Utilising the IB Inquiry-Based Pedagogy in a Positive Education Program

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Abstract

Seligman (2009) suggests schools primarily teach for accomplishment. However, presently the accomplishment of wellbeing is not considered an important outcome. Positive education can promote change in this area by adopting a pedagogy that encourages genuine knowledge creation through authentic inquiry (Friesen & Scott, 2013). With a focus on engagement, inquiry-based learning can boost the mental health and academic outcomes of students (Zafra-Gómez, Román-Martínez & Gómez-Miranda, 2014). One such approach to inquiry-based learning is the International Baccalaureate (IB). This paper describes and innovative program which fills a void by utilising this IB inquiry-based pedagogy in a positive education program. This innovative structure for a positive education program is designed for the middle years to meet EPOCH (Kern, Benson, Steinberg & Steinberg, 2016) adolescent wellbeing goals of engagement, perseverance, optimism, connectedness and happiness. Thereby addressing both the basic psychological needs described by self-determination theory; competency, relatedness and autonomy and the need to teach life skills in wellbeing.

Keywords: Inquiry-based learning, positive education, wellbeing, achievement, engaging, transition

Introduction

Ravenswood is a positive education girls' school. It is also an International Baccalaureate (IB) school. At Ravenswood (Ravenswood, 2017), wellbeing is identified as one of six fundamental goals. As such, positive education lessons are part of the curriculum for years 7-10. The current method for teaching positive education at Ravenswood involves what White and Kern (2018) refer to as the taught and caught method; both explicit teaching in positive education classes and implicit teaching via a whole staff trained in Lea Water's Visible Wellbeing (VWB) (2017) method. The implicit teaching is currently being well catered for at Ravenswood by VWB and the school culture but there is still a need to develop more engaging, fit for purpose, positive education classes. The age group that I have focussed on is the Year 7 and 8 group, also known as stage 4. I propose there is synergy between the teaching methods of the IB and the aims of positive education. This study provides a framework for applying the IB inquiry-based method, taught in junior and senior school at Ravenswood, to positive education lessons for students transitioning to high school. It is designed to both engage student learning and address some of the detrimental effects of transition.

Transition

Transition is a difficult time for students (Wit, Karioja, Rye & Shain, 2011). Studies indicate that in Year 7 students experience a significant drop in both wellbeing and academic outcomes (Shoshani & Steinmetz, 2013; Wit et.al, 2011; Wigfield, Eccles, Mac Iver, Reuman & Midgley, 1991; Durlak, Weissberg, Dymnicki, Taylor & Schellinger, 2011). Wellbeing distress, indicated by disengagement, greater anxiety and lower academic outcomes, have been shown to increase through the middle years of high school (Salmela-Aro, Kiuru, Pietikäinen & Jokela, 2008). The challenge for educators is to provide strategies to build

student wellbeing and increase student academic outcomes. This program seeks to address this issue by utilising an inquiry-based learning approach to teaching positive education.

Academic requirements increase considerably as students transition from primary to secondary school. They may have as many as twelve different subjects, each with specific academic outcomes. The struggle to balance so many priorities is overwhelming for many students. Anecdotally, the indications are that students who were able to manage primary school academic requirements adequately often struggle with gauging how much time and effort to apply to each new subject and to understand their own limits. This seems particularly evident in high performing girls, with perfectionist tendencies. Further, Eccles and Wigfield (1997) report that during transition students become less intrinsically motivated and have declining self-belief in their academic ability.

The effort to form relationships with many new teachers and classmates, coupled with the onset of puberty, makes for an emotionally challenging time for many students (Corcoran, R. & Slavin, R., 2016). The feelings of anonymity and disconnectedness affects both academic performance and wellbeing in general (Durlak, &et.al. 2011). Janis Whitlock (2006) refers to this as the "connectedness slump". Students move from primary school where they have formed a close bond with just a few teachers and peers to the much larger community of high school. Year 7 students will have multiple teachers and suddenly go from being 'big fish in a small pond to little fish in a big pond'. School connectedness suggests a relationship between the student and the school. These relationships included teacher-student relationships, peer relationships; a sense of belonging to the environment and culture of the school; and engagement with what is happening in the classroom (Whitlock, 2006). Students who feel connected feel that they have higher levels of efficacy at school to influence outcomes. The wellbeing elements of positive relationships, accomplishment, engagement, meaning and purpose are all being met if students feel connected at school.

During the early years of adolescence the frontal lobes of children's brains are undergoing structural and cognitive changes resulting in greater executive functioning (Corcoran & Slavin, 2016); cognitive processes such as increased attention, self-reflection, planning, decision making and self-control. At the same time they are also learning how to control their emotions and manage social situations, collectively, social emotional competency (SEC). These higher-order thinking skills along with greater resilience and SEC are characteristics of adolescents who have a better chance of navigating the transition successfully (Durlak, & et.al. 2011). Studies suggest that students with higher levels of emotional intelligence are better able to manage these cognitive changes and show greater inclination to use these executive functions to increase their learning (Rhoades, Warren, Domitrovich & Greenberg, 2011). Duckworth and Seligman (2005) also found that self-discipline, a higher order cognitive executive control, was a more reliable indicator of academic success than IQ. These students are able to organise themselves better, set high academic goals and be more motivated. Other studies refer to emotional regulation (ER) as being inherent in promoting wellbeing, resilience and psychological flexibility (Morrish, Rickard, Chin & Vella-Brodrick, 2017). Therefore, schools wishing to better equip their students to transition with less academic and motivational decline need to have positive education programs which incorporate both academic rigour and positive psychology interventions (PPI) to promote wellbeing (Noble & McGrath, 2008).

Positive Psychology and Education

Wellbeing is feeling content and happy and functioning at optimum (Waters 2017). Martin Seligman (2012) explains wellbeing theory in terms of positive emotions, positive relationships, engagement, accomplishment, meaning and purpose (PERMA). When these emotional, social and psychological elements of wellbeing are operating well, one is said to

be flourishing (Keyes, 2007). Positive psychology brings together scientifically based, empirically supported theories and interventions to promote flourishing (Seligman, 2012).

In their original work, Seligman and Csikszentmihalyi included the need for schools to adopt a positive approach to equip individuals to flourish. Positive education is the application of positive psychology in schools (White, 2016). White argues that positive education should be treated in the same way as other academic pursuits such as science and mathematics. It should be taught and integrated into the school curriculum. It should be given the same credence and treated with the same goal-oriented directives. In the same way that teaching students the fundamentals of mathematics means that they can balance their budget in the future, positive education should provide learning that can be utilised at all stages of life.

Positive education primarily aims to teach the whole student (White & Murray, 2015), attending to both academic and wellbeing needs. By utilising scientifically tested intervention programs designed to enhance the wellbeing of students, it is both preventative and proactive in dealing with the increasing mental health issues seen in Australian adolescents (Mission Australia, 2017). Additionally, it seeks to provide guidance in increasing subjective wellbeing and therefore promote flourishing in those who practise it. White and Kern (2018) suggest six reasons why positive education is important:

- To grow students who will be able to make valuable contributions to society
- To support student mental health by equipping them with the tools for happiness
- Encouraging strong connections and positive relationships
- Engage and challenge
- As a preventative measure against mental ill health
- Encourage a positive culture

Recent work on wellbeing in adolescents has developed the EPOCH measure of adolescent well-being (Kern, Benson, Steinberg & Steinberg, 2016), a more specific model for measuring psychological wellbeing in adolescents. EPOCH is the acronym for engagement, perseverance, optimism, connection and happiness. There is harmony between EPOCH and PERMA (Steinberg 2012 in Adler, 2017) as optimism in adolescents equates to adults with meaning in their lives and perseverance leads to accomplishment (Duckworth & Seligman, 2005; Duckworth, 2017). These five elements are more relevant to adolescents and therefore a positive education program should have these elements as goals for measuring the success of the initiative. Kern et.al. (2016) recommend that EPOCH measures can be used to focus initiatives on specific areas of need. Transition is a time of low connectedness and disengagement (Ellerbrock, Denmon, Owens & Lindstrom, 2015). The role of this positive education program is to address these issues with targeted inquiry-based learning.

Positive Education in Australia

Currently in Australia, school achievement is still largely measured in terms of academic results. In NSW, the Higher School Certificate is the pinnacle of school achievement. However, there is a growing acknowledgement that wellbeing is an essential component of learning and therefore, it is the school's responsibility to provide for student wellbeing at least while at school (NSWDET, 2018). The goal of positive education schools is to apply a contextually appropriate method to teaching the skills of wellbeing to encourage students to flourish.

The uptake of positive education in Australian schools has been generally enthusiastic but somewhat reactive rather than proactive (White 2017; Green, 2014). The application of sound pedagogical practise to the implementation of positive education is often left undone as schools scramble to provide pastoral care to their students and address crises. It seems that there is little time for planning of relevant curriculum and even less for measuring the impact

of positive education and its worth (Slemp, G., Chin, T., Kern, M., Siokou, C., Loton, D. Oades, L., Vella-Brodrick, D., Waters, L. 2017). The current models of positive education in Australia fall into three broad categories:

1. School-wide implicit and explicit learning along the lines of the Geelong Grammar School model (Norrish, 2015; White and Kern 2018)

2. School-wide positive interventions

3. Specialised interventions and programs for targeted groups within the school.

Once the type of positive education model has been determined, establishing a curriculum that is fit for purpose is essential. Each school environment is different; each school microsystem has its own culture. For a positive education syllabus to work it must fit the culture of the school (White, 2017). Programs and interventions which on the surface seem engaging, but are unsupported by scientific research may result in, at the very least, a waste of money and time and at the worst, damage vulnerable students and staff. Studies by Dr Helen Street (2017) indicate that contextualised wellbeing initiatives in schools are much more likely to result in engagement and long-term benefits. As with all curriculum planning, taking time to plan and research best practice is essential to the success of any positive education program.

The emotional climate of the classroom or school affects the academic and psychological wellbeing of the students (McCullough & Quinlan, 2016). Thus, the wellbeing of teachers and other school staff is integral to the success of these programs (Green, 2014). All models of positive education require staff training and implementation; as they say at Geelong Grammar: "learn it live it teach it embed it" (Norrish, 2015). For this reason, an approach to positive education which also addresses the wellbeing of staff and the wider school community is often adopted. This is known as a whole-of-school approach.

It seems that the whole-of-school approach has the greatest impact (Waters & White, 2015; Green, 2014). However, with the increased time-stress felt in the education sector, deciding to "do positive education" is a choice that must be supported by the school management. To gain the greatest value from positive psychology there must be significant investment by the school community (Green, 2014; White, 2016). They must work towards becoming 'positive institutions' as termed by Seligman and Csikszentmihalyi (2000). Changing the school culture increases the gain from positive education (White, 2016). On the other hand, devoting resources to positive education means that it must achieve gains in both academic and wellbeing outcomes.

This paper proposes a teaching method with theoretical and practical foundations in inquiry-based learning. Schools must have specific goals both short and long term, they need a plan and they must be able to measure the output (White & Kern, 2018; White 2016). In the positive institution, the skills of wellbeing are as important to students as literacy and numeracy. They should be given similar weight in the curriculum.

Pedagogy

Pedagogy is the art and science of teaching (UNESCO, 2018). Good pedagogy involves teaching methods and curricular appropriate to the developmental stage of the students (UNESCO IIEP Learning Portal", 2018). Best practice pedagogy results in enthusiastically engaged and enjoyable learning. As a science, pedagogy must be measurable.

Essential to the implementation of any pedagogy is writing curricular that is fit for purpose. Each school environment is different; each school microsystem has its own culture. For a positive education syllabus to work it must fit the culture of the school. Studies by Dr Helen Street (2017) indicate that contextualised wellbeing initiatives in schools are much more likely to result in engagement and long-term benefits. This study seeks to show that inquiry-based learning is adaptable enough to be used in any school context but has the

necessary pedagogical structure to meet the needs of transition aged students in positive education.

Research suggests experiential learning has a greater impact than instruction alone (Friesen & Scott, 2013). Inquiry-based learning is a teaching practise where the learning process is research focused. In these classrooms the teacher acts as the facilitator. It is a constructivist pedagogy where students work through problem solving of real world examples to acquire new knowledge and consolidate previous understanding; they construct new ideas and knowledge on the old. The educational advantage is that in the process students become more engaged with the question and more responsible for their learning (Zafra-Gómez, Román-Martínez & Gómez-Miranda, 2014). Inquiry-based learning has been around since Socrates and has evolved to meet the demands of the new knowledge that is needed in the twenty-first century. In fact, Socrates, Dewey and other proponents of inquiry-based learning believed that this method facilitated learning for knowledge but also learning for living as it provided the student with tools to problem solve and be mentally flexible.

Knowledge was once considered a fixed set of facts or methods (Friesen & Scott, 2013) and that the best way of imparting knowledge was to have it delivered by an expert to a passive group of students. We are now aware that knowledge is ever changing and growing and that context and experience in learning the field of knowledge adds significantly to the remembering and understanding of it (OECD, 2009). Cognitive science tells us that deep conceptual understanding comes from authentic learning and is a much more meaningful way of learning than the traditional instructionist method (Sawyer, 2005). Inquiry-based learning, done well, provides the learner with authentic learning opportunities in real world applications. Authentic learning is the learning that one gets when actually participating in the real work practice of the field. For example, when someone is learning to drive a car and has an instructor with them at every moment, they understand the principles and rules, but it

is not until they actually join the traffic as a solo driver that true and deep understanding of the process occurs. We learn the most from doing not being told or "done to". This is authentic learning which leads to deep understanding.

Inquiry-based learning aims to activate student motivation leading to heightened engagement and flow, a state of complete absorption and engagement in the work (Csikszentmihalyi, 2008). The pedagogy of inquiry-based learning provides students with opportunities for autonomy in the design, direction and structure of their inquiry in the belief that these elements will lead to the students becoming intrinsically motivated to learn. Intrinsic motivation is described as essential to cognitive and social development and a key reason for happiness and life satisfaction (Ryan & Deci, 2000).

Self-determination theory (Ryan & Deci, 2000) (SDT) says that there are three basic psychological needs: competency, relatedness and accomplishment. When these needs are being supported people have higher intrinsic motivation, self-regulation and wellbeing, we flourish. Thus, inquiry-based learning should meet those needs in students and thereby achieve the flourishing goals of positive education. In students, these characteristics are evident as improved engagement and higher academic outcomes (Taylor et al., 2014). Inquiry-based learning provides a medium for students to learn with autonomy, pursuing their passions, gaining competence and finding achievement.

Inquiry-based learning of positive education should also improve the literacy of students in wellbeing science. Wellbeing literacy, like literacy in Biology, refers to the understanding of constructs and appropriate use of the terms synonymous with that field of knowledge. Wellbeing literacy is the responsibility of positive education (Oades, 2017). It is difficult to adopt a program to increase flourishing if one does not understand what flourishing is and why it is helpful to flourish. As students unpack their inquiry in positive

education, they should gain a deeper understanding which ultimately leads to greater literacy in the field.

I believe that this pedagogy lends itself to positive education by encouraging students to validate the theories of positive psychology through authentic inquiry and develop a deep understanding of practises which they can utilise throughout life.

The International Baccalaureate

The International Baccalaureate (IB) is a system of education rooted in inquiry-based learning (Stillisano, Waxman, Hostrup & Rollins, 2011). It has a staged program: the primary year's program (PYP) the middle year's program (MYP) and the Diploma (DP). The IB method encourages students to be independent, curious and motivated learners. As a pre-eminent Inquiry-Based Learning method, the aims of the IB and those of positive education intersect.

The IB inquiry method seeks to provide students with:

- Challenge and thereby *engagement* and *connection*

- It fosters a growth mindset encouraging students to find their passion and show *perseverance* and grit to achieve it.

- There is *autonomy* in the inquiry process and

- Competence in the exhibition process where students can make their thinking and learning visible.

- Students need to connect with their peers and the wider world (relational).

Similarly, if we gauge the aims of positive education by the EPOCH measure, then, as shown in Figure 1 there is considerable overlap with the IB method. This justifies using the EPOCH measure as a means of evaluating the program.
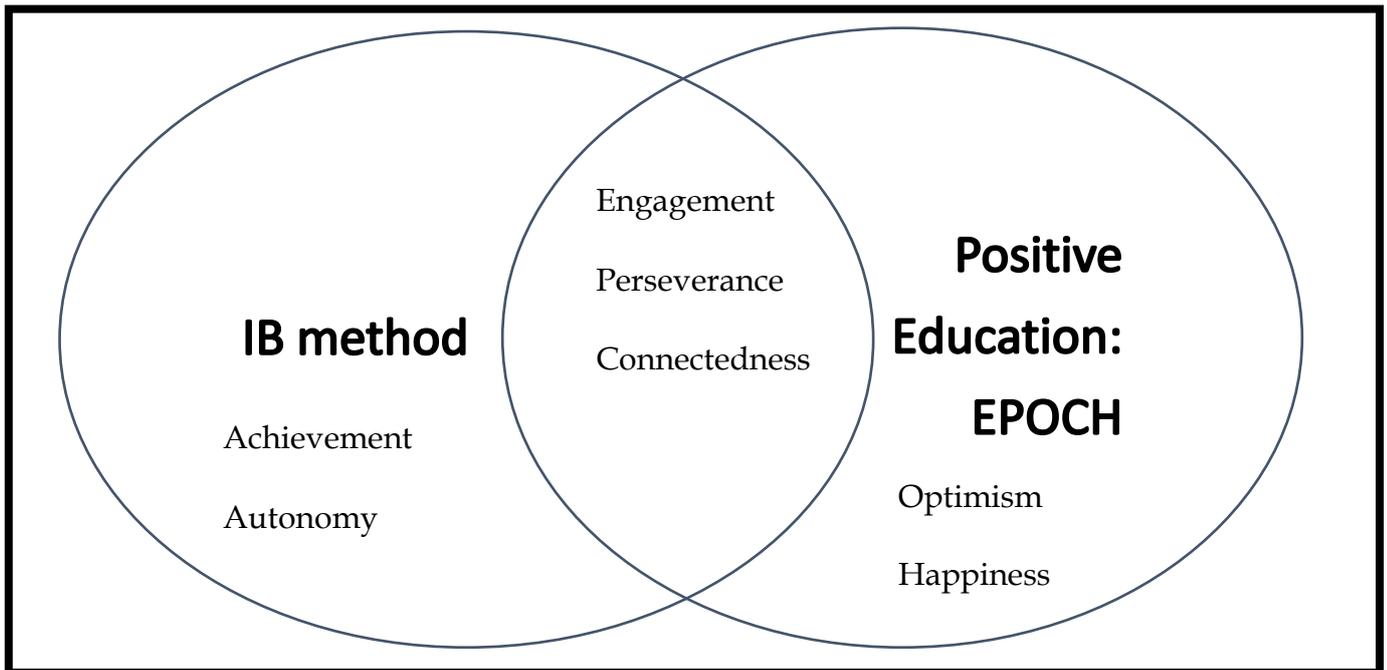
Figure 1: comparison of IBL goals and EPOCH measure criteria.

    As a pedagogical vehicle for positive education, the IB inquiry-based learning seems to be very useful. Not only does it fulfil the above wellbeing goals but also provides for the curriculum to be written to fit the context.

The IB website states that "Teaching in IB programmes is:

- Inquiry-based—provoking curiosity to structure and sustain exploration

- Concept-driven—planning and teaching through concepts that are transferable to new contexts

- Contextualised—reaching beyond the scope of individual subjects to establish relevance

- Collaborative—promoting effective teamwork and purposeful/productive collaboration

- Differentiated—providing access to learning for a diversity of learners

- Informed by assessment—balancing assessment of, and for, learning. ("MYP: From principles into practice", 2014)"

In the Primary Years Program (PYP) the IB believe that learners view the world through their own beliefs and constructs and that as they learn they add to these beliefs and constructs. In this constructivist, experiential learning model, the IB argues that students learn by the process of testing ideas with experiences provided by the curriculum. They will then remodel or build on their knowledge, making connections and constructing meaning (IBO, 2009). The central philosophy is that structured inquiry encourages learners to engage with big ideas and challenging concepts. This leads to deep understanding. PYP is a transdisciplinary program for ages 3-12, designed to provide an alternative to traditional learning. However, there are specific elements of this PYP program which can be utilised in construction of a positive education programs; in particular, the learning exhibition. This framework aims to enable intrinsic motivation for students in the process.

The curriculum is designed around units of inquiry. Each unit has a central idea which must be engaging, relevant, challenging and significant (IBO, 2009). The central idea should be expressed as a statement; e.g. "Using our strengths energises us". Some form of provocation is provided to engage the students, it may be an interview, YouTube clip etc. At this point students are encouraged to reflect on what they find fascinating about the idea and can they apply the idea to an existing interest. As Angela Duckworth (2017) says the development of passion starts with interest. From the central idea, suggested lines of inquiry and key concepts are connected. The PYP key concepts can be adapted to the purpose of positive education. The key concepts are:

1. Form: What is it like?

2. Function: How does it work?

3. Causation: Why is it like this?

4. Change: How is it changing?

5. Connection: How is it connected to other things?

6. Perspective: What are the points of view/opinion?

7. Responsibility: What is our responsibility?

8. Reflection? How do we know? (IBO, 2012)

At least four key concepts should be pursued in the research framework for the inquiry. Although inquiry-based learning encourages the student to follow their interest it is important that there is a good structure for them to use. Without guidance and structure the outcomes may not be met. Interviews with teacher mentors are also an important part of the IB process. This works well with positive education as it encourages positive relationships between teachers and students in the learning process. Research indicates that these strong relationships are crucial to student wellbeing and academic achievement (Lei, Cui & Chiu, 2018).

Although the students pursue their inquiry on an individual topic, they work in pairs or small groups. This peer mentoring also adds to the connectedness sought after by adolescents (Wit, Karioja, Rye & Shain, 2011). The mentors assist students to stay on track and reflect on their learning process. Visible thinking routines (Ritchhart & Perkins, 2008) may be used to help with structure in this part of the program.

The exhibition is the culmination of many weeks' inquiry by students and ensures that their understanding has developed. By explaining their learning and the development of their ideas to peers, teachers and the wider school community, such as parents, students are able to clearly display their thinking and learning. The exhibition is a useful tool for formative assessment. The student has ownership of the learning and presents it for discussion and assessment. This is a medium to explore the critical thinking the student has been engaged in and for reflection by the student on their learning.

The Program

Context

Ravenswood (RSG) is an IB school except for the middle years. Junior school girls participate in the PYP, working on collaborative inquiry-based research across all curricular. The Diploma Program is available to senior secondary students as an alternative pathway to the NSW Higher School Certificate. At the beginning of Year 7 the junior school girls are joined by approximately an equal number of new students. These students come from various local feeder primary school, other primary schools, both public and private, and from overseas. The total cohort of Year 7 is usually around 150 students. Positive psychology is an integral part of the school culture and the implicit delivery of positive education is being well facilitated by the visible wellbeing program (Waters, 2017). It is the explicit teaching of positive education that this program seeks to address.

Positive education at RSG has been explicitly taught to middle school for two years using traditional talk and chalk or one off interventions utilising strengths based PERMA framework (Seligman, 2012). The lessons are one, fifty-minute lesson per ten-day cycle. This equates to around four hours per term. The positive education teachers are mostly those already involved in wellbeing in the school. Most have some training in wellbeing literacy either through the Visible Wellbeing training (Waters, 2017), PENN resilience course training (PENN Arts and Sciences, 2018) or more formally at tertiary level.

Program Outline

RSG already has a purpose-built wellbeing profiler which will be used to avoid survey fatigue and also allow for future comparisons to be made. If no appropriate wellbeing measurement tool is already in place then the PERMA profiler for adolescents (Kern, & et.al. 2014) or EPOCH (Kern, & et.al. 2016) should be used. A base-line for academic potential is generally applied at the end of Year 6 when the incoming students sit the Middle Years

Ability Test (MYAT, 2005), a general ability test and Progressive Achievement Tests for reading and mathematics (ACER, 2018). These results will be mapped across cohorts to compare before and after results. Anecdotal qualitative data will also be collected by teachers.

When constructing curriculum it is important to ask the question, what do we want the children to learn? In positive education we want the children to learn the theory and skills to increase their wellbeing. The curriculum must address these questions. Context is crucial in this step. Careful consideration will be given to the needs of the cohort. At RSG, we work to bring the two groups of transition students, new girls and old girls (students coming up from RSG Junior school), together as one cohesive group as quickly as possible. We want to engender a feeling of belonging and connection with the school and their peers. For that reason, the choice of topic areas in the curriculum will reflect the school guiding principles. Each term will have a theme based around elements of positive psychology theory, e.g. character strengths, gratitude, optimism, grit, hope theory, mindfulness etc. These will form the central ideas. The first term will be a study of character strengths. Following that, we will move through the school guiding principles: optimism, courage, compassion, excellence, respect. These guiding principles will be aligned to a positive education theme and then part of the EPOCH model. A suggestion for these connections is seen in Table 1.

Table 1. Guiding Principles and their corresponding Positive Education theme.

Guiding Principle	Positive Education theme (Central idea)	EPOCH factor
Optimism	Optimism, hope, gratitude	Optimism
Excellence	Grit, flow, achievement	Perseverance
Respect	Positive relationships,	Connection
Compassion	Positive relationships, empathy	Connection, engagement
Courage	Mindfulness, grit, optimism	Perseverance, optimism

The written curriculum will follow a scope and sequence around the four or five fortnightly positive education lessons per term. Extra time can be given to the topic in Year meetings and mentor group time if required. Classes are made up of approximately 15-18 students from the same mentor group. These groups are static throughout middle school. Once the central idea is determined then the unit of inquiry can be developed. Key concepts and then lines of inquiry will be added. The inquiry cycle used at RSG involves a six stage process developed by Kath Murdoch (Murdoch, 2010):

1. Tuning in: the provocation

2. Finding out: applying the key concepts to the research

3. Sorting out: what is valid, synthesis of ideas

4. Going further: pursuing the passion and organizing the information. Where to next?

5. Drawing conclusions: critical analysis

6. Taking action: presenting your information

As this is a cycle, the students reflect on the process and refine their critical thinking. An example Unit of Inquiry program is shown below.

Example of a unit on a Program of Inquiry

An inquiry into:

Character Strengths

An inquiry into the core virtues identified by philosophers and religions and continuum of character strengths that make them up: the function of and connection between character strengths and wellbeing.

Central idea

"Strengths are patterns of thinking, feeling, or behaving that, when exercised, will excite, engage and energise you and allow you to perform at your optimum level" (Linley, Willars & Biswas-Diener, 2001)

Key concepts: form, function, causation, connection, change

Related concepts: behaviour, consequences, growth, relationships, beliefs

Lines of inquiry (examples)

　• Historical philosophical approach to virtue

　• Determining own signature strength and identifying strengths in others

　• Researching a famous hero (or villain) figure and identify the character strengths shown

　• Reflecting on what using different strengths feel like

　• Evaluating interventions to grow particular strengths

Specifics about the teaching framework

- Positive Education will be introduced in a whole of Year meeting where the fundamentals of positive psychology and wellbeing will be introduced. Visible thinking routines (Ritchhart & Perkins, 2018) such as "I used to think but now I think" or "compass points" will be used to help students unpack the information and find a direction of inquiry.

- VIA character strengths youth surveys will be completed (Authentic Happiness, 2018)

- Lesson plans will include an introductory lesson which will include a provocation such as a TED talk or interview regarding the use of strengths.

- Students will form pairs one new girl and one old girl. The old girl will act as a mentor to the new girl in inquiry-based learning.

- Students will choose a strength to research over the following weeks.

- They must answer at least three of the key concepts and show that they have analysed, synthesised and evaluated the information they have collected. These are to be included in the exhibition and will be assessed.

- Students must display their learning in an exhibition at the end of the term. The exhibition will contain at least three mediums for displaying knowledge which will be included in a presentation.

- Teachers will act as facilitators and mentors.

- Students will also have to check in with a peer partner and evaluate that partner's work at the end of each concept. This is important for building and reflecting. Visible thinking routines can also be used at this time.

- This is an eight to ten-week program designed to introduce positive psychology and wellbeing to Year 7 students in term 1.

Student learning outcomes:

By the end of the program students should:

- Understand that positive psychology is the scientific study of what helps us flourish

- Synthesise information on theories of wellbeing such as PERMA

- Have a working understanding of wellbeing and why it is important.

- Understand negative bias

- Understand and describe what character strengths are

- Have completed the VIA strengths survey and know what their signature strengths are

- Be able to spot strengths in others

- Predict the effects of overuse or underuse of strengths

- Critically evaluate interventions to promote wellbeing

- Analyse the effect of positive psychology interventions (PPI)

- Effectively communicate knowledge

- Reflect on the thinking and learning process and make conclusions based on the reflection.

Assessment and Expected Results

The assessment of student progress in this program is two pronged: wellbeing and academic.

Wellbeing

The wellbeing assessment will be quantitative and qualitative. The EPOCH wellbeing scale or RSG wellbeing profiler measures can be used to determine any change in the level of overall subjective wellbeing. These tests will be conducted annually to determine growth or otherwise in wellbeing levels over the course of the program.

Anecdotal qualitative evidence from teachers will also be collected regarding how the school feels, looks and sounds (Waters, 2017). The students own reflection of their learning will also provide a valuable insight into the effectiveness of the program. This reflection could be used on the end of year report to parents so providing an authentic student voice to their learning.

The expectation of this type of learning program is one of heightened engagement leading to increased wellbeing literacy. The connectedness slump would be overcome by the collaboration of students within groups and shared goals in the exhibitions. One would expect that students will be better equipped to manage the stress of transition by having greater wellbeing.

Academic

The academic outcomes will be assessed using both formative assessment and summative assessment. The main academic goal is that there is evidence of learning. Within that broad goal are sub-goals relating to wellbeing literacy, critical thinking, research methodology and collaboration. The formative assessment will utilise visible thinking routines and meetings with mentors involving reflection and construction of the inquiry

around the key concepts. Finally, the quality and depth of the exhibition presentation can be used as a summative assessment.

As there are two distinct groups coming together to use this program some kind of comparative test such as a t-test may give quantitative evidence of the impact of positive education on the academic wellbeing of the students. Those students who had previously not had wellbeing taught explicitly may show different academic improvement to those who already had a level of wellbeing literacy. This result should show a greater improvement from the baseline at the end of Year 6 in those students who were new to positive education. At the very least, one would hope that all students maintained a steady level of academic achievement and that the academic decline so often seen is not evident.

Evaluation

Sawyer (2006) proposed the following criteria, shown in table 2, as evidence of deep learning. The exhibition should display as many of these criteria as possible.

Table 2: Evidence of Learning Framework for RSG Strengths Unit

Evidence of Deep Learning	RSG Strengths unit of inquiry: Student outcomes
Learners can relate new concepts to their previous knowledge	Understand that positive psychology is the scientific study of what helps us flourish Wellbeing definition
Learners can determine where their knowledge fits into the larger central idea	Synthesise information on theories of wellbeing such as PERMA
Learners can see patterns and fundamental ideas	Be able to spot strengths in others Have completed the VIA strengths survey and know what their signature strengths are
Learners can evaluate new ideas and draw conclusions from the new knowledge	Understand and describe what character strengths are Able to identify strengths in others Critically evaluate interventions to promote wellbeing Predict the effects of overuse or underuse of strengths
Learners can participate in critically based discussion	Critically evaluate interventions to promote wellbeing Analyse the effect of positive psychology interventions (PPI)

and form a justifiable position	Effectively communicate knowledge through the exhibition
Learners can reflect on their new understanding and the learning process they have undertaken	Reflect on the thinking and learning process and make conclusions based on the reflection

The effectiveness of the program will be evaluated using the EPOCH elements.

Engagement: were the students engaged in the process and did they find it absorbing? One of the primary goals of this program is to engage the students. The EPOCH measure does not distinguish what the adolescent is engaged in, so measuring student engagement in this way does not necessarily reflect solely the result of the program. However, if students find the program relevant and engaging it will add to the general engagement they feel at school, thus improving their wellbeing and academic achievement. Engagement in the program will also be borne out in the reflections and the quality of the exhibition. Have students shown evidence of critical thinking and therefore, improved wellbeing literacy? These aspects of the program are strongly supported by the inquiry-based pedagogy and within the evidence of deep learning.

Perseverance: was there sufficient time and challenge in the program for the students to show perseverance? If increases in academic attention are gained from the program, there will be evidence of this in other areas. The beauty of inquiry-based learning is that it allows for differentiation of topics, so students can work at their own level. Despite this, the goal is for students to aim high to achieve their best. The finished exhibition will show the degree of perseverance. This element may be the most difficult for the RSG program as there is little class time to develop an in-depth line of inquiry. Chunking the program should alleviate this problem. It will need regular review by teachers and close watch on student progress.

Optimism: this element is seen in the approach of the student to the progress of their work and the goals that they set themselves. The mentoring meetings where goals are set

reveal the ambition of the students with the breadth of work and indicate their level of optimism. Grit and optimism often coexist. Grit is perseverance with passion (Duckworth, 2017). It is difficult to not feel optimistic if one is pursuing something one is passionate about and optimistic people are much less likely to just give up (Duckworth, 2017). The effectiveness of this program will also be evident in the passion that the students develop for their topic and the confidence they have in their work.

Connectedness: the sense of belonging that the students feel for RSG and their cohort will be visible in the feel, sounds, look of the group. The other connectedness that should develop is with their teachers who will guide them through these inquiries. These students will show greater wellbeing and less evidence of disconnection such as friendship problems, anxiety and low self-esteem.

Happiness: the evidence for this element will be in the emotional regulation exhibited by the individuals and the group as a whole. Contentment leads to calm responses and less reactiveness to pressure. Again, apart from the results on the EPOCH measure, this will be evident in the culture of the group and observable in their interactions and empathy.

This inquiry-based positive education program is designed to have ongoing evaluation. If the outcomes are met, the wellbeing of the group should be supported and the deep learning will be measurable. Outcomes will be reviewed by Year 7 mentors and, where adjustments are required, they will be agreed, enacted, evaluated and reviewed in a continuous developmental process.

Limitations and Future Directions

This program is designed for the transition program at RSG and as yet has not been trialed. The level of staff training required for implementation of inquiry-based learning in a non-IB school may be quite prohibitive although fundamentals of inquiry-based learning are not new to most teachers. It is also similar to the discipline-based inquiry rubric published by

the Galileo Educational Network Association (2008). This rubric may be more accessible to non-IB schools.

Students will also need significant scaffolding in the initial inquiry to help them to understand the requirements and the research method. Careful instruction and mentoring will be needed. Students who are not engaged with the process will need extra assistance to find their passion and so be able to move forward. In this way, the teaching load is quite high.

The framework for this program is very general so that it can be adapted to suit the specific requirements of each school. However, I believe there is valid justification for using this method to teach positive education in Australia.

Due to the nature of the RSG Year 7 cohort, studies into the effectiveness of the pedagogy can be conducted between the groups who had previous inquiry-based learning experience from junior school and those who had not. It would be particularly interesting to determine if having experience in inquiry-based learning made the experience of it in the form of positive education more engaging. A t-test should be used to compare the two separate groups to determine if having prior understanding of the IB learning process led to a deeper understanding of wellbeing.

A complete guide to this pedagogy for teaching positive education could be undertaken so that it is more accessible to teachers in non-IB schools. This should include lesson plans, teaching strategies, and assessment examples. It is important that the plans be contextualized so that it is developmentally appropriate and also fit for purpose in each school.

Conclusion

If a positive education program is developed to meet the specific wellbeing goals of the school, and supported with planning time, training for teachers and a sensitively written curriculum, outcomes for students should be strongly positive. The way that such a program

is taught needs to be considered. Positive education programs are currently considered 'fluffy' or 'window dressing', lacking academic rigor and not achieving lasting results. Seligman (2009) asserts schools mostly teach for accomplishment. This is not inherently negative, however the scope of achievement skills realised needs to be broadened to include the achievement of wellbeing in school. Positive education promotes change in this area by adopting a method of teaching that facilitates achievement. Post-industrial learning is best done by experience rather than instruction; anyone who has received a new smart phone has experienced this type of learning. It seems counterproductive to expect students to learn only by instruction when we know that is not how they learn best. Inquiry-based learning provides the engagement, autonomy and rigor to push students towards increased wellbeing literacy, so enabling lifelong flourishing. The value of wellbeing is not disputed. What is needed is the engaging application with which to attract student's curiosity.

There is a synergy between the IB inquiry-based learning pedagogy and positive education goals for flourishing. The structure encourages students to find something they are passionate about, research it using key concepts and exhibit their learning. It is challenging, exciting and will take considerable commitment these are reflected in passionate persistent teachers with Grit.

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