, happiness is defined from the perspective of social-emotional skills which enable one to regulate thoughts, emotions and behaviour. The framing as a set of "skills" is significant and deliberate since the context for the enablement is learning within the formal education system. Although academic learning is prioritised in education, so also are the social, emotional, and ethical competencies which create confident, mindful, responsible and happy individuals. Educators and policy makers across the globe are realizing that it is important to equip young learners with the cognitive and social-emotional skills that help them to build resilience and to connect meaningfully with their communities (Scoffham & Barnes, 2011).

Given this educational context, it is important to identify those skills which might contribute to happiness, those that can be nurtured or taught. These would ideally be drawn from cognitive domains, such as critical thinking, and would include social-emotional learning components, such as self-awareness, relationships and social awareness.

Happiness & Education **In India**

The World Happiness Index ranked 156 countries based on factors including inequality, life expectancy, GDP per capita, social freedom, generosity, public trust (a lack of corruption in government and business) and social support. The UN Sustainable Development Solutions Network released a World Happiness Report in 2019 (Helliwell, Layard, & Sachs, 2019). This report ranks countries on six key variables that support wellbeing, including income, freedom, trust, healthy life expectancy, social support and generosity. Together these parameters are used to generate a country's happiness score on a scale from 1 to 10. According to this report, India ranked 140 among 156 countries; this ranking may signify an important challenge for the society.

Another source of salient data is the World Health Organization, which noted high rates of suicide incidence among youth, stating "suicide is the second leading cause of death among 15–29-year-olds globally" (WHO, 2017, p. 14). Research suggests that the incidence of suicide among Indian students is rising (Patel et al., 2012). Based on the data provided by the Ministry of Home Affairs in India, almost 26,500 students committed suicide related to

failure in examination performance between 2014 and 2016. In mid-2020, as education systems around the world are grappling with how to prepare students to deal with the challenges of life in a highly unpredictable coronavirus environment, these concerns remain paramount.

Existing curricula in India have components to promote development in cognition, language, literacy, numeracy and arts. The HC adds the goal of creating a stimulating environment for learners, with a child-centred pedagogy that focuses on children's experiences and active participation. The premise of the HC is that helping students develop essential skills associated with happiness will improve students' learning and life outcomes (SCERT Delhi, 2018). In the classroom, teachers provide opportunities to connect knowledge to life outside of school, encourage students to apply skills in their lives; and use a variety of engaging teaching strategies, including active participation.

Accordingly, this new curriculum is expected to enable students not only improve their scholastic skills but also their co-scholastic skills of mindfulness, critical thinking, reflection and inner stability. These skills are necessary to be able to thrive in today's world.

HAPPINESS

Instability associated with constantly changing social and economic dynamics can have a considerable impact on people's wellbeing (Kumar, 2013), which may seriously impact their long-term potential to thrive. Education, which is clearly intended to facilitate learning and growth (Adler, 2017), may act as a preventive factor to the impact of disadvantage or crisis.

The current education system in many countries seeks to prepare students to excel academically, but it does not teach youth how to develop and master the art of living well. Prevalent pedagogical paradigms state that the objective of education is to teach students to succeed academically. Some also hold that teaching within a more holistic model, with a focus on wellbeing or 21st century skills, might divert valuable resources from academic subjects and might interfere with the teaching and learning that is designed to meet examination or accreditation priorities (Spence & Shortt, 2007).

Research in school, community and clinical settings has led several authors to offer recommendations about what procedures should be followed to ensure effective learning environments that will facilitate more holistic student development. These include:

- Regular widespread monitoring of subjective wellbeing (education, workplace and cities)
- Rigorous happiness-based evaluation of interventions (health, education and workplace)
- Measurement of subjective wellbeing before and after interventions (personal happiness)
- Use of happiness and other outcome data to help set policy priorities on a continual basis.

An essential need is to determine exactly what might populate such environments and programming—what might a happiness-oriented educational context look like in terms of identification of essential factors?

Review of the Literature

A review of literature was conducted to identify the main factors associated with happiness. First, relevant studies were identified through a combination of manual and computer searches. In April 2020, a comprehensive search of original articles published post-1984 in major databases—including PsycINFO, ERIC, Routledge, Science Direct and SAGE Journals—was conducted. Five websites were also searched: CASEL, UNESCO, OECD, UNICEF and Google Scholar. Manual searches were conducted in the following journals: American Educational Research Journal; Pastoral Care in Education: An International Journal of Personal, Social and Emotional Development;

Cambridge Journal of Education; Child Development; International Journal of Child Care and Education Policy; Journal of Psychoeducational Assessment; Journal of School Psychology; The Journal of Positive Psychology; and the Journal of Happiness Studies. Terms and their variants used to identify relevant articles included: happiness, wellbeing, education and social skills. The exact term combinations are: [((happiness*) OR (socio-emotional skills*) OR (subjective wellbeing) AND ((measurement*) OR (school), (indicator) OR (measure)]. Titles and abstracts were screened to preclude articles that did not meet the selection criteria. Then, full texts of the remaining articles were obtained and screened for eligibility. Reference lists of included articles were further examined to complete the search.

Studies represented in original research articles and published in English-language journals were considered for inclusion. This review included different types of literature, such as policy reports, articles, books, technical reports and other accessible papers available in full text. Book reviews, commentaries, editorials, unpublished articles, abstracts and dissertations were excluded.

The context for the literature review was established by the fact that only components that can be reasonably taught and learned in school settings were of interest. Studies that were eligible for this review targeted students between the ages of 6 and 18 and school-based intervention programs on improving the happiness and wellbeing of learners. Studies targeting students who had pre-existing behavioural, emotional or academic problems were excluded.

Through systematic search, over 9000 records were initially retrieved during computer search on the listed databases. After removing any duplicates and adding the results of manual searches, 312 distinct records were identified for the screening phase. After reviewing the titles and abstracts, 48 studies were considered useful for inclusion. These studies provided the literature reflected in this brief review.

Happiness, **Positive Psychology and Wellbeing**

There are multiple approaches to the study of happiness. Lippman, Moore, and McIntosh (2011) provide a comprehensive conceptual framework for child wellbeing. At the most basic level, happiness is seen as an outcome of material, behavioural, intellectual and experiential factors. The review of the happiness literature reveals that definitions of happiness vary across a wide range of disciplines, age groups, cultures, communities and countries. The discipline of positive psychology is of particular interest.

The main goal of positive psychology is to develop good and decent people, as well as civil societies, by promoting meaning. Positive emotions, such as happiness, can broaden the scope of thinking and facilitate the building of psychological resources (Fredrickson, 2000). It can enhance exploration, imagination, inquisitiveness and the ability to develop relationships, which can contribute to success both in school and beyond (Scoffham & Barnes, 2011). Therefore, the intervention programs, practices, treatments, methods and activities based on positive psychology try to cultivate positive feelings, positive behaviours and cognition. Schools can play a central role in working toward these outcomes. For example, Seligman (2011) introduced a model with five elements of wellbeing into schools. These elements, or enabling conditions, are listed as positive emotions, engagement, relationships, meaning and accomplishment. The model established a framework that embraces the promotion of one's own wellbeing and achievement.

Wellbeing is often referenced in discussions of happiness. However, it is important to understand that wellbeing is not the same as happiness but is a distinct instance of being. Happiness is often defined as a positive emotional state that reflects a high level of mental or emotional wellbeing moment to moment (Haybron, 2013). Wellbeing is a broader concept that includes happiness, as well as other factors, such as life satisfaction, autonomy and self-esteem. In other words, wellbeing is an outcome of a person's cognitive and affective evaluations, including evaluations of emotional reactions to life events and cognitive judgments about satisfaction and sense of fulfilment with life (Diener, 2012). Recent research suggests that happiness can lead to better overall wellbeing. According to Lyubomirsky and Dickerhoof (2005), happiness is a complex construct that encompasses the subjective elements of both affect and cognition that contribute to wellbeing.

Factors Contributing to Happiness

Different happiness models address different aspects of happiness (Durlak et al., 2011). Mastering competencies related to wellbeing results in a shift from being controlled by external factors to acting increasingly in accord with internalized beliefs and values, caring and concern for others, making good decisions, and taking responsibility for one's choices and behaviours (Greenberg et al., 2003). These competencies are hypothesized to provide a foundation for better adjustment and academic performance, as reflected in positive social behaviours, fewer conduct problems, reduced emotional distress and improved learning outcomes. Increase in connectedness, engagement and perseverance through education interventions are hypothesized to produce both academic success and happiness.

Review of the literature of several school-based intervention programs for students' wellbeing is used to summarise the components of happiness in Table 1.1. Drawing on the literature, the following review is focused on those constructs reflected in the HC.

1. Mindfulness

Mindfulness is hypothesized to help participants feel a greater sense of calm, happiness, wellbeing and engagement with others. Positive emotions, such as happiness, can broaden the scope of our thinking and allow for building of psychological resources (Fredrickson, 2000). It can also enhance exploration, imagination, inquisitiveness and the ability to develop relationships, which can contribute to success in school and beyond (Scoffham & Barnes, 2011). Mindfulness supports autonomous functioning, which results in better choices, more congruent activities and less stress and conflict. It is suggested that practicing mindfulness is helpful in many ways, including:

- The ability to remain in the present
- The ability to listen actively
- The ability to focus attention on the current task

2. Awareness

Awareness is a form of non-judgmental, non-reactive attention to experiences occurring in the present moment; it includes cognition, emotions and bodily sensations by paying attention to the surrounding environmental stimuli (Vago & David, 2012). It is a skill that can be learned and improved throughout life.

3. Awareness of self

Self-awareness is how the mind receives and reacts to experiences; it involves paying attention to oneself and consciously knowing one's personal strengths and weaknesses. Evidence implies a positive relationship between self-awareness and wellbeing (Huppert, 2009). Self-awareness skills are useful to achieve goals, develop better attention and feel happier (Burke, 2010). In addition to these positive aspects, self-awareness skills might be helpful to reduce attention and behaviour problems and anxiety symptoms in children (Semple, Lee, Rosa, & Miller, 2010).

4. Awareness of others

Awareness of others is the ability to comprehend and react appropriately to societal and interpersonal difficulties. Being socially aware means being able to interpret accurately the emotions of people with whom one interacts (Cerezo & McWhirter, 2012). It requires competency in inference, comprehension and interaction with others. These skills have been associated with better social adjustment and responsible decision-making (Cerezo & McWhirter, 2012; Van Huynh, 2018).

Table 1.1 Summary of literature

	Individual capabilities	Home environment	School and community	Enabling society and regulations
Hair et al., 2005; Volling & Blandon, 2005; Ginsburg, 2007; Goldman et al. 2016		Positive parenting; warm and supportive parents; positive relations with siblings and relatives; positive family-school relationships		
Cook et al., 1999; Hawkins, Smith, & Catalano, 2004; Schaps, Battistich & Solomon, 2004; Layard & Hagell, 2015; Choi, 2018			Positive relations with teachers; social-emotional development through establishing safe, caring learning environments; improved classroom management and teaching practices; sense of belonging at school and peer acceptance	
Pollard & Lee, 2003; Lerner & Henke, 2008; Kim & Lim, 2011; Siddiqui, 2015;	Positive attitude to learning; optimistic personality; positive attitudes about the self; self-efficiency; overall psychological wellbeing; healthy habits; cognitive competence and social-emotional skills			
Seligman et al., 2009; Black & Krishnakumar, 1998; Christian et al., 2015; Musikanski et al., 2017				Balanced curriculum that supports social-emotional skills; safe neighbourhoods without violence; green spaces and playgrounds

Critical Thinking & Reflection

Critical thinking is an essential life skill which enables one to adapt to changes in today's world (Lucas & Spencer, 2017). Critical thinking is the ability to evaluate and judge statements, situations, ideas and theories relative to alternative explanations to reach competent positions.

Critical Thinking

Critical and creative thinking skills (DiYanni, 2016) can be developed through practice, like any other skills. They have been found to have an impact on student academic performance (Hove, 2011). Focus on students' creative thinking skills rather than only on subject knowledge helps students to explore and discover alternatives rather than to simply memorize (Beghetto & Kaufman, 2014). Educating to foster creative thinking can equip students with capabilities that cannot be replicated by machines.

Metacognition

Metacognition, or reflection, refers to the skills of "thinking about thinking," facilitating individuals' awareness about their cognitive processes and strategies (Sperling et al., 2012; Winne & Nesbit, 2010). Metacognition skills are helpful to interpret and regulate cognitive processes, such as learning, thinking, perceiving and memorizing. People with good metacognitive skills are aware of their strengths and weaknesses, and are better able to evaluate their capacity (Sperling et al., 2012). A body of literature has found a positive relationship between metacognitive skills and academic performance (Taraban, Rynearson, & Kerr, 2000). In addition, meta-cognition is associated with critical thinking skills (Magno, 2010).

Social-Emotional Skills

According to Elias et al. (1997), social-emotional skills are essential to recognize and manage emotions, set and achieve positive goals, appreciate the perspectives of others, establish and maintain positive relationships, make responsible decisions and handle interpersonal situations constructively. The Collaborative for Academic, Social, and Emotional Learning (CASEL, 2020) concentrates on five interrelated sets of cognitive, affective and behavioural competencies:

- Self-awareness
- Self-management
- Social awareness
- Relationship skills
- Responsible decision-making.

Social-emotional skills are the abilities of people to regulate their thoughts, behaviours and self-perceptions and to engage in productive and functional ways. Evidence suggests that developing these skills during the early years can be a predictor of emotional wellbeing later in life (OECD, 2015). In addition, these skills contribute to development and use of cognitive skills (OECD, 2017)

Empathy

Empathy can be defined as the affective and cognitive ability to feel and understand another's emotional state or condition (Eisenberg, 2003). It can contribute to the development of altruistic and prosocial behaviours and is associated with psychological health (Eisenberg, 2003).

Positive Relationships

Forming positive relationships has a significant impact on life and wellbeing. Healthy relationships with peers, parents and teachers can help enhance aspects of psychosocial development and emotional wellbeing, such as optimism, empathy, self-esteem and self-efficiency (OECD, 2015). It has been found that students with higher happiness scores are more likely to have better relationships with their teachers (Durlak et al., 2011). Also, students who receive more support from their teachers are found to cope better with stress in the school environment.

Communication

Communication skills include the ability to understand knowledge and ideas and to express these clearly and effectively in verbal, nonverbal and written communication. These skills include the ability to negotiate, persuade, transmit and interpret knowledge (Lippman et al., 2015). These skills are related to collaboration skills, because individuals apply them to work effectively with diverse groups for common goals (Scott, 2015).

External Factors Contributing to Happiness

Beyond the interpersonal and intrapersonal factors described, the individual's environment plays a major role in contributing to happiness and a sense of wellbeing.

The role of parents and home environment

Although the role of parents continues throughout the lives of their children, it is especially crucial in the early and adolescent years. Families play a significant role in child development. Forming close and secure attachments with parents at a young age can support the development of social-emotional skills, such as self-regulation, self-efficacy and self-worth (Goldman et al., 2016). Stable emotional support and positive relationships with parents can act as protective factors to help children cope with difficulties such as stress, bullying, and depression (Durlak, 2011; OECD, 2015).

The role of the school environment

In addition to promoting the academic achievement of students, schools should be places to promote students' development of resilience and connectedness (Layard & Hagell, 2015). The school environment is a second important context after the home environment because school-aged children spend a significant portion of their time at school, where they interact with their peers and teachers (UNESCO, 2016). The Happy School Project found that school practices that encourage parental involvement and directly include members of the community improve the interactions and friendships among students of different grades (UNESCO, 2016).

Relationships with teachers

Having positive relationships with teachers in the school environment may enhance children's emotional wellbeing (Choi, 2018). Students who have good relationships with their teachers and those who receive more support from their teachers are found to be more successful in the regulation of their emotions (Durlak, 2011; Goldman et al., 2016).

The role of peers

Peers also play an important role in cognitive, physical, social and emotional development, especially from middle childhood throughout adolescence. Positive peer relationships are associated with less involvement in aggressive behaviour and violence (Goldman, 2017).

The role of curriculum

Adopting a balanced curriculum to support creativity, learning and the accumulation of knowledge helps to minimize the focus on result-oriented achievement (UNESCO, 2017). The Happy School Project aims for its students to be able to express their opinions and learning without the fear of making mistakes. Engaging with relevant and useful learning content, with curricula that reflect relevant and contemporary matters, supports teachers as they show how learning and the lives of learners are connected (Seligman et al., 2009).

SUMMARY

The literature on happiness and wellbeing informs the focus of the HC, which integrates both the cognitive and social dimensions of functioning. The framework adopted by the HC incorporates:

1. Mindfulness and attentiveness;
2. Critical thinking and reflection; and
3. Social-emotional skills.

SECTION 2

Happiness: Curriculum & Observations

The HC framework situates the program globally and in India's environments, stating that "schools in India need to implement a curriculum which not only promotes development in cognition, language, literacy, numeracy and the arts but also addresses wellbeing and happiness of the students... and prepares citizens who are mindful, aware, awakened, empathetic" (SCERT-Delhi & DoE, 2018, p. 9).

The framework used to understand the nature of happiness is structured as a triad composed of physical senses (labelled as Momentary Happiness), feelings within relationships (labelled as Deeper Happiness), and learning and awareness (which is labelled Sustainable Happiness). Within this triad, the purpose of the HC is to support students on their path to sustainable happiness. The intended outcome is to enhance student awareness and mindfulness and to deepen learning.

Accordingly, the objectives of the HC are as follows (SCERT-Delhi & DoE, 2018, p. 14):

- To develop self-awareness and mindfulness among learners
- To inculcate skills of critical thinking and inquiry in learners
- To enable learners to communicate effectively and express themselves freely and creatively
- To enable learners to develop empathy and understand their expectations in relationships to build healthy relationships with peers and teachers
- To enable learners to apply life skills to deal with stressful and conflicting situations around them
- To develop social awareness and human values in learners to engage in meaningful contributions to society
- To develop a holistic approach to education in a universal context.

Guiding these objectives are the principles of the National Curriculum Framework (NCERT, 2005), which are as follows:

- Connecting knowledge to life outside of school
- Ensuring that learning is shifted away from rote methods
- Enriching the curriculum to provide for the overall development of children rather than maintain a textbook-centric approach
- Making examinations more flexible and integrated into classroom life
- Nurturing an overriding identity informed by caring concerns within the democratic principles of the country.

The intended learning outcomes of the HC are listed in Table 2.1. It is noteworthy that some of these outcomes can be hypothesised as direct effects of the HC, while others are indirect. For example, scheduled classes on mindfulness are a feature of the HC and could reasonably be expected to generate changes in student and teacher perceptions due to their explicit nature. Links of such direct effects to improved academic performance in general, or comprehension in particular, are more tenuous. These outcomes will be a function not only of influences such as the HC but also of the past learning performance and individual characteristics of students.

In this study the curriculum was analysed to explore the degree to which these intended learning outcomes were reflected in lesson plans.

Intended learning **outcomes**

Table 2.1. Intended learning outcomes

1. Ability to be Mindful and Attentive

1.1. **Develops increased level of self-awareness and mindfulness**
1.2. *Comprehends subject matter clearly*
1.3. *Reflects better performance in academics and extracurricular activities*
1.4. *Shows increased interest in studies*
1.5. **Develops active listening (e.g., with teachers, family and peers)**
1.6. **Focuses and sustains attention on the current task (e.g., on academics, sports and arts), thereby reducing distractions**
1.7. Remains in the present, i.e., aware of what is happening within themselves and in the surrounding environment
1.8. Monitors and is mindful of actions and thinks before acting

2. Critical Thinking and Reflection

2.1. **Observes self and others better**
2.2. **Develops strong ability to reflect on one's thoughts and behaviours**
2.3. *Thinks critically and does not believe without evaluation*
2.4. *Operates in a resolution-centric way*
2.5. *Reflects clarity of choices and is able to choose and decide authentically*
2.6. *Thinks beyond stereotypes and assumptions*
2.7. Thinks innovatively and executes work creatively

3. Social-Emotional Skills

3.1 Demonstrates empathy (understands feelings of others, sees situations from own as well as others' perspectives and responds appropriately)
3.2 Understands expectations in relationships
3.3 *Deals with stress and anxiety*
3.4 *Identifies, reflects on and takes mindful actions in difficult circumstances*
3.5 Makes and maintains relationships and resolves conflict in an appropriate manner
3.6 **Develops Better Communication and Expression skills**

4. Confident and Pleasant Personality

4.1 *Develops balanced outlook in daily life*
4.2 *Reflects self-confidence with pleasant behaviour*
4.3 *Reflects awareness of health, cleanliness and hygiene*
4.4 Appreciates self, family, others and environment
4.5 *Becomes more responsible*

Italics show the subscales which are minimally reflected in sample HC lesson plans.
Bold font shows the subscales which are most strongly reflected in sample HC lesson plans.

CURRICULUM ANALYSIS

Lesson plans were selected across levels from Nursery to Grade 8, with the topics and their stated objectives and guidelines for teachers. These representative plans were analysed to identify how they mapped to the stated objectives of the HC, as well as how they reflected the intended learning outcomes. The analysis consisted of an audit of the lesson plans to note the intended objectives and the contributing skills required to complete the lessons. The audit was completed by two-raters and then compared for consistency.

There are differences in the degree to which the various factors and learning outcomes are reflected across lesson plans within and across grade levels. The detailed results from the curriculum analyses are presented in Appendix I.

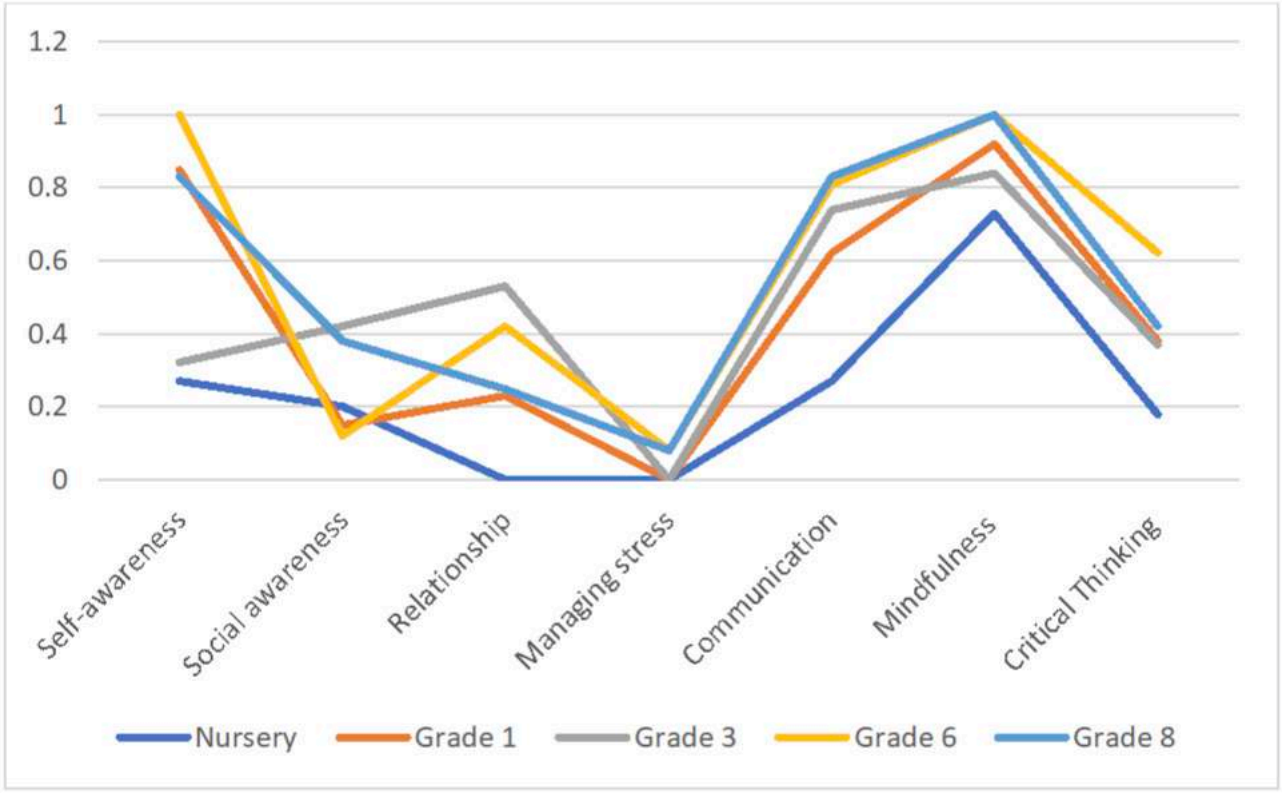
Factors

The factors of self-awareness, communication and mindfulness are those most strongly represented across the curriculum, as Figure 2.1 shows. HC factors are represented least overall at the Nursery level and somewhat less at Grade 1.

In brief:

- *Self-awareness* is increasingly evident from Nursery through Grades 6-8.
- *Social awareness* is strongest in Grades 3 and 8.
- *Relationship* is strongest in Grades 3 and 6.
- *Managing stress* is not represented strongly across all grades at all.
- *Communication* appears across all grades and is particularly strong in Grades 6 and 8.
- *Mindfulness* is strong across all grades.
- *Critical thinking* varies across grades but is strongest in Grade 6.

Figure 2.1 Presence of Happiness Curriculum factors in lesson plans

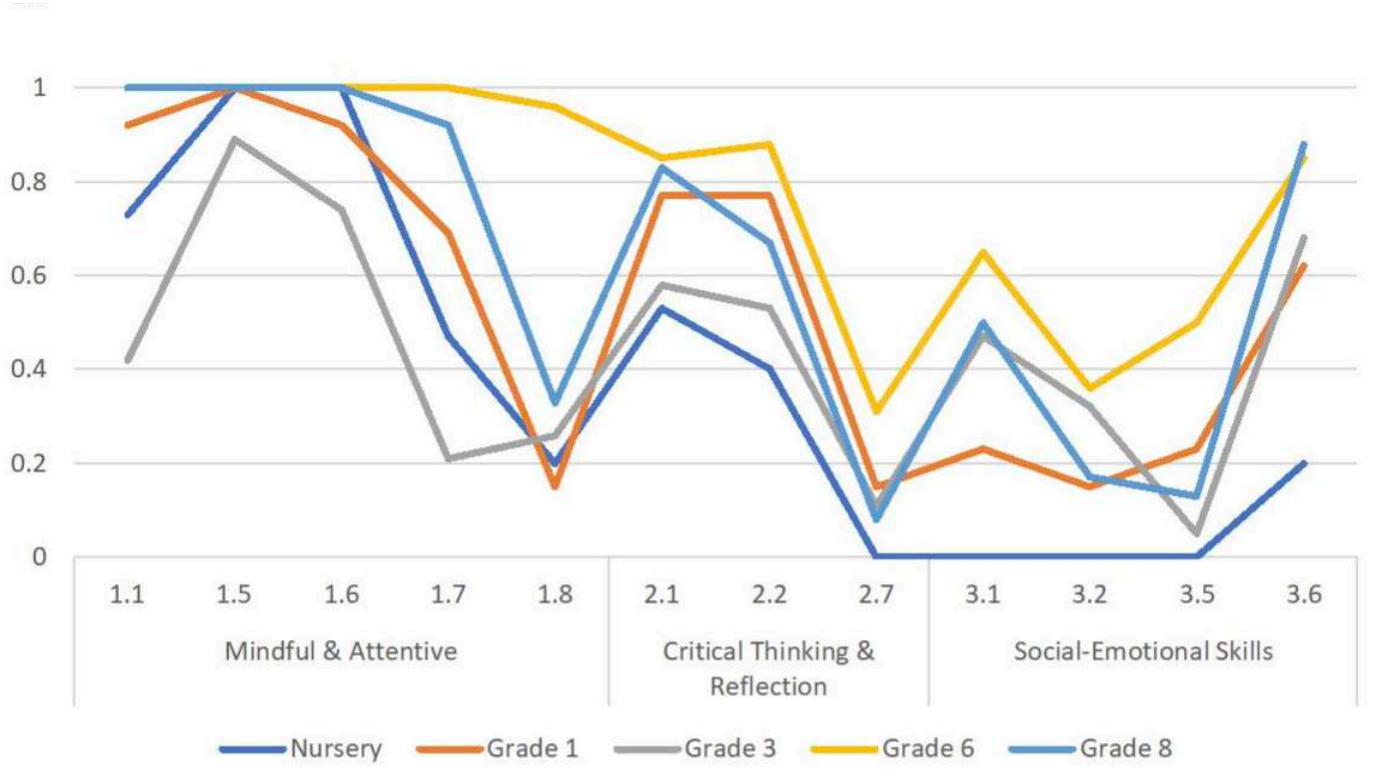


Learning outcomes

Representation of the learning outcomes is complex due to the deconstruction of the four sets of learning outcomes into subsets (Table 2.1). Within each of the four sets, representation of subsets varies. Those subsets shown in italics in Table 2.1 are almost non-existent in the curriculum analysis across all grade levels. For the remaining subsets, there are some interesting differences both within set and within grade levels. The subsets in bold font in Table 2.1 are those that are found most frequently. Some variations are seen across grades; typically, these variations take the form of greater presence in the higher grade levels. Therefore, subsets in the mindful and attentive and critical thinking and reflection sets are most evident, with the final subset (3.6) of social-emotional skills also notable, apart from within the Nursery level.

Figure 2.2 includes only those intended learning outcomes that are evidenced in the curriculum. Notable is the relative invisibility of most subscales within the Confident and pleasant personality scale. One subset (not shown in Figure 2.2), appreciates self, family, others and the environment, is visible through the lesson plans and is linked substantively with the areas of self-awareness, social-awareness, relationships and communication.

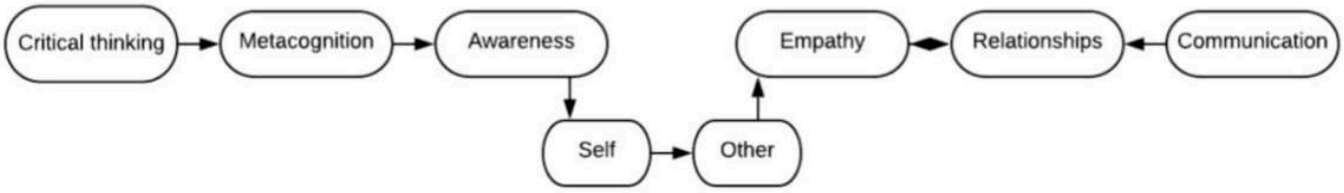
Figure 2.2 Presence of intended learning outcomes in lesson plans



1.1 Develops increased level of self-awareness and mindfulness 1.5 Develops active listening 1.6 Focuses and sustains attention on the current task, thereby reducing distractions 1.7 Remains in the present 1.8 Monitors and is mindful of actions and thinks before acting	2.1 Observes self and others better 2.2 Develops strong ability to reflect on one's thoughts and behaviours 2.7 Thinks innovatively and executes work creatively	3.1 Demonstrates empathy 3.2 Understands expectations in relationships 3.5 Makes and maintains relationships and resolves conflict appropriately 3.6 Develops better Communication and Expression skills

As described in Section 1, the Happiness Curriculum rests on clusters of human characteristics and competencies. A useful summary of these clusters and their relationships is provided in Figure 2.3. These illustrates the cross-over between cognitive and social competencies in the individual, together with how each of these inform the other. These are all represented in the findings from the curriculum analysis as shown in Figures 2.1 and 2.2.

Figure 2.3 Structural conceptualisation of Happiness Curriculum



GROUP INTERVIEWS

The researchers interviewed students, teachers and mentor teachers to understand the ideology, activity of and responses to the HC from the direct stakeholders—students and teachers. The premise of the HC is that helping students develop the essential skills associated with happiness (e.g., critical thinking, communication and social skills) will improve students' learning and life outcomes. Teachers provide opportunities to connect knowledge to life outside of school, encourage students to apply skills in their lives and use a variety of engaging teaching strategies, including active participation. Children attending classes in Delhi government schools spend 35 minutes (that is, one class period) in the first half of the school day in Happiness Classes, where they engage in exercises, indoor games, reflective conversations, storytelling, guided practice for mindfulness, role-play and presentations.

Method

Interviews were carried out with 24 students from Grades 5 and 8 and their teachers in separate groups. Open-ended focus questions were designed to stimulate free-ranging responses. The group interviews were conducted in both Hindi and some English; the predominance of each language varying across the groups according to language facility. A translator supported the process. Most interviews took 20 to 30 minutes. Questions in the teacher group interviews were designed to identify teachers' knowledge and understanding of the HC. The questions to students were directed to elucidate the difference in their experiences between Happiness Classes and subject classes, as well as their perceptions about how teachers and parents were reacting to the HC. Researchers also attended several happiness and subject classes to better understand the processes and activities.

The project team took notes of participant responses during interviews and classroom observations. Analysis consisted of a thematic review.

Themes from Student Interviews

Students were asked a selection of the following questions during the interviews. These questions were asked after some initial conversations, in which students and researchers talked briefly about themselves as a warm-up activity. Ad lib follow-up questions were also posed, according to student responses.

1. Do you have happiness classes every morning? Can you describe a typical happiness class?
2. What are some differences between the happiness classes and other subject classes?
3. Can you tell me about your least/most favourite activity in the happiness class?
4. Have these happiness classes helped you to learn new things? Has it helped you do better in your other classes?

5. Do you receive any grades for your happiness class?
6. Can you tell me three things you would like to change about happiness classes?
7. Can you think of any time when you used any skills that you learned in the happiness classes in your daily life?

The next section describes the main points and themes from the sessions.

Better relationships with their teachers

Students initially found the HC very different from their traditional classroom experiences. In other subjects, teachers are restricted in terms of timeline and content, and the focus is on knowledge and providing right answers for questions. Happiness Classes were perceived as different, with opportunities for interesting activities and discussions; in particular, there were no right and wrong answers. This approach is seen to encourage students to feel more comfortable in raising their hands and sharing their perspectives with their teachers and classmates. As both students and teachers have become more familiar with the new environment, interaction and discussion have increased; students have been provided with the space to express themselves; and teachers have the opportunity to know their students better—with the outcome perception of improved relationships between students and teachers.

Increased participation in classes

With the transition to a new classroom dynamic in the Happiness Classes, students had some difficulties adjusting and understanding what is expected of them. Since there are no textbooks in the classes, no examinations and no need to provided correct answers, students have come to feel less pressured and realise that everyone has something to contribute to the discussion. The changed view of some conventions is illustrated by this example. In traditional classes, being first to raise a hand to respond to the question is seen as an indicator for success. In contrast, with the help of mindfulness classes, students are starting to realise that being calm and thinking before acting may be valuable.

Increased focus and mindfulness among students

Mindfulness sessions are a central component in the HC; these occur every day of the week (two to three minutes of mindfulness breathing in the morning and the whole class on Mondays). These classes enable students to practice and improve their skills in retaining attention and being present in the moment. Students mentioned their experience as feeling recharged, calm and relaxed. Mindfulness classes help them to take a pause and reflect before reacting without thinking. Students noted that they interact with their peers more positively and are less likely to get into fights over little things.

POSITIVE BEHAVIOUR CHANGES OUTSIDE OF CLASS AND SCHOOL

The moral stories and role-playing activities have highlighted the concept of empathy for some students, who mentioned changes in their reactions to issues. One noted that he is taking less for granted now and expressing his appreciation more often, for example, to a school worker for providing food to the students. Another stated, “These days I don’t get as angry as I used to. I have slowed down and not contradicted my mother…. Happiness Classes have helped me with it.”

Themes from Teacher Interviews

Teachers were asked a selection of questions from the following after researchers described the purpose of the interview.

1. What is your understanding of what the goals of the Happiness Curriculum are? Do you think these goals are achievable, given the structure of the curriculum?
2. How would you identify whether a child is happy?
3. How long have you been teaching Happiness Classes?
4. Please describe a typical happiness class.
5. What are the main differences between Happiness Classes and subject classes?
6. What kind of teaching strategies have you tried to implement in these lesson plans? How comfortable do you feel using the instructional strategies involved in teaching these lessons? Do some strategies work better than others?
7. What are three things that you like, or dislike, about this curriculum? Are there any aspects of these lesson plans that you find helpful in teaching or that are obstacles to your teaching?
8. What are some challenges in implementing this curriculum, and how do you address them?
9. Have Happiness Classes brought about changes in the behaviours of students or your teaching approaches?
10. Would you say these Happiness Classes have a positive impact on student learning outcomes?
11. Do students behave differently in the Happiness Classes than in subject classes?
12. How do you assess whether students understand the material you present in class and whether they have met the objectives?
13. Have you received any training to teach the Happiness Classes? If so, please describe.
14. If you have any questions about implementation of these lesson plans, whom can you ask?
15. What resources are generally available to teachers to improve teaching and assessment techniques?
16. Is there additional support that would make it easier for you to better use this curriculum?

The following section summarises the main themes that **were identified from the interview sessions**

Prioritizing values over academic success

Historically, the curriculum has primarily focused on academic success and achievement. In contrast, the HC is centred on building values to make students better citizens. This curriculum has been developed to promote the importance of factors other than competition, such as better relationships, cooperation and mindfulness. Teachers find that the HC supports these values, and they have observed changes in student behaviour. For example, students who have been less likely to volunteer inputs into traditional subject classes are now raising their hands to participate in discussions.

Changing teaching orientation

Teachers see the flexibility of the HC as a positive development. In the absence of required standardisation in terms of content, timeline and assessment, teachers have the freedom to design classes according to students' needs and interests. One of the teachers stated "There is no pressure to complete in one year—we can stick with the pace of the students." This statement is in contrast to how teachers and students still see their behaviour in traditional subject classes, which sometimes reflects a less positive teacher-student dynamic in which teachers might yell at students.

Increased collaboration among teachers

The introduction of the HC represents a major change for some teachers. They receive one to two days of training before they start implementing the HC; some find this period insufficient. Some teachers experienced difficulties in understanding how to teach students and follow the HC lesson plans. Some teachers have shared their strategies to help one other. Teacher responses reveal significant differences in how they view their preparedness for HC classes.

SUMMARY

Students and teachers presented an overall positive response to the HC. Note that it is possible that the group format for interviews may have inhibited the expression of diverse opinions in both student and teacher groups. Present at the interviews were members of the implementation team; for the student groups, the teacher of the students was often also present. Notwithstanding, the students, in particular, seemed eager to share their perspectives, and they illustrated these with personal examples, thereby providing some validation of the more generic positive statements made. Classroom observations by the researchers confirmed many of the insights provided through the interviews, providing yet another source of validation evidence. The interviews were a major contribution to ensuring the authenticity of some scenarios that were developed in the survey process to underpin the survey items.

SECTION 3

Happiness: Development of Measures

In order to develop surveys that would capture student and teacher behaviours associated with the goals of the HC, several steps were followed. Despite anecdotal information from interviews and observations that the HC is well regarded by both students and teachers, it is important to ascertain if the HC initiative has sustainable outcomes. The first step in looking for sustainable outcomes is to find out if the characteristics of the HC can be sampled in a way that contributes to claims of validity—that what is being measured is true to the target of the measurement. Since many factors contribute to a sense of wellbeing and to learning outcomes, attribution of effects to only one of these factors is not possible. However, the development of a survey that provides information about functioning levels of students and teachers in the factors of interest will contribute to an evaluation of the added value of HC over the sole delivery of academic teaching and learning.

The curriculum analysis provided information germane to the development of survey items. It identified:

- What factors are represented in the HC itself; and
- What factors are represented in the intended learning outcomes?

Item and Scale Development

Survey items were created that might capture the student and teacher behaviours associated with factors that contribute to happiness. The steps followed were:

- Draft items
- Review items within small groups of students and teachers in Delhi
- Revise items
- Pilot the administration of items
- Analyse the results of a pilot of the items
- Finalise the items within scales.

The competencies of being mindful and attentive, thinking critically and reflecting and social-emotional skills, as these pertain to empathy, perspective taking and relationships, were identified as central to the HC learning goals and were reflected in the HC analysis. Item creation was seeded by the descriptors of the competencies and the curriculum analysis that provided contextual information. Reference is made in the items to the context in which students and teachers find themselves on a daily basis. This approach was designed to maximise the authenticity, that is, the real-life aspects, of the items to facilitate student and teacher responses.

Measurement Approach

There are various ways of measuring happiness or wellbeing, both for adults and children. Most measures are self-report assessments. Some of these are created in academic environments; others are created by and for use by non-government organisations to evaluate their interventions. Large-scale measures are also available. For example, every three years since 2012, the World Happiness Report releases global rankings of happiness based on a survey that asks people to evaluate how they feel about their lives on a scale from zero to 10.

Measurement Approach

Happiness is an imprecise, multifaceted, and subjective term that is difficult to define in the terms needed to facilitate measurement, and it is hard to measure in a way that allows meaningful comparisons between individuals and groups (White, 2015). Based on OECD (2013), life circumstances, differences about how people feel about their life circumstances, the language which they use to express themselves and the culture in which they live, should be taken into account when addressing the measurement of happiness or wellbeing.

In many contexts, self-report formats for gathering information about individuals are often preferred because they are relatively easy to administer and may be cost efficient. However, they can be subject to distortion caused by mood (that is, state versus trait responses), lack of understanding of the intent of items and social response bias.

There are several challenges to the measurement of "soft skills," social-emotional competencies, personal characteristics and values and attitudes. For this work, three challenges are particularly salient. The first is the broadness of the goals of the HC and its description of relevant factors. For well-targeted assessments, it is essential to have a very clear understanding that translates into detailed descriptions of the competencies of interest. Due, in part, to the recency of the concept of the HC, these detailed descriptions of the valued competencies have not been fine-tuned. The second challenge concerns social response bias, that is, the predisposition of respondents to present themselves in positive ways. The third challenge concerns the mode of assessment. How do we know whether two children are happy to different degrees when one endorses an item "I am very happy" and another endorses an item "I am happy"? Are these two children actually reporting different degrees of happiness? The answer, of course, is that we do not know.

To address the first challenge, item development was guided by the learning context and curriculum, as well as by the current state of knowledge about the competencies of interest.

To address the second challenge, the rationale for the study needed to be communicated well to participants. In the case of evaluation of innovations such as the HC, it is likely that responding participants may feel anxious or at risk. Although such evaluations may not intend to evaluate the individual, it is natural for respondents to feel evaluated. Such concerns can translate into respondents providing responses that they believe are desirable in the eyes of the person asking the questions. To diminish this risk of social bias, researchers try to ensure a non-threatening environment for respondents. Unfortunately, in many systems where any provision of data may have repercussions for data providers, innate anxiety is almost impossible to assuage. Notwithstanding, in this study, efforts were made to assure participants of the non-personal nature of the research, and, in particular, that they were not the ones being evaluated. Rather, they were told that they were helping to develop measures that will inform the teaching and learning of students more generally, as well as possible program improvement. Another way of addressing social bias is to develop items that may be less transparent. Such items might, for example, rest on behaviours or predictions of behaviours, as opposed to perceptions; this approach is similar to the situational approach taken in this study.

To address the third challenge, drafted items relied on evidential situations. Students and teachers were asked to provide their likely emotional, social, cognitive or behavioural responses to hypothetical situations, rather than to make evaluative or judgmental statements about themselves. Several approaches to the item format were considered. An assumption in education, including in the HC, is that desired student behaviours can be enhanced by the modelling of those behaviours by significant others, such as teachers. In addition, a hypothesis of the rollout of the HC is that changes in teacher behaviour will lead to changes in student behaviour. This means that the test items for both students and teachers need to reflect the same, or similar, competencies. However, the perspectives and maturity levels of students and teachers are typically very different. Accordingly, the item development needed to be situated in scenarios or situations that were valid for both groups while able to reflect these maturational differences. These differences can be seen in the items where student attention is focussed on responses to the teacher, while teacher attention is focussed on the management of the student. Using these different perspectives, items were drafted to capture many of the same competencies while maintaining the authenticity of the situation for both participant groups. As will be seen in the discussion of final item selection, the responses from the two groups demonstrate that exact parallels cannot be achieved. This finding is not unexpected; it may be viewed in the

same way that we see discontinuities in other aspects of human development over the maturational spectrum—such as between childhood temperament and adult personality, or between early and more mature forms of literacy behaviour.

Data Plan for Pilot of Student and Teacher Surveys

The number of students and teachers needed for piloting of items was calculated based on number of items in the measures. The recommended minimum number for sample size was 40 teachers from each of Classes 1, 3, 6, 8, for a total pilot size of 160 teachers; and 150 to 200 students at each of these class levels, for a total pilot sample size of 600 to 800 students. Actual sampled numbers were 218 teachers across 16 schools and 1155 students across 14 schools. The inclusion of several class levels was to inform the hypothesis that growth in the constructs of interest would be associated with the increasing age and maturity of students. If it can be established that growth in contributing competencies is associated with maturation—and given the evidence in the literature that these competencies are teachable—then the explicit teaching and modelling of the happiness competencies would be justified. Equally, an increase in the competencies with maturation would provide validation evidence of the measures of the competencies.

The sections on item analysis, pilot and scale building are presented separately for students and teachers. Items for both groups were drafted based on the hypothesised competencies and scales identified in Table 3.1. Materials used with students and teachers are in Appendices A to F.

Table 3.1 Hypothesised competencies and scales

Skills	Subscales
Mindful and Attentive	**1A** Increased level of self-awareness **1B** Focused and sustained attention
Reflection and Critical Thinking	**2A** Reflects on thoughts and behaviours **2B** Thinks critically
Social-Emotional Skills	**3A** Empathy and perspective taking **3B** Relationship skills

Item Analysis: Student

Initially, 24 items were drafted to target the competencies for students outlined in Table 3.1. The situational items were written specifically for student-level issues. For each item, students were instructed to self-identify for each item from "most like you" to "least like you". Students were not presented with one response statement and requested to indicate endorsement of this at different levels; rather, they were presented with three response options and requested to identify which was most, less and least likely for them. None of the response options was negative in nature; they merely reflected the different levels of skills inference.

Figure 3.1 provides an example of a discarded item to illustrate the characteristics of the approach. The item has three parts:

1. The instruction to note how all of the responses are preferred, from most preferred to somewhat preferred to least preferred;
2. The stem of the question; and
3. The three response options.

The requirement that students express preferences for all of the items was to ensure rich data gathering to provide maximum information; students needed to read all options rather than focus only on what they most preferred. Data gathering at this detailed level provided the researchers with item-level responses to inform scale development.

The stem of the question for all items presented an activity or situation that would be familiar to all students, providing the opportunity for them to reflect on their typical behaviours.

The response options provided several choices, none of which would be identified as intrinsically wrong or negative. The options were developed to target levels of development within the scales. In the case of this discarded item, there are no "wrong" responses, which lowered the risk of social bias. However, the rationale behind the item was to capture aspects of critical thinking and reflection, rather than adherence to a rote learning paradigm in which finding a correct solution would reasonably be regarded as an appropriate response.

Figure 3.1 Illustration of item format and response options—a discarded item

For each question, show which response is "most like you," "somewhat like you," and "least like you," by putting a 1, 2 or 3 next to each option. You can use each number only one time.

1 = least like you;
2 = somewhat like you;
3 = most like you.

If I am given a problem, the most important thing to me is:

_____ To find the solution.
_____ To think of different ways of solving it.
_____ To understand what the problem is asking.

The item review by the teacher mentors and Dream a Dream staff led to simplifying some items, rewording others to clarify them, and changing some response options. Notwithstanding these changes, some concerns remained about language complexity and phrasing.

Pilot: Student

A set of 24 items was administered at group level to 1155 students across schools in Delhi. Students were from Grades 1 to 8 (Table 3.2). Slightly more males than females participated. The goal of the pilot was to identify the functioning of the items; the intention was to ascertain whether items were responded to in patterned and consistent ways. Ideally, analysis of how an item functions would be referred to a criterion judgment, such as whether a student known to be "happy" or act and perform at a high level on the competencies of interest also scored high, or in the predicted direction, on the items. In this case, however, such a set of criteria was not available. Accordingly, decisions concerning the functionality of items were made based on statistical and interpretive grounds.

Initial item screening was undertaken for responses from all students, while later analyses were undertaken only for students in Grades 3–8. First, all items were checked for the distribution of student raw responses across all response options. No response options received less than 8 percent of endorsements; accordingly, no items were deleted as a result of this step. The final scoring approach adopted1 was to mark the response most consistent with the HC factors and intent as "correct" and other responses as "incorrect." The rich data generated by the three-response requirement provided additional information to inform the discarding of items—where patterning of responses indicated that the items were not functioning as expected.

Table 3.2 Number of student participants in the pilot

		Male	Female	Total
Grade	1	50	53	103
	3	47	64	111
	5	58	62	120
	6	177	216	393
	8	187	241	428
Total		519	636	1155

Scale Development: Student

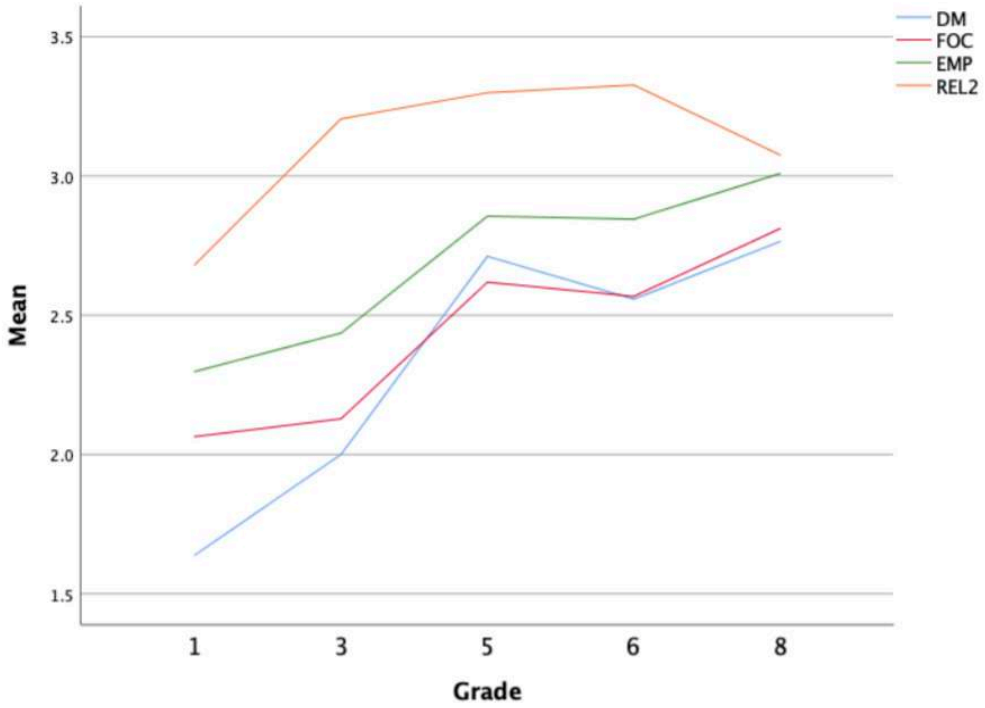
Items were reviewed in terms of their individual distributions and of how they contributed to their loading on a priori hypothesised scales (Table 3.1) through analysis of reliability coefficients and item clustering. Responses from Grade 1 students were discarded due to concerns about the validity of the responses. Final analyses were undertaken with student responses in Grades 3–8 and again in Grades 5–8. Some items showed different patterns of response for Grade 3 students than for the older students. These different patterns could be due to literacy issues, or developmental issues associated with cognitive demand of items or associated with emotional and social development.

The final set of items includes 14 of the original 24. However, the items did not uniformly adhere to the a priori attributed scales of mindful and attentive, critical thinking and reflection and social-emotional. The review of the item text, in concert with the review of the item statistics, contributed to the updated scales; the composition and interpretation of the scales are generated based on statistical and substantive considerations. One outcome is that the reliability coefficients for the scales are not as robust as they would have been had the statistical output alone been relied on. The interpretability of the information is prioritised, taking into consideration the need to establish the face validity of the survey. This aspect of face validity is particularly important for the stakeholder user group and has been used as a key criterion for item review.

Method 1: Three variables for each subscale are calculated: one for the most valued responses (Hi), one for the second-most valued (Md), and one for the least valued (Lo). Hi, Md, and Lo are each calculated from the addition of the 3, 4 or 5 items that were a priori allocated to the subscale. The item numbers are drawn from the item numbering on the administered student form.
Method 2: This method reflects the original intent of the item development in valuing the preferred (or "correct" response) only. The method uses the a priori Hi responses only such that the resulting scale is based on just one response to each item.
Method 3: This method used all three response options to each item, based on a priori patterns. The original item development had provided a preferred (correct) response, a less preferred, and a non-preferred. This method allocated scores from 1 to 6, dependent on the student endorsement of each of the options. A response that conformed with the student identifying most closely with the preferred response, and least with the non-preferred response, would receive a score of 6; a response that prioritised the non-preferred and identified least with the preferred would receive a score of 1. A response that prioritised the less preferred, then the preferred, and then the non-referred, would receive 4.

The final scales are Decisionmaking, Focus, Empathy and Relationships. Figure 3.2 shows that students gain greater proficiency in competencies as they mature. This finding is consistent with our expectations of such competencies and provides assurance of the meaningfulness of the scales. The Relationships (REL) scale consists of only two items and is subject to nonlinear differences across the grades. No significant or patterned differences by gender were observed across the competencies.

Figure 3.2 Increasing student mean scores across scales, by grade



Key: DM = Decisionmaking; FOC = Focus; EMP = Empathy; REL(2) = Relationships (adjusted to same scale as remaining three scales).

More than double the number of final items had been originally created to provide a pool from which to select. This approach was taken for two reasons. First, it is a typically conservative approach in test and scale development. Second, the items were created by experts familiar with the underlying constructs but unfamiliar with the Delhi context and cultures. It was reasonable to assume that this lack of cultural familiarity might lead to the creation of items that might not stimulate the skills responses intended in the target population.

The final set of student scales is shown in Table 3.3. Item allocation to scales is shown in Appendix G. Some of the concerns about student literacy and maturity (Appendix) inform the instability of reliability coefficients, many of which were in the 0.5-0.6 range (Hair et al., 2006) for these scales. The results are regarded as sufficiently strong to justify item use in larger populations. Addition of more similar items will contribute to greater stability.

Table 3.3 Student scales

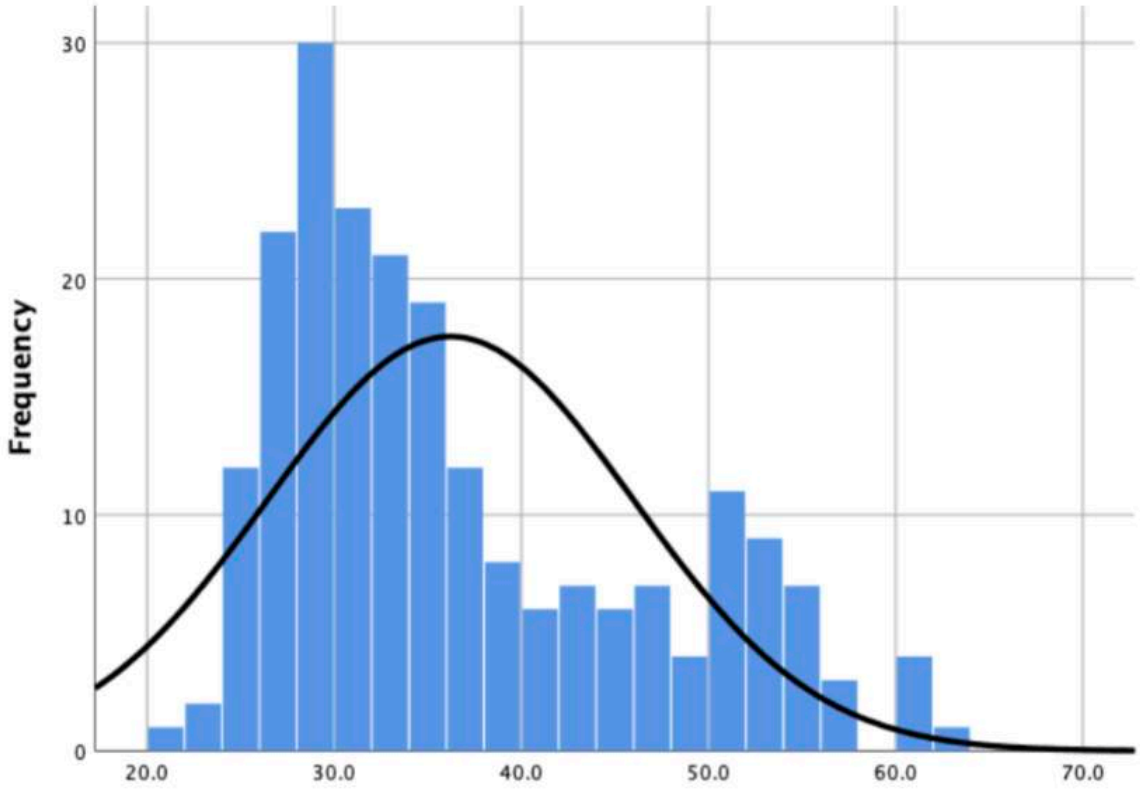
Competencies		Scale Descriptions	Items
Decision-making	**DM**	Making decisions by reviewing the situation and assessing alternative actions; requires insight about one's possible emotional and cognitive reactions	**4**
Focus	**FOC**	Being self-aware and focussed; demonstrating self-control and managing frustration and impulsive reactions	**4**
Empathy	**EMP**	Thinking of and considering the other; understanding the emotions that another person may experience	**4**
Relationships	**REL**	Taking the perspectives of others into consideration in the context of relationship maintenance and facilitation	**2**

Item Analysis: Teacher

An initial 21 items were drafted to target the competencies outlined in Table 3.1, the same skills and subskills onsidered for students. The items were situational, using an approach similar to that adopted for the student survey. Each situational item was accompanied by three response options. For each item, the administration instructions guided teachers to identify the response option "least like you" and the option "most like you," leaving the third option as the default mid-level response.

The item review by teachers and Dream a Dream staff led to simplifying some items, rewording and clarifying, and changing some response options. Notwithstanding these changes, concerns remained about the degree to which all teachers might have faced the situations described in the items.

Figure 3.3 Age of teachers in the sample



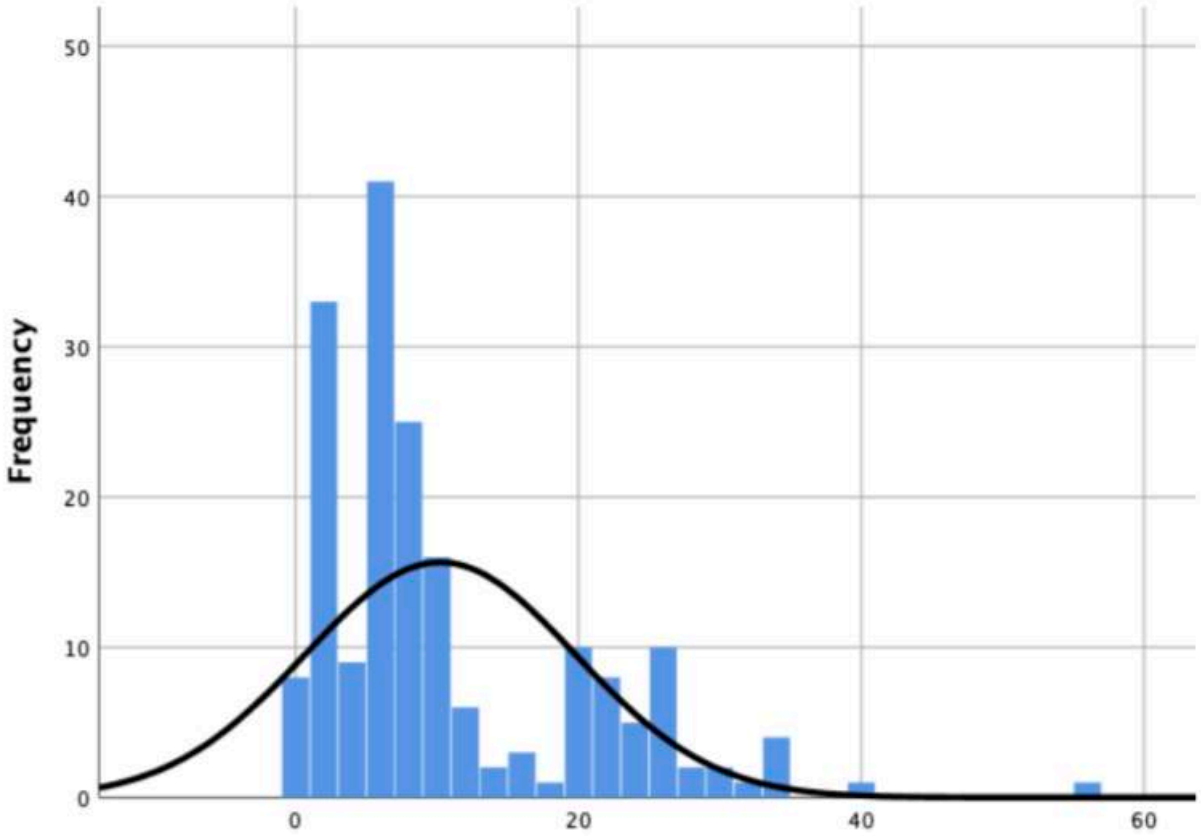
Pilot: Teacher

The items were administered at group level to 216 teachers across schools in Delhi. The 152 female and 64 male teachers were employed across 14 schools and their sub-schools and taught Grades 1 to 11. The mean age was 36 years, with a standard deviation of 10 (Figure 3.3); the years of experience, on average, was 10, with a mode of 5 and standard deviation of 10 (Figure 3.4). Most frequently mentioned subjects taught were Happiness, English, Hindi, Sanskrit and Social Science. Class sizes varied widely; 17 percent included 30 students or less, 53 percent included 31–49 students and 30 percent included more than 50 students. Most of the larger class sizes were in Grades 6–8.

Following the same set of procedures implemented for the exploration of student responses, Methods 1, 2 and 3 were used to explore the robustness and meaningfulness of items and item patterns with the teacher data. Method 2 item scores were selected as the most useful for scale development—that is, teachers' endorsement of the preferred, or high value, response for an item, was scored positive; "least like me" and null (mid-level equivalent) responses were scored as zero.

Unlike the student data, some teacher items had problematic frequency distributions of raw responses. These were analysed with a view to discarding those that had response options of less than 8 percent of endorsements or where the patterns were anomalous. In one case, an item was discarded since it appeared probable that different conventions across schools might impact teacher responses.

Figure 3.4 Years of experience of teachers in the sample



Scale Development: Teacher

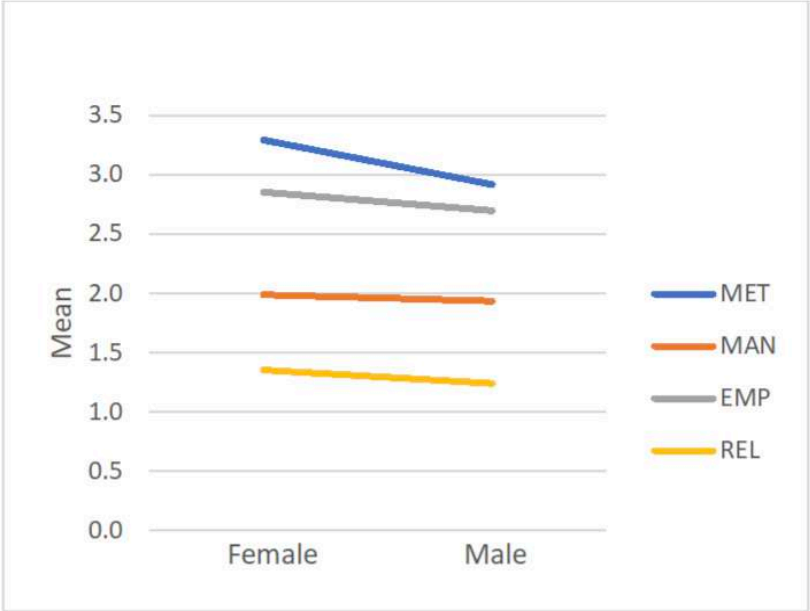
After the initial item-level analyses, a quick analysis of the retained items according to their a priori target scales was undertaken. Not all items loaded as anticipated. Accordingly, scale construction was reinitiated in light of the empirical relationships between the items, followed by interpretive analysis. The analysis of the correlations between items showed that some items related negatively or at zero levels with each other; these were deleted from the dataset. As a result of both the initial item-level analyses and the relationships analyses, the final set of items numbered 13 of the original 21. How these 13 items consistently clustered formed the final scales.

Table 3.4 lists the final scales and numbers of items contributing to these. There are clear similarities in the competencies captured across teacher and student groups, as well as some differences due to the different perspectives that each group brings to its school-based life.

Competencies		Scale Descriptions	Items
Metacognition	**MET**	Encouraging student metacognition	**4**
Management	**MAN**	Student-centred classroom management	**3**
Relationships	**REL**	Facilitating how students relate to each other in conflict situations	**4**
Empathy	**EMP**	Considering students' emotional and cognitive responses in difficult circumstances	**2**

Based on the nature of the background data collected, we have no theoretical basis on which to establish whether the teacher survey provides information that is associated with actual teacher proficiency. In the case of the student survey, some indication of authenticity was provided through the demonstration of increasing proficiencies across grade levels. There is no parallel evidence with the teacher survey. Although there is no reasonable assumption that age or experience should impact these competencies, these factors were explored for the teacher group. There were no associations; competency is not related to either age or years of experience. Female teachers achieved higher proficiency scores overall on all four competencies, compared with male teachers (Figure 3.5), but the difference was significant only for Metacognition.

Figure 3.5 Mean scores of female and male teachers on competencies



Note: Absolute size of means does not imply comparative proficiency levels across the scales in this figure since different numbers of items contribute to the scales.

SUMMARY: STUDENT AND TEACHER SURVEYS

On the basis of the piloted items that were drafted to target the competencies of interest in the implementation of the HC, the student and teacher surveys consist of 14 and 13 items respectively. These surveys can be used to capture the competencies associated with HC aspirations.

Items for the two surveys were drafted against the competencies of being mindful and attentive, reflecting and thinking critically, and social-emotional skills. The items were created specific to these competencies insofar as they would be familiar to students and teachers within the school context and to a lesser extent in the home. In other words, the item development was not designed to capture these constructs at a generic level; the parameters were set by the HC. The resulting scales are characterised slightly differently from the hypothesised scales but draw on the same constructs.

Analysis of student and teacher responses to these items reveal that different aspects of the competencies are reflected by the two groups. This makes sense, given both maturational and role differences across the groups. For example, Metacognition for the teachers takes the form of encouragement of this competency in students; for the students, it takes the form of insight into Decision-making and Self-Management.

Empathy looks more similar across the two groups; teachers consider how students respond in difficult circumstances, while students consider how others might respond across a variety of situations. Facilitation of Relationships for teachers concerns how students relate to one another in conflict situations, while students are engaged in earlier understandings of how others experience situations. These differences across the groups can be seen from a developmental perspective of growth and learning.

The two surveys represent an initial pool of items that can capture student and teacher competencies in the context of the implementation of the HC. That the competencies have been shown to vary across individuals demonstrates that the surveys have the capability of differentiating between individuals, as well as of differentiating among competencies within the individual over time. The degree to which the surveys are sufficiently fine-tuned to capture small shifts in the competencies remains to be established through a test-retest plan. Such a plan could reasonably include some additional items to make more robust the scales for both students and teachers.

The final constructs, or skills, that are represented by student and teacher responses to the piloted survey items tap into both the HC factors and the intended learning outcomes. Since the items were drafted in order to sample these, the finding is not surprising. However, some of the skills are more represented by the final survey than others, and student and teacher proficiencies vary across these.

The final competencies for students are as follows: decision-making, focus, empathy, and relationships. For teachers, the final competencies are: encouraging metacognition, student-centred classroom management, facilitating relationships, and considering empathy. These are all well-represented in the happiness factors and in the intended learning outcomes. Figure 3.6 depicts the commonality in the alignment of the theoretical foundations of the HC, its intended learning outcomes, and the student and teacher scales that most robustly capture the HC elements. Its similarity to the structure conceptualised in Figure 2.3 across cognitive and social functioning is clear.

Figure 3.6 Mapping of happiness factors across lesson plans and measurement scales

Categories of competencies	Critical thinking and reflection		Mindful and attentive		Social-emotional skills		
Sources							
Lesson plans: HC factors			Mindful	Self-awareness		Relationships	Communi-cation
Lesson plans: Learning outcomes	Critical thinking	Reflection	Mindful		Empathy		Communi-cation
Student scales				Focus	Empathy		
Student scales	Decision-making					Relationships	
Teacher scales					Empathy	Relationships	
Teacher scales		Metacognition			Classroom management		

Note: *Confident and pleasant personality* was found only minimally across the sources and is excluded from the table.

USE OF THE SURVEYS

The student and teacher surveys have been developed over a relatively short period of time, drawing on theoretical frameworks of the learning objectives, insights from students and teachers, and pilot response data.

The surveys should be used with caution. They are not intended to act as assessments of individual students or teachers. The mode of development was consistent with development of measures for large scale use, to generate information that would identify trends, or patterns. The surveys should not be used to rank students or teachers since they are not sufficiently robust and have not been subjected to large scale trials. In the event that such large scale trials were to be undertaken, collection of other information is also advised. This might consist of data based on classroom observations, standardised school progress scores, etc. These data could then be used to support evidence accumulation for claims of construct validity.

Administration and Scoring of Surveys

Instructions for administration of surveys is included in Appendices A to D. Note that validity of survey responses is dependent on literacy levels of students and teachers in the language in which the survey is presented. Where items are read out loud to students, this must be undertaken in such a way that there is no intimation from the test administrator that a particular response is favoured.

Scoring of the surveys is undertaken through simple summing of the responses. At this stage of survey development, each scale may be summed separately, as well as aggregating across all scales for a total score. Such scale and overall scores should be used with caution, as advised above.

As described in this report, for each item, three response options were provided. If an individual identifies as "most like" the preferred option, they receive a score for that item. This is the simple scoring method. For continued research use, the surveys can be used to provide richer information. In this case, if the preferred option is endorsed as "most like", it can be scored as a 3; if the second most preferred option is endorsed, it can be scored as a 2; and if the least preferred option is endorsed, it can be scored as a 1. Both scoring methods are illustrated in Appendix G together with the full tools.

Commensurate with the philosophy and purpose of the HC, it is appropriate that these surveys are administered with both students and teachers in the context of discussion about the goals of the HC. It is important that students and teachers understand that there are no incorrect responses. They should feel affirmed whatever their responses are, in the same way as teachers are currently affirming responses from students in the classroom without the need to judge, rank, or score students in the HC classes. As with the learning goals, the pedagogical methods are aligned, and so need to be the assessment approaches.

SECTION 4

Discussion

Three processes were undertaken: to review the HC, its contents and alignment with objectives; to determine the perspectives of students and teachers; and to develop a measure to evaluate the degree to which students and teachers appear to have adopted the values inherent in the HC and its factors. These processes involved analysis of the curriculum; group interviews with students and teachers; and development of items for surveys to be completed by students and teachers. Each of these processes are valuable in their own right, and each also contributes in exploring how to evaluate such an initiative. Such a goal is ambitious. Challenges to its fulfilment include the following:

· The known difficulty of measurement of human characteristics in normal populations, particularly those associated with values, attitudes and emotions

- Language factors across three levels:
- Translation of English language items to Hindi
- Use of language understood in schools, as distinct from formal language
- Variations in language fluency in the target participant groups.

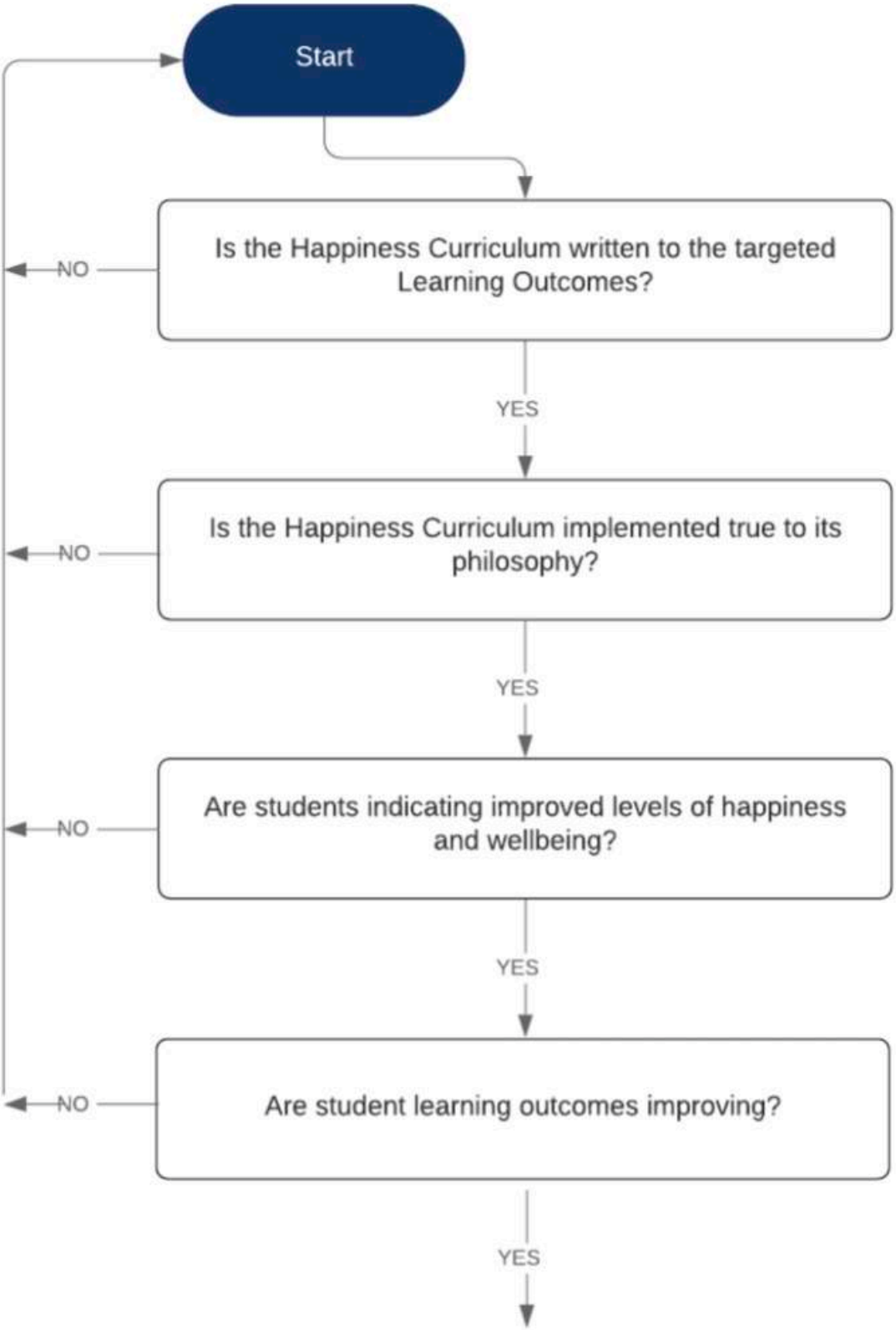
Over time, mastering wellbeing-related competencies results in a developmental progression that leads to a shift from being mainly controlled by external factors to increasingly acting in accord with internalized beliefs and values, caring and concern for others, making good decisions and taking responsibility for one's choices and behaviours (Greenberg et al., 2003). These competencies should provide a foundation for better adjustment and academic performance, as reflected in more positive social behaviours, fewer conduct problems and less emotional distress. The increase in connectedness, engagement and perseverance in education interventions are more likely to produce both academic success and happiness.

Systems and schools worldwide are implementing programs that take a holistic approach to student learning and development; the HC introduced by the Delhi Government is one such approach. Such programs are implemented in countries and districts which vary in educational outcomes. For example, the shift away from knowledge-based to competency-based education is taking place in the Republic of Korea, noted for its high academic performance in international large-scale assessments in recent years. A similar interest is indicated in Indonesia's recent decision to include measures of character in the national assessment system, notwithstanding its lesser success in international large-scale assessments. Each of these countries approaches the issue differently but with a common goal—the betterment of educational outcomes.

When educational systems identify systemic issues, as has been the case in Delhi and elsewhere, they are duty-bound to implement reasonable strategies to remedy deficiencies. They do not, however, have the luxury of running high-quality randomised trials to check on efficacy, due both to the considerable time needed to conduct these and to the ethical issues involved in providing some but not all constituents with the intervention.

Accordingly, the issue confronting the evaluation of the HC is that it cannot be undertaken through a strict trial process. All students in the Delhi Government school system are receiving the intervention, so there is no option to use control groups or randomised trials. And it will be many years before the fruits of the new trends in learning outcomes become visible. This study has taken an approach which acknowledges these limitations and which is focussed on examining whether the curricular approach is mirrored in teacher and student behaviour.

Figure 4.1 describes the logic model to be followed to evaluate the utility and effectiveness of the HC in the longer term.



At each point in the model, another step in the logic can be tested or evaluated. Where the answer to each logic question is "NO," that step goes to review. For example, if analysis of the HC were to identify that it was not well written to the learning outcomes, it would need review and rewriting.

From this pilot study, it was shown that the current HC targets certain happiness factors to a greater extent than others. Following the model provides an opportunity to rethink whether all of the factors included in the HC objectives are appropriately part of the curriculum. It then provides the opportunity to review the curriculum with an eye to the inclusion of additional features to target the desired elements more comprehensively.

The next question concerns whether the HC implementation is true to the intention. Many factors affect implementation. These include provision of guidance materials to schools and teachers; professional development for educators; acceptance of and engagement in the innovation and its philosophy by schools and teachers; and physical conditions, such as class size. Evaluation of the implementation is not the same as evaluation of the curriculum or of its impact on students—it is specific to the nature of the implementation activities themselves. If the curriculum is not implemented as intended, the evaluation of student learning outcomes would be based on unfounded assumptions.

The next question begins the exploration of the effects of HC implementation. In the first instance, are students indicating happiness and wellbeing? To explore this question requires a method of capturing such indications, and this study describes a survey method. This is the point at which the non-availability of a control study approach needs to be recalled. It is not possible in the current case to ascertain any increase in happiness and wellbeing scientifically because all schools were involved and no pretesting was undertaken. The next best option is merely to ascertain whether the levels of happiness are consistent with the expectations, as explicitly stated in the curriculum. Over time, as implementation of the HC becomes fine-tuned, it may be possible to examine increases in these affective outcomes.

The final question goes to the impact of student happiness and wellbeing on learning outcomes. If the curriculum is written to its target learning outcomes, and if the implementation of the curriculum is true to its philosophy, then improvement in levels of happiness and wellbeing, as defined by the HC, should improve over time. The next question then is if the levels of happiness and wellbeing improve, will learning outcomes improve?

It is through this last outcome that the most robust psychometric impact of the HC could be monitored. Education systems are relatively better equipped to assess academic learning outcomes than social-emotional conditions. The establishment of happiness levels in parallel with improved learning outcomes would provide conclusive evidence of the positive influence of HC on children and their futures.

CAUTIONS

Given the global shift to a focus on wellbeing in education systems, this study provides insight into the opportunities and challenges posed by the need to evaluate the implementation of more holistic models of learning. An essential step in such evaluation is to determine the viability of the collection of indications of changed states of wellbeing and of learning. This study represents one approach to the development of a tool for this step.

There are two considerations to note concerning this approach:

1. Additional Items

The development of additional items, based on the template provided by the finalised scale presented in this report, would provide a complementary resource to the set of items developed to date. The development of items would take into consideration the following:

- Conventions governing teacher and student behaviours in the school context
- Greed notions of appropriate pedagogical strategies, including both teacher-directed and student-centred strategies

- Literacy demands of survey items
- Likely bias of student responses to survey items in the case of teacher-facilitated administration.

2. Alternative Strategy for Young Students

The identification of an alternative strategy to monitor HC outcomes for students in the early grades is necessary. The approach explored in this study is beyond the literacy and maturity levels of most young children.

CONCLUSION

This study has demonstrated that it is viable to generate a measure of happiness factors in the context of the HC. The use of situational items with responses that reflect increasingly valued actions is a preferred approach to self-rating scales that reflect respondent evaluation of affective states. Situational items stimulate individuals to consider likely behaviours and actions and encourage metacognition—itself a valued factor among the happiness elements.

The next step is to implement a large scale evaluation study in which changes in state using the developed measures could be ascertained. Ideally, additional steps in the development of tools would take place. These would include the accumulation of evidence of construct validity through concurrent measures rather than through internal goodness-of-fit approaches.

The decision flow model provides an overview of a way forward over the longer term for a full-scale evaluation of the HC.

Through a wider lens, from the field research undertaken as part of this study, there is no doubt of anecdotal support for the HC in schools in Delhi. School leaders, teachers and students all express enthusiasm for the philosophy and its externalisation in classrooms. It is clear that there are differences in views on the part of all stakeholder groups. Some teachers would prefer more training and guidance; others are content with the current situation. Some students are less enamoured of mindfulness sessions and more of moral stories, while others express the opposite view. These are all manifestations of our individual differences and reflect a healthy and balanced externalisation of these differences, which, in part, the HC has nourished.

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BY DREAMS

APPENDIX A

Data Collection Guidelines

TEACHER SURVEY

Before the Test

- Be there on time
- Preparation

1. Obtain the list of teachers who will be taking the survey
2. Make sure you have extra copies of forms and numbers of pens/pencils
3. Set up the room (provide a copy for each teacher)

- Introduce yourself and provide information about the survey (see Data Collector Script)
- Ask them fill to out the Personal background information-Teacher form
- Make sure the background information table is complete, and consent form is signed

During the Test

- Provide teachers with the Teacher Survey.
- Read aloud the instructions.
- Go through the example at the top of the survey, and discuss how to indicate the preferred response.
- Remind them that there are no right or wrong answers for questions; it is about how they would respond in different scenarios, which may differ by teacher.
- Ask whether they have any questions before they start.
- If there are any questions regarding which options to choose or whether they are "right" or "wrong", remind them that you can help them understand the instructions but cannot provide any other help.
- Stay at a distance to make them feel comfortable while they are completing the survey.
- Give them notice regarding the remaining time
- Request that they do not discuss the questions with each other while completing the survey

After the Test

- When teachers return the survey, make sure that they have responded to each question appropriately (i.e., choosing one option by circling and another option by crossing it out).
- Use sealed envelopes for completed surveys, and maintain confidentiality.
- Thank the teachers for their participation.

STUDENT SURVEY

Before the Test

- Be there on time
- Preparation

1. Obtain the list of teachers who will be taking the survey
2. Make sure you have extra copies of forms and numbers of pens/pencils
3. Set up the room (provide a copy for each teacher)

- Introduce yourself and provide information about the survey (see Data Collector Script)
- Ask them fill to out the Personal background information- Student form
- Ask them to read and sign the informed consent section (If they do not sign the form, they cannot take the survey)
- Make sure the background information table is complete, and consent form is signed

During the Test

- Read aloud the instructions at the top of the Student Survey Questions.
- Go through the example, and show how to rank the items and what each number means.
- Emphasize that each number can only be used once for each question.
- If needed, use additional examples so that students can practice.

Remind students

- There will be no scores given for the survey.
- Their responses will not be shared with their parents, friends or teachers.
- There are no right or wrong answers for questions; each person is different.
- Ask whether they have any questions before they start.
- You can help them understand the instructions but cannot provide any other help.
- Stay at a distance to make them feel comfortable while they are completing the survey.
- Give them notice regarding the remaining time.
- Instruct them that they are not to discuss the questions with one another while completing the survey.

After the Test

- When the students return the survey, make sure that they have responded appropriately by using 1, 2 or 3 only once to rank each option for each question.
- Use sealed envelopes for completed surveys, and maintain confidentiality.
- Thank the students for their participation.

APPENDIX B

Data Collection Script

TEACHER SURVEY SCRIPT

Thank you for agreeing to participate in the survey today. My name is [XXXXX], and I am working with an organization called Dream a Dream and the Brookings Institution. We are interested in learning about teaching strategies that teachers use. The survey that you are about to fill out is to gather this information. It is not to evaluate your teaching but to give us an idea of how teachers may respond in different situations. There are no right or wrong answers. How you respond to a situation may be different from how another teacher responds. We request that you do not discuss the questions with one another during the survey. Your responses will remain confidential.

Before we start, please read the informed consent. If you agree to participate, please complete the information form and sign the consent.

[Ask teachers to read the instruction at the top. Then go through the example at the top of the survey, and discuss how to indicate the preferred response. Below are extra practice items, if necessary.]

Practice Items

For each question, there are three options from which to choose. Please choose one option that is "least like you" by circling the option, and choose one option that is "most like you" by crossing out the option. You can use each symbol only once for each question.

	Option 1	Option 2	Option 3
Ex. 1: **When I am going home…**	I usually walk	I usually drive	I usually bike
Ex.2: **In the morning, the first thing I like to drink is…**	Water	Coffee	Tea

STUDENT SURVEY SCRIPT

Thank you for participating today. My name is [XXXXX], and I am here because I want to learn more about your interests and experiences in school and home. The survey that you are about to fill out is not a test, and you will not be graded on it. There are no right or wrong answers. How you respond to a question may be different from how your friend responds, and that is fine. We request that you do not talk to or look at your friends' responses to the questions during the survey. Your responses will remain confidential.

Before we start, I will read the informed consent aloud:

- I voluntarily agree to participate in this research study.
- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I have had the purpose and nature of the study explained to me, and I have had the opportunity to ask questions about the study.
- I understand that I will not benefit directly from participating in this research.
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this research, my identity will remain anonymous.
- I agree to take part in the research study.

If you agree to participate, please complete the information form, and sign the consent. Please let me know if you need any help.

[Ask students to read the instruction at the top while you read it aloud. Then go through the example at the top of the survey, and discuss how to indicate the preferred response. Below are extra practice items, if necessary.]

Practice Items

For each question, please order each of the responses from "least like you" to "most like you" by putting a 1, 2 or 3 next to each option. You can use each number only one time.

1 = least like you
2 = somewhat like you
3 = most like you.

Ex. 1: After I complete my homework,

___ I like to play outside with friends.

___ I like to play with my toys at home.

___ I like to read a book.

Ex. 2: If I could be any animal,

___ I would be a dog.

___ I would be a fish.

___ I would be a bird.

APPENDIX C

Teacher Background Form

Personal background information— Teacher

Name	
Age	
Gender	
Name of the School	
Grade levels you teach	
Subjects you teach	
Average number of students per class	
Teaching experience including this year	

Informed consent

- I voluntarily agree to participate in this research study.
- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I have had the purpose and nature of the study explained to me, and I have had the opportunity to ask questions about the study.
- I understand that I will not benefit directly from participating in this research
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this research, my identity will remain anonymous.
- I agree to take part in the research study.

Name:

Signature:

Date:

APPENDIX D

Student Background Form

Personal background information– Teacher

Name	
Student ID	
Age	
Gender	
Name of the School	
Grade	
Teacher's Name	

Informed consent

- I voluntarily agree to participate in this research study.
- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I have had the purpose and nature of the study explained to me, and I have had the opportunity to ask questions about the study.
- I understand that I will not benefit directly from participating in this research
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this research, my identity will remain anonymous.
- I agree to take part in the research study.

Name:

Signature:

Date:

APPENDIX E

Teacher Survey

Administration Version

For each question, there are three options to choose from. Please choose one option that is "most like you" by circling the option and choose one option that is "least like you" by crossing out the option. You can only use each symbol once for each question.

	Option 1	Option 2	Option 3
When I am teaching:	I like when students share what they did at home I like when students share what they did at home	I like when students are having fun	I like when students ask questions

This is most like me.

This is least like me.

	Option 1	Option 2	Option 3
If two students will not cooperate with each other...	I suggest they find someone else to work with.	I insist they work together.	I ask them to tell each other what the issue is.
If a student is working hard but not doing well...	I talk to the student to work out what he/she does not understand.	I tell the student to move on to the next task.	I tell the student to keep trying.
If a student has difficulty finishing	I tell the student the next class is starting	I tell the student he/she has to work faster next time.	I help the student to pace his work.
If a student says something mean to a friend...	I tell the student to be nice to the friend.	I talk to the class about how to be a good friend.	I let the students deal with the issue.

If I know that science exams are challenging for the students..	I explain how to answer example questions.	I remind students that the exam is tomorrow.	I tell students to study hard for the exam.
If two students in your class are not listening to you...	I ask the class if anyone has questions.	I tell them to pay attention to me.	I continue talking to the class.
If a student is upset because he/she is not good at something...	I tell the student to try harder.	I tell the student that each person has something different he/she is good at.	I tell the student not to worry about it.
If a student is not willing to contribute to the group work..	I ask why the student does not want to help.	I tell the student he/she must help.	I tell the group to solve this issue.
If I ask a question to the whole class...	I select students so that each has a turn.	I choose a student at random.	I usually choose the student who raises his/her hand first.
If a student takes a long time to settle down to work...	I draw the student's attention to the first task to be done.	I tell the student to get down to work	I focus on the whole class.
If students are being hurtful to each other...	I ask students to tell about when someone was not nice to them and how that made them feel.	I tell them they must be nice to each other.	I send the students to different parts of the classroom.
If a student tells me he/she did not finish his/her homework... his/her work on time...	I ask why the student was not able to do the homework and when he/she will hand it in.	I tell the student that he/she must hand in work on schedule like everyone else.	I accept the homework but mark it down.
If a student is worried about finding the right answer to a problem...	I tell the student to think about the problem from another point of view to see if it helps.	I tell the student to keep working.	I tell the student that getting the right answer is very important.

APPENDIX F

Student Survey

Administration Version

For each question, please order each of the responses from "least like you" to "most like you" by putting a 1, 2 or 3 next to each option. You can use each number only one time.

1 = least like you;
2 = somewhat like you;
3 = most like you.

Example:

When I have free time:

_2_ I like to play outside (This is somewhat like me.)
_1_ I like to eat (This is least like me.)
_3_ I like to sleep (This is most like me.)

1. You don't like your friend's new haircut, but she/he asks you what you think. You want to stay friends. What would you say?

___I would say it looks good.

___I would say I don't like it.

___I would pretend I didn't notice.

2. If you don't get your homework finished, what would you do?

___I would ask my friends what I should do.

___I would ask my teacher if I can hand it in late.

___I would get upset.

3. Your favourite dessert is carrot halwa. You don't like gulab jamun. For your brother's birthday, your mother made gulab jamun. Why would she do this?

___Because it might be easier for my mother to make gulab jamun.

___Because we did not have carrots at home.

___Because my brother likes gulab jamun.

4. If you don't understand what the teacher is saying, what would you say to her?

____I would not say anything to her.

____I would ask the teacher to explain it again.

____I would tell the teacher I don't understand her.

5. You see your friend getting yelled at by the teacher after class. When your friend meets up with you, he/she yells at you. How do you respond?

____I would yell back

____I would ask why she is yelling at me

____I would walk away

6. When I am doing mindfulness exercises:

____The teacher tells me to look down

____I hear sounds like my classmates breathing

____I sometimes open my eyes

7. At end of class, if I have not finished my work:

____I am happy to close my books and get ready for my next class

____I want to stay and finish my work

____I would forget about it

8. If I do not get good marks for my mathematics test although I worked hard:

____I would talk to my teacher about the questions I got wrong.

____I would feel badly.

____I would think that mathematics is difficult.

9. If you are working hard on a project and a classmate ruins it, what would you do?

____I would ask my classmate why he/she ruined my project.

____I would rework the project again.

____I would argue with my classmate.

10. You see that Aditi is building a tall tower of blocks, but Aarav pushes the tower over. How would you respond?

____I would think about how Aditi might feel.

____I would not do anything.

____I would help Aditi rebuild the tower.

11. Your teacher puts you in a sports group, although you always come in last in sports. You:

_____Ask to be put in a different group.

_____Complain that it's not fair.

_____Don't say anything.

12. If you want to play with your friends, but your mother needs help from you, what would you do?

_____I would help my mother.

_____I would quickly run outside before she asks me.

_____I would ask my mother if I can help later.

13. When I am in class:

_____I mostly listen to the teacher.

_____I mostly look at what my friends are doing.

_____I mostly think about something else.

14. Your neighbour is new to your school and wants to walk with you on his/her first day. If you walk with him/her, you will be late and get in trouble. How would you respond?

_____I would walk with my neighbour because I remember my first day of school.

_____I would get upset because I wouldn't know what to do.

_____I would tell him/her that I can't.

APPENDIX G

Scale Compositions & Scoring Options

Student competencies		Scale descriptions	Items	Item # in pilot version	Item # in final version
Decisionmaking	DM	Making decisions by reviewing the situation, and assessing alternative actions; requires insight about one's possible emotional and cognitive reactions	4	3.2, 8.2, 15.1, 21.1	2.2, 4.2, 8.1, 11.1
Focus	FOC	Being self-aware and focussed; demonstrating self-control and managing frustration and impulsive reactions	4	12.2, 13.2, 16.1, 23.1	6.2, 7.2, 9.1, 13.1
Empathy	EMP	Thinking of and considering the other; understanding the emotions that another person may experience	4	7.3, 9.2, 18.3, 24.1	3.3, 5.2, 10.3, 14.1
Relationships	REL	Taking the perspectives of others into consideration in the context of relationship maintenance and facilitation	2	1.1, 22.1	1.1, 12.1

Teacher competencies		Scale descriptions	Items	Item # in pilot version	Item # in final version
Metacognition	MET	Encouraging student metacognition	4	11.1, 16.1, 18.1, 21.1	8.1, 11.1, 12.1, 13.1
Management	MAN	Student-centred classroom management	3	9.1, 12.1, 15.1	6.1, 9.1, 10.1
Relationships	REL	Facilitating how students relate to each other in conflict situations	2	1.3, 5.2	1.3, 4.2
Empathy	EMP	Considering students' emotional and cognitive responses in difficult circumstances	4	2.1, 3.3, 6.1, 10.2	2.1, 3.3, 5.1, 7.2

APPENDIX G-1

Simple Scoring

STUDENT FORM	DM	FOC	EMP	REL
1. You don't like your friend's new haircut, but she/he asks you what you think. You want to stay friends. What would you say?				
I would say it looks good.				1
I would say I don't like it.				
I would pretend I didn't notice.				
2. If you don't get your homework finished, what would you do?				
I would ask my friends what I should do.				
I would ask my teacher if I can hand it in late.	1			
I would get upset.				
3. Your favourite dessert is carrot halwa. You don't like gulab jamun. For your brother's birthday, your mother made gulab jamun. Why would she do this?				
Because it might be easier for my mother to make gulab jamun.				
Because we did not have carrots at home.				
Because my brother likes gulab jamun.			1	
4. If you don't understand what the teacher is saying, what would you say to her?				
I would not say anything to her.				
I would ask the teacher to explain it again.	1			
I would tell the teacher I don't understand her.				
5. You see your friend getting yelled at by the teacher after class. When your friend meets up with you, he/she yells at you. How do you respond?				
I would yell back				
I would ask why she is yelling at me			1	
I would walk away				
6. When I am doing mindfulness exercises:				
The teacher tells me to look down				
I hear sounds like my classmates breathing		1		
I sometimes open my eyes				

7. At end of class, if I have not finished my work:				
I am happy to close my books and get ready for my next class				
I want to stay and finish my work		1		
I would forget about it				
8. If I do not get good marks for my mathematics test although I worked hard:				
9. If you are working hard on a project and a classmate ruins it, what would you do?				
I would ask my classmate why he/she ruined my project.		1		
I would rework the project again.				
I would argue with my classmate.				
10. You see that Aditi is building a tall tower of blocks, but Aarav pushes the tower over. How would you respond?				
I would think about how Aditi might feel.				
I would not do anything.				
I would help Aditi rebuild the tower.			1	
11. Your teacher puts you in a sports group, although you always come in last in sports. You:				
Ask to be put in a different group.	1			
Complain that it's not fair.				
Don't say anything.				
12. If you want to play with your friends, but your mother needs help from you, what would you do?				
I would help my mother.				1
I would quickly run outside before she asks me.				
I would ask my mother if I can help later.				
13. When I am in class:				
I mostly listen to the teacher.		1		
I mostly look at what my friends are doing.				
I mostly think about something else.				
14. Your neighbour is new to your school and wants to walk with you on his/her first day. If you walk with him/her, you will be late and get in trouble. How would you respond?				
I would walk with my neighbour because I remember my first day of school.			1	
I would get upset because I wouldn't know what to do.				
I would tell him/her that I can't.				
Scale scores (sum the "1" in each column)				

TEACHER FORM	MET	MAN	REL	EMP
1. If two students will not cooperate with each other...				
I suggest they find someone else to work with.				
I insist they work together.				
I ask them to tell each other what the issue is.			1	
2. If a student is working hard but not doing well...				
I talk to the student to work out what he/she does not understand.				1
I tell the student to move on to the next task.				
I tell the student to keep trying.				
3. If a student has difficulty finishing his/her work on time...				
I tell the student the next class is starting.				
I tell the student he/she has to work faster next time.				
I help the student to pace his work.				1
4. If a student says something mean to a friend...				
I tell the student to be nice to the friend.				
I talk to the class about how to be a good friend.			1	
I let the students deal with the issue.				
5. If I know that science exams are challenging for the students...				
I explain how to answer example questions.				1
I remind students that the exam is tomorrow.				
I tell students to study hard for the exam.				
6. If two students in your class are not listening to you...				
I ask the class if anyone has questions.		1		
I tell them to pay attention to me.				
I continue talking to the class.				
7. If a student is upset because he/she is not good at something...				
I tell the student to try harder.				
I tell the student that each person has something different he/she is good at.				1
I tell the student not to worry about it.				
8. If a student is not willing to contribute to the group work...				
I ask why the student does not want to help.	1			
I tell the student he/she must help.				
I tell the group to solve this issue.				

9. If I ask a question to the whole class...				
I select students so that each has a turn.		1		
I choose a student at random.				
I usually choose the student who raises his/her hand first.				

10. If a student takes a long time to settle down to work...				
I draw the student's attention to the first task to be done.		1		
I tell the student to get down to work				
I focus on the whole class.				
11. If students are being hurtful to each other...				
I ask students to tell about when someone was not nice to them and how that made them feel.	1			
I tell them they must be nice to each other.				
I send the students to different parts of the classroom.				
12. If a student tells me he/she did not finish his/her homework...				
I ask why the student was not able to do the homework and when he/she will hand it in.	1			
I tell the student that he/she must hand in work on schedule like everyone else.				
I accept the homework but mark it down.				
13. If a student is worried about finding the right answer to a problem...				
I tell the student to think about the problem from another point of view to see if it helps.	1			
I tell the student to keep working.				
I tell the student that getting the right answer is very important.				
Scale scores (sum the "1" in each column)				

APPENDIX G-1

Research Scoring Student Survey

If the student endorses as "most like" the high response, the student is scored 3; if the student endorses as "most like" the medium response, the student is scored 2; if the student endorses as "most like", the low response, the student is scored 1.

STUDENT FORM	DM	FOC	EMP	REL
1. You don't like your friend's new haircut, but she/he asks you what you think. You want to stay friends. What would you say?				
I would say it looks good.				3
I would say I don't like it.				1
I would pretend I didn't notice.				2
2. If you don't get your homework finished, what would you do?				
I would ask my friends what I should do.	2			
I would ask my teacher if I can hand it in late.	3			
I would get upset.	1			
3. Your favourite dessert is carrot halwa. You don't like gulab jamun. For your brother's birthday, your mother made gulab jamun. Why would she do this?				
Because it might be easier for my mother to make gulab jamun.			2	
Because we did not have carrots at home.			1	
Because my brother likes gulab jamun.			3	
4. If you don't understand what the teacher is saying, what would you say to her?				
I would not say anything to her.	1			
I would ask the teacher to explain it again.	3			
I would tell the teacher I don't understand her.	2			
5. You see your friend getting yelled at by the teacher after class. When your friend meets up with you, he/she yells at you. How do you respond?				
I would yell back			1	
I would ask why she is yelling at me			3	
I would walk away			2	
6. When I am doing mindfulness exercises:				
The teacher tells me to look down		1		
I hear sounds like my classmates breathing		3		
I sometimes open my eyes		2		

7. At end of class, if I have not finished my work:				
I am happy to close my books and get ready for my next class		2		
I want to stay and finish my work		3		
I would forget about it		1		
8. If I do not get good marks for my mathematics test although I worked hard:				
I would talk to my teacher about the questions I got wrong.	3			
I would feel badly.	2			
I would think that mathematics is difficult.	1			
9. If you are working hard on a project and a classmate ruins it, what would you do?				
I would ask my classmate why he/she ruined my project.		3		
I would rework the project again.		2		
I would argue with my classmate.		1		
10. You see that Aditi is building a tall tower of blocks, but Aarav pushes the tower over. How would you respond?				
I would think about how Aditi might feel.			2	
I would not do anything.			1	
I would help Aditi rebuild the tower.			3	
11. Your teacher puts you in a sports group, although you always come in last in sports. You:				
Ask to be put in a different group.	3			
Complain that it's not fair.	2			
Don't say anything.	1			
12. If you want to play with your friends, but your mother needs help from you, what would you do?				
I would help my mother.				3
I would quickly run outside before she asks me.				1
I would ask my mother if I can help later.				2
13. When I am in class:				
I mostly listen to the teacher.		3		
I mostly look at what my friends are doing.		2		
I mostly think about something else.		1		
14. Your neighbour is new to your school and wants to walk with you on his/her first day. If you walk with him/her, you will be late and get in trouble. How would you respond?				
I would walk with my neighbour because I remember my first day of school.			3	
I would get upset because I wouldn't know what to do.			1	
I would tell him/her that I can't.			2	

Teacher Survey

If the teacher endorses as "most like" the high response, the teacher is scored 3; if the teacher endorses as "most like" the medium response, the teacher is scored 2; if the teacher endorses as "most like", the low response, the teacher is scored 1.

TEACHER FORM	MET	MAN	REL	EMP
1. If two students will not cooperate with each other...				
I suggest they find someone else to work with.			2	
I insist they work together.			1	
I ask them to tell each other what the issue is.			3	
2. If a student is working hard but not doing well...				
I talk to the student to work out what he/she does not understand.				3
I tell the student to move on to the next task.				2
I tell the student to keep trying.				1
3. If a student has difficulty finishing his/her work on time...				
I tell the student the next class is starting.				2
I tell the student he/she has to work faster next time.				1
I help the student to pace his work.				3
4. If a student says something mean to a friend...				
I tell the student to be nice to the friend.			1	
I talk to the class about how to be a good friend.			3	
I let the students deal with the issue.			2	
5. If I know that science exams are challenging for the students...				
I explain how to answer example questions.				3
I remind students that the exam is tomorrow.				2
I tell students to study hard for the exam.				1
6. If two students in your class are not listening to you...				
I ask the class if anyone has questions.		3		
I tell them to pay attention to me.		1		
I continue talking to the class.		2		
7. If a student is upset because he/she is not good at something...				
I tell the student to try harder.				1
I tell the student that each person has something different he/she is good at.				3
I tell the student not to worry about it.				2
8. If a student is not willing to contribute to the group work...				
I ask why the student does not want to help.	3			
I tell the student he/she must help.	1			
I tell the group to solve this issue.	2			

9. If I ask a question to the whole class...				
I select students so that each has a turn.		3		
I choose a student at random.		2		
I usually choose the student who raises his/her hand first.		1		
10. If a student takes a long time to settle down to work...				
I draw the student's attention to the first task to be done.		3		
I tell the student to get down to work		1		
I focus on the whole class.		2		
11. If students are being hurtful to each other...				
I ask students to tell about when someone was not nice to them and how that made them feel.	3			
I tell them they must be nice to each other.	1			
I send the students to different parts of the classroom.	2			
12. If a student tells me he/she did not finish his/her homework...				
I ask why the student was not able to do the homework and when he/she will hand it in.	3			
I tell the student that he/she must hand in work on schedule like everyone else.	1			
I accept the homework but mark it down.	2			
13. If a student is worried about finding the right answer to a problem...				
I tell the student to think about the problem from another point of view to see if it helps.	3			
I tell the student to keep working.	2			
I tell the student that getting the right answer is very important.	1			

APPENDIX H

Survey Administration Challenges

Data collection challenges with students

Although the survey items were checked extensively with facilitators and teachers for their appropriateness prior to administration to students in the pilot, substantial issues remained. These primarily concerned literacy levels; students were unable to read the survey items easily in order to understand. The literacy issues were related to vocabulary, comprehension and complexity of sentence structures.

- The language of the survey form for Grade 1 was difficult for the students. They were not able to comprehend the text; even after an explanation, they were unable to connect the questions and answers together.
- Questions were explained to most of the students of Grades 1 and 3 and to those students from higher classes who could not read. Doing this required a significant investment of time.
- Students were unable to understand hypothetical matters, so facilitators had to explain them. This meant an additional investment of time, as well as the possibility of influence on student responses.
- Students in higher grades but lower sections, composed of students who were unable to read, required special attention from the facilitators.
- Some words in the questions were difficult to comprehend even for fluent readers in higher grades and had to be explained in simple terms.
- Students, especially in Grades 3 and 5, lost concentration due to lengthy questions and complex sentence structures.
- Even Grade 8 students in Urdu medium schools were unable to read Hindi properly. However, they were able to understand when the facilitators read the question aloud.
- The survey form in the piloted structure was lengthy, with more questions than an optimal amount. Due to this, many students were unable to maintain their focus to complete them.

Data collection challenges with teachers

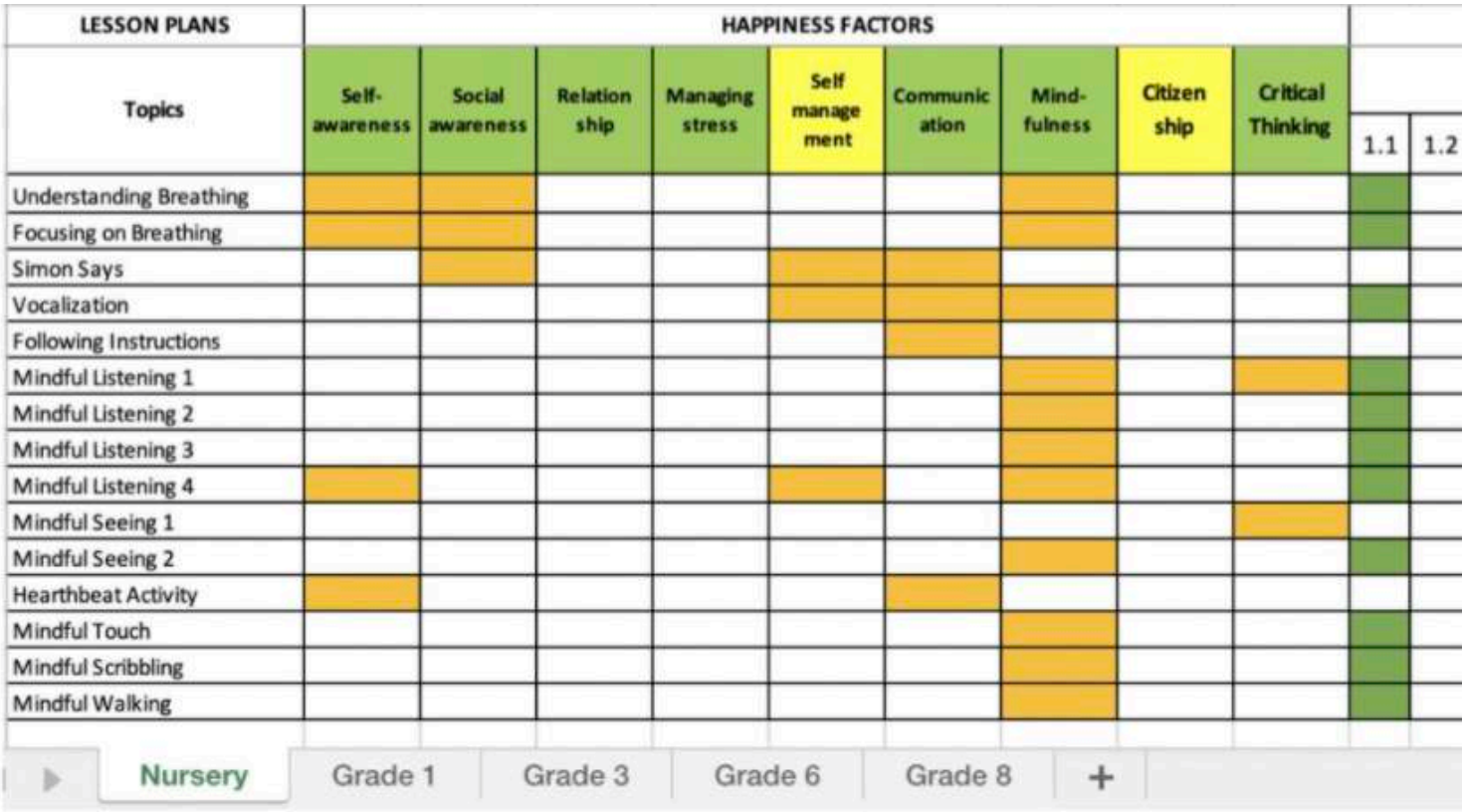
- Although teachers provided positive feedback on draft versions of the survey, they expressed different opinions about the appropriateness of the response options for some items.
- The teachers and volunteers suggested using simple contextualised versions of words, such as homework, problem, respond, project and tower, which have complex Hindi translations.

Challenges during data entry

- Some issues were encountered in entering response data into the results spreadsheets: these included omission of classification codes for teachers with less than a year experience, and teachers who take pre-school classes. .
- Blanks were maintained in the datasheet to reference missing/incorrect entries in hard copies. This happened when teachers did not provide any information or when they provided a response other the allowed values in the respective field on the hard copy form.
- The data entry operators were Kannada-/English-speaking and could not comprehend the responses written in Hindi. Additional resources were required to translate the form responses, which significantly increased the time required for data entry.

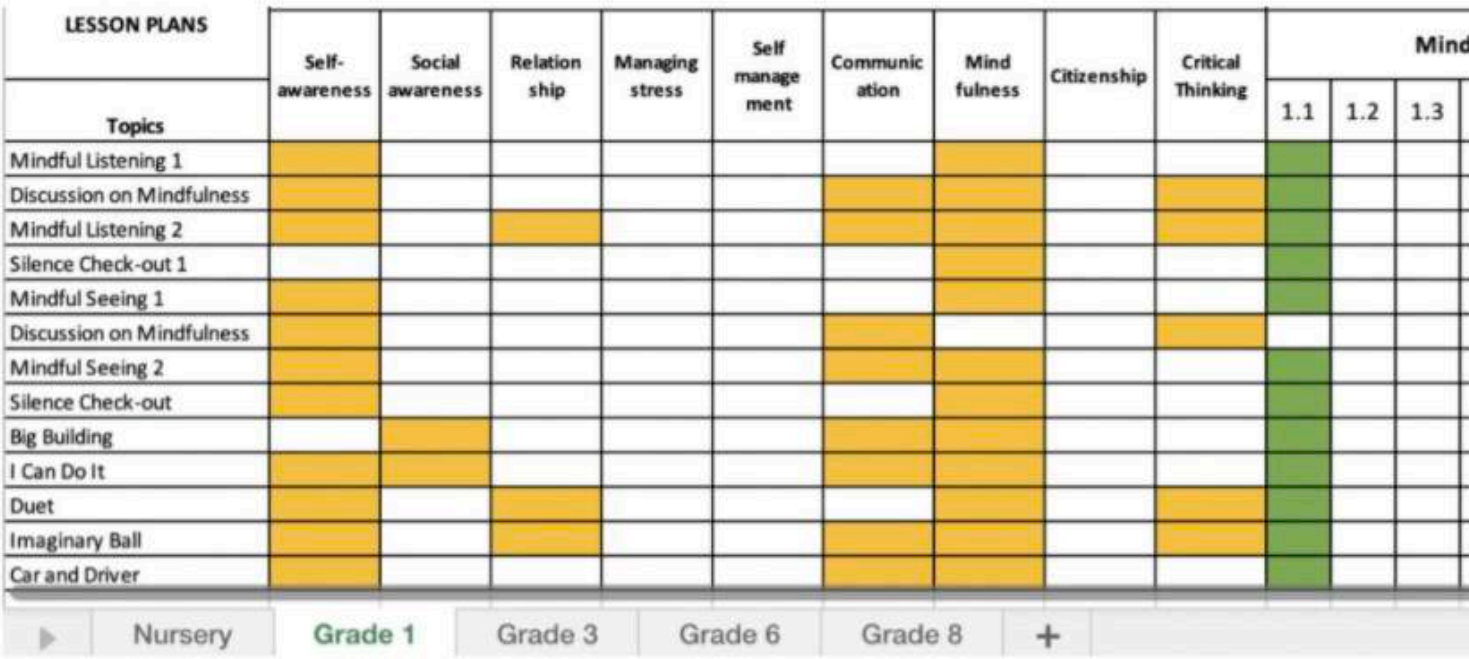
APPENDIX I

Curriculum Analysis Summary



LESSON PLANS	HAPPINESS FACTORS										
Topics	Self-awareness	Social awareness	Relation ship	Managing stress	Self manage ment	Communic ation	Mind-fulness	Citizen ship	Critical Thinking	1.1	1.2
Understanding Breathing											
Focusing on Breathing											
Simon Says											
Vocalization											
Following Instructions											
Mindful Listening 1											
Mindful Listening 2											
Mindful Listening 3											
Mindful Listening 4											
Mindful Seeing 1											
Mindful Seeing 2											
Hearthbeat Activity											
Mindful Touch											
Mindful Scribbling											
Mindful Walking											

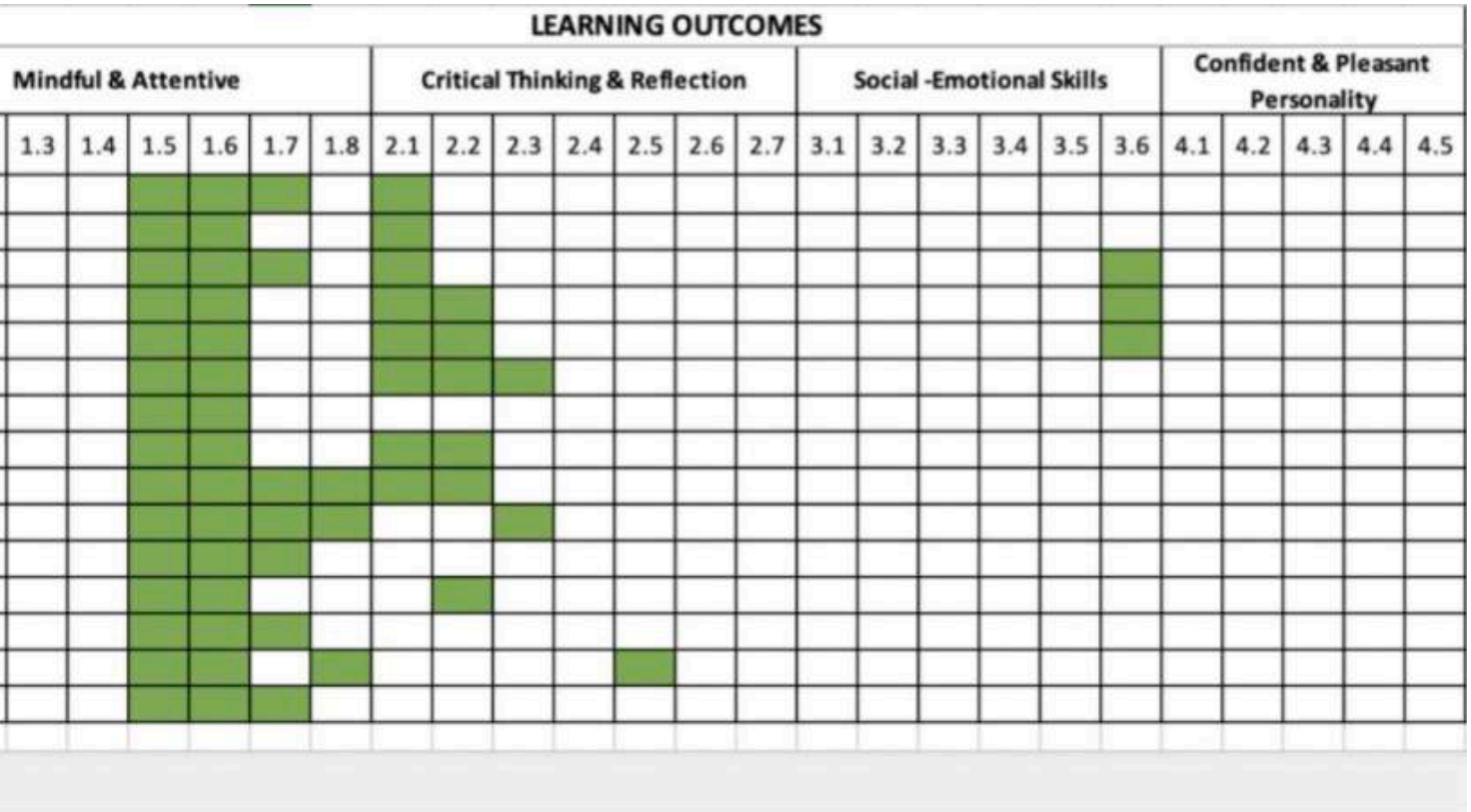
Nursery | Grade 1 | Grade 3 | Grade 6 | Grade 8 | +

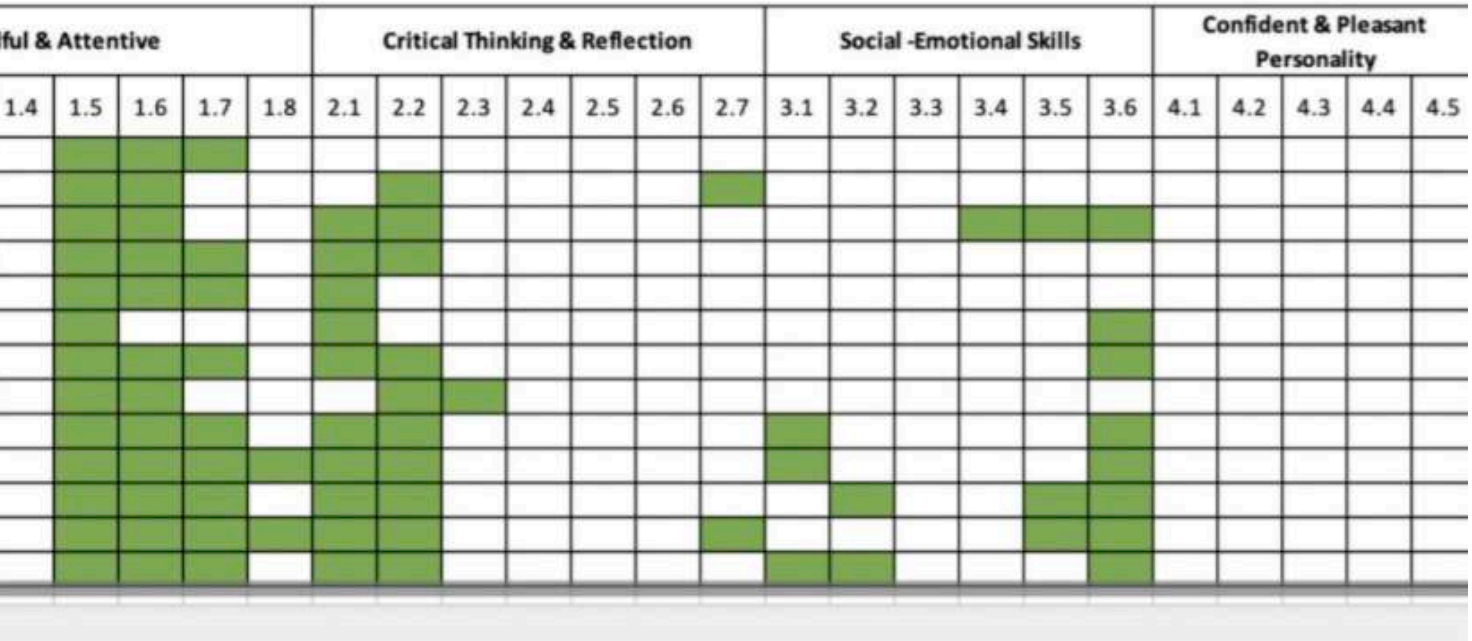


LESSON PLANS	Self-awareness	Social awareness	Relation ship	Managing stress	Self manage ment	Communic ation	Mind fulness	Citizenship	Critical Thinking	Mind		
Topics										1.1	1.2	1.3
Mindful Listening 1												
Discussion on Mindfulness												
Mindful Listening 2												
Silence Check-out 1												
Mindful Seeing 1												
Discussion on Mindfulness												
Mindful Seeing 2												
Silence Check-out												
Big Building												
I Can Do It												
Duet												
Imaginary Ball												
Car and Driver												

Nursery | Grade 1 | Grade 3 | Grade 6 | Grade 8 | +

19th August, 2020


LEARNING OUTCOMES
Mindful & Attentive
Critical Thinking & Reflection
Social -Emotional Skills
Confident & Pleasant Personality
1.3 1.4 1.5 1.6 1.7 1.8 2.1 2.2 2.3 2.4 2.5 2.6 2.7 3.1 3.2 3.3 3.4 3.5 3.6 4.1 4.2 4.3 4.4 4.5

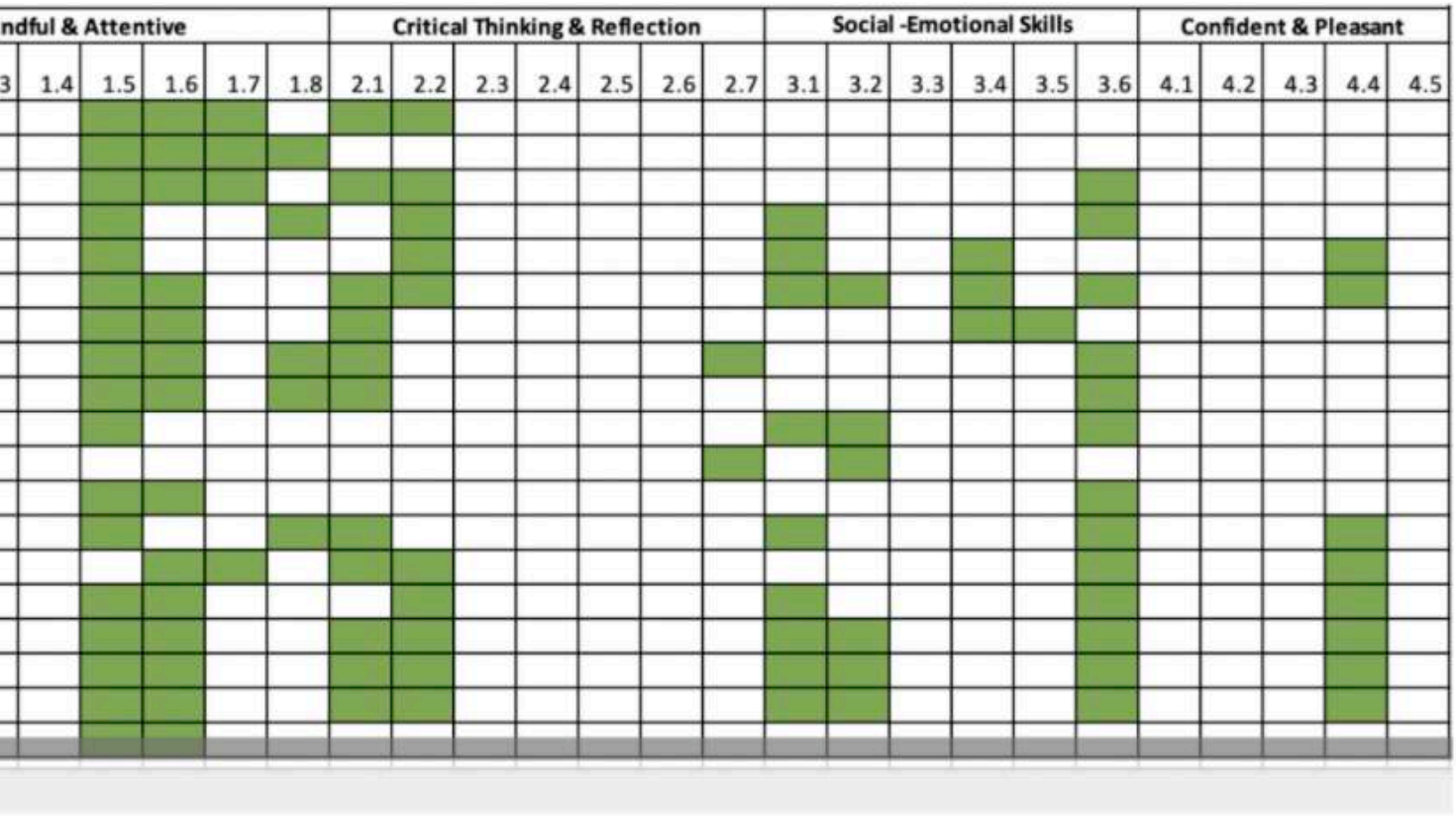

Critical Thinking & Reflection
Social -Emotional Skills
Confident & Pleasant Personality
1.4 1.5 1.6 1.7 1.8 2.1 2.2 2.3 2.4 2.5 2.6 2.7 3.1 3.2 3.3 3.4 3.5 3.6 4.1 4.2 4.3 4.4 4.5

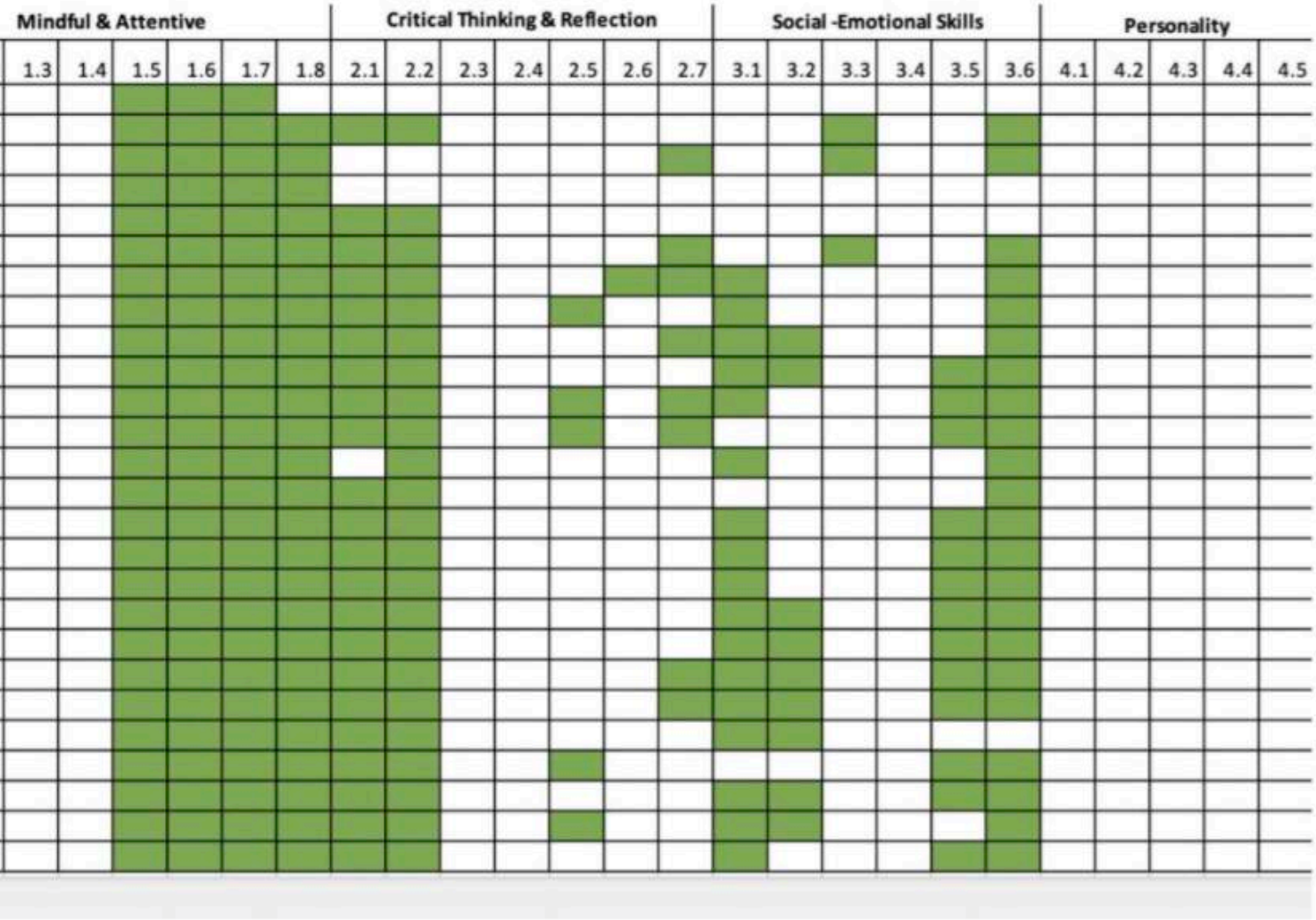
Topics	Self-awareness	Social awareness	Relationship	Managing stress	Self management	Communication	Mind fulness	Citizenship	Critical Thinking	Mi		
										1.1	1.2	1.
Temperature of Breath												
Mindful Walking												
Mindful Drawing/Scribbling												
Realisation												
Taking care of Mother												
One burnt paratha(story)												
My True Happiness												
Me and Nature												
Needs and Likes												
Care Session 1.1												
Care Session 1.2												
Care Session 1.3												
Gratitude Session 3.1												
Gratitude Session 3.2												
Gratitude Session 3.3												
Gratitude Session 3.4												
Gratitude Session 3.5												
Gratitude Session 3.6												
Gratitude Session 3.7												

Nursery | Grade 1 | Grade 3 | Grade 6 | Grade 8 | +

Topics	Self-awareness	Social awareness	Relationship	Managing stress	Self management	Communication	Mind fulness	Citizenship	Critical Thinking		
										1.1	1.2
Listening											
Discussion on Mindfulness											
Mindful Listening											
Discussion on Mindful Listening											
Progressive Muscle Relaxation 1											
Characterisation of Emotions											
The Boastful King											
Three Workers Three Attitude											
True Reflection											
Check-In											
Gratitude Wall											
Feeling good – Being good											
Care- Session 4.1											
Care- Session 4.2											
Care- Session 4.3											
Affection-Session 3.1											
Affection-Session 3.2											
Affection-Session 3.3											
Affection-Session 3.4											
Affection-Session 3.5											
Respect- Session 2.1											
Respect- Session 2.2											
Respect- Session 2.3											
Respect- Session 2.4											
Respect- Session 2.5											
Respect- Session 2.6											

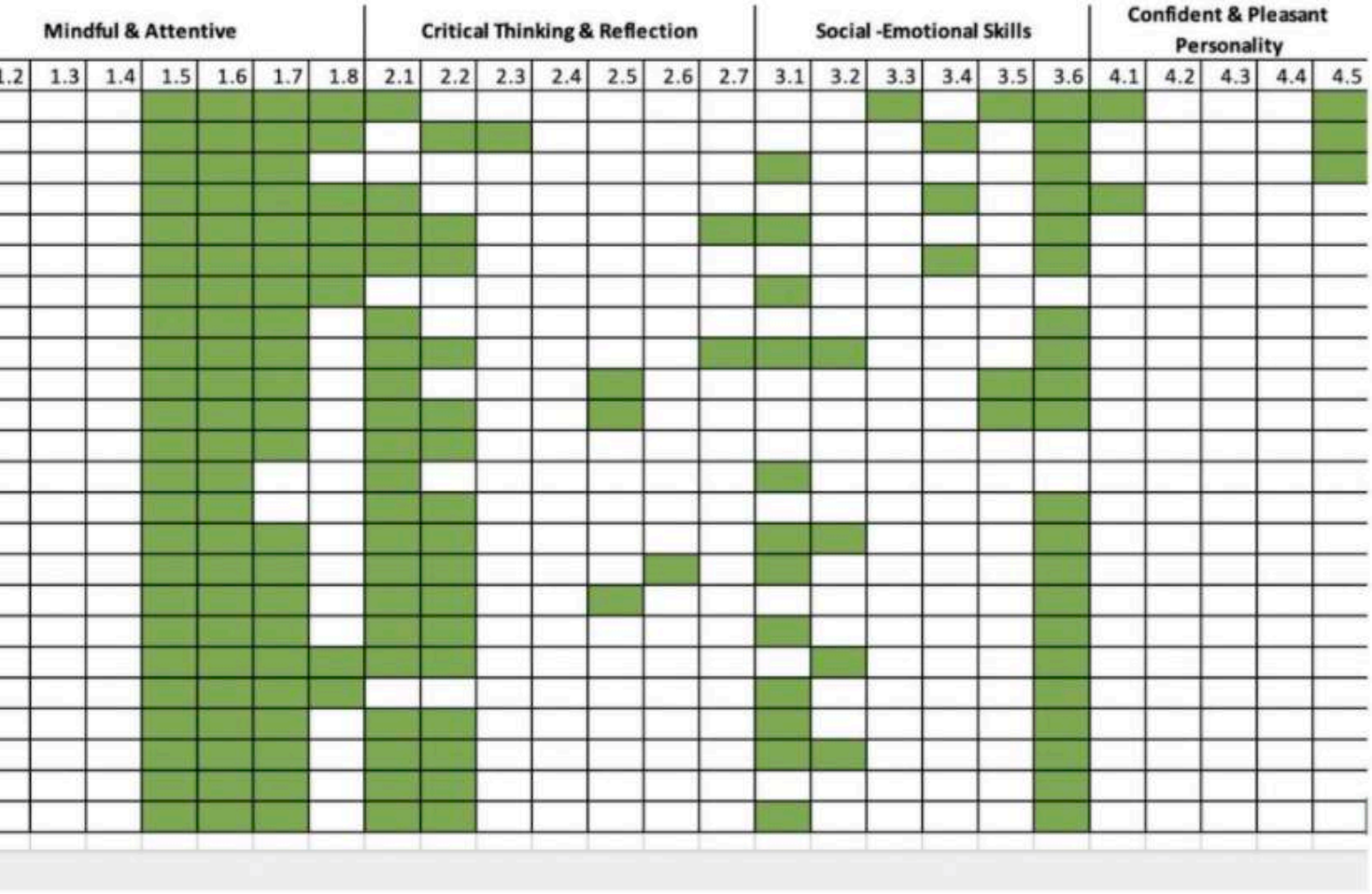
Nursery | Grade 1 | Grade 3 | Grade 6 | Grade 8 | +


ndful & Attentive
Critical Thinking & Reflection
Social -Emotional Skills
Confident & Pleasant
3 1.4 1.5 1.6 1.7 1.8 2.1 2.2 2.3 2.4 2.5 2.6 2.7 3.1 3.2 3.3 3.4 3.5 3.6 4.1 4.2 4.3 4.4 4.5


Mindful & Attentive
Critical Thinking & Reflection
Social -Emotional Skills
Personality
1.3 1.4 1.5 1.6 1.7 1.8 2.1 2.2 2.3 2.4 2.5 2.6 2.7 3.1 3.2 3.3 3.4 3.5 3.6 4.1 4.2 4.3 4.4 4.5

Topics	Self-awareness	Social awareness	Relation ship	Managing stress	Self manage ment	Communica tion	Mind fulness	Citizen ship	Critical Thinking	1.1
Mind Jar										
Brain House										
Silence between Thoughts										
How Much Happiness Do We Want										
The Palace in the Mind										
Being Happy- From What and How Long										
Rabiya's Sewing Needle										
Our Needs										
Difference in our Needs - Quality										
Difference in our Needs - Time										
Are our needs unlimited										
How much land										
Respect Session 2.1										
Respect Session 2.2										
Respect Session 2.3										
Respect Session 2.4										
Respect Session 2.5										
Respect Session 2.6										
Gratitude Session 3.1										
Gratitude Session 3.2										
Gratitude Session 3.3										
Gratitude Session 3.4										
Gratitude Session 3.5										
Gratitude Session 3.6										

Nursery | Grade 1 | Grade 3 | Grade 6 | Grade 8 | +


Mindful & Attentive
Critical Thinking & Reflection
Social -Emotional Skills
Confident & Pleasant Personality
1.2 1.3 1.4 1.5 1.6 1.7 1.8 2.1 2.2 2.3 2.4 2.5 2.6 2.7 3.1 3.2 3.3 3.4 3.5 3.6 4.1 4.2 4.3 4.4 4.5

BROOKINGS