Chapter 10: Education

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Domain: Education

"Give a man a fish, and you have fed him today. Teach a man to fish, and you feed him for a lifetime": Though the author of the quote is unknown, the maxim is almost universally understood. Education, providing it passes on a skill or knowledge, can change a person's entire future. It is the key to creating new possibilities for creating a safe, socially and ecologically responsible global order that enhances human happiness and well-being of all life. Through education we can capture the hearts and minds of our children and young people to the new development paradigm. Our challenge in education is to develop our young people's capacities as active responsible learners and global citizens who thrive and flourish in the complex world of the 21st century.

This focus on learners' skills and understandings is reflected in the United Nations goals for education: to make people wiser, more knowledgeable, better informed, ethical, responsible citizens who are critical thinkers, and capable of life long learning. The four United Nations pillars of Education for the 21st century offer a paradigm for quality education for all children. The four pillars are learning to live together, learning to know, learning to do and learning to be (Delors, 1996).

Education can also change the way that people view issues, it can affect their ability to get employment, to take care of themselves during sickness, or to think rather than fight their way out of a challenging situation. For this reason education can be seen as the glue between all of the GNH domains.

Existing sub-domains

The sub-domains considered below are with reference to Bhutan as the originator of the GNH. However they are easily generalised to other countries and examples cover countries with differing geographies, politics and economies.

Education attainment

Education attainment matters: it can provide feelings of satisfaction and accomplishment as well as giving access to more satisfying work opportunities (Judge, Ilies and Dimotakis, 2010). The formal education system in Bhutan, for example, developed only recently and qualification systems are particularly new, with certification mostly related to length of time in education rather than

based on testing. While some countries are also still developing their formal systems, in some other countries education attainment is highly complex and can involve a myriad of qualification types and varying attainment levels. Where attainment is more complex it is sometimes labelled as 'achievement' rather than 'attainment'. Increasing levels of achievement have been found to increase an individual's happiness and the overall productivity of a country although this relationship is stronger in developing countries (Jamison, Jamison and Hanushek, 2007).

Questions have been raised regarding the relationship between formal schooling, educational attainment, and 'knowledge' more broadly. For example, years in formal education have expanded in North America, however literacy levels and social capital have arguably remained static or declined (Hirsch, 2003). It is also difficult to assess to what extent the replacement of 'formal knowledge' may reduce knowledge of one's local community or civic literacy (Howe, 2003). For this reason a broader view of 'education attainment' is important, which looks not just at the outcomes of formal learning but also at a more 'general' or cultural knowledge base.

National/local language literacy

The history of language in Bhutan makes the inclusion of literacy a particularly important GNH survey point for the Bhutanese government. A person is rated as literate in the survey if they can read and write in any one language: English, Dzongkha or Nepalese. Literacy matters for educational attainment and achievement, which influence well-being, and it also matters that all languages in Bhutan are included. Studies show that where a person lives in a country with a national language, but speaks a different language – perhaps because of family heritage or a localised dialect - then being able to speak in one's native language *as well as* the separate national language brings feelings of authenticity and greater levels of integration, both of which are important for subjective well-being (Coracini, 2006; Vedder et al., 2006).

Unfortunately statistics suggest that up to half of the world's languages could be lost by the end of the century if current indigenous language loss patterns continue (Moseley, 2009). With the loss of language comes the loss of knowledge embodied within that language – therefore ideas or action specific to a particular community, and important for survival and well-being, are in danger.

Folk and local literacy

Given that Bhutan only recently developed its formal education system, many older Bhutanese people did not experience formal education, but they nevertheless 'learned' throughout their lifetime via informal networks – e.g.

role-modelling from the family, through local stories, etc. The GNH survey attempts to capture this informal education by measuring knowledge of local legends and folk stories traditionally passed through informal means. The sharing of tacit knowledge across generations is important for health and feelings of community cohesion. The five survey questions in this section measure knowledge of: local legends and stories, local festivals, traditional songs, how HIV and AIDs are transmitted, and knowledge of the constitution. Concepts such as the knowledge of HIV transmission are critical for understanding how groups protect themselves against health risks. Unfortunately, there is no body of research so far studying the importance of folk or local historical knowledge for well-being. However a recent study by Stavans (2012) showed that maintaining the oral culture of displaced Ethiopian communities enhanced their confidence and well-being, suggesting that informal customs may have some links with well-being.

As noted above, folk and local literacy also contributes to our understanding of 'education attainment' when broadly defined to incorporate both formal and informal education.

Alternative sub-domains

Length of education

Education attainment in Bhutan is heavily correlated with education length. In other nations education attainment and length of education are separate variables. A person can achieve highly at, say, their school leaving certificate aged 16, yet not continue on to higher levels of education. There is some evidence that satisfaction with life and subjective well-being may therefore relate more heavily to *length* of education rather than attainment (Oreopolous, 2006). It is also the usual case that higher achievement in earlier parts of formal education enables a pathway for accessing higher education but for clarity's sake future surveys (either GNH or any cross-nationally) and policies might usefully disaggregate education attainment/achievement and education length.

Lifelong learning

Formal education and informal education are looked at in the GNH survey. However the assumption is that formal education only considers younger people at school in their compulsory programmes, whereas informal education (provided by family, peers, and mentors) and non-formal education (i.e. swimming lessons, summer camps, etc) are measured through a framework of local knowledge. In some countries creating a unified 'local knowledge' framework will be difficult if the nation is multi-cultural or strongly divided between different cultural groups. Furthermore, many countries provide formal learning opportunities beyond the end of a child's schooling. An additional education proxy may therefore be a measure of 'lifelong learning'. Though there

is no accepted single definition of 'lifelong learning' it can be thought of as the provision of education opportunities for people of an age and at any stage in their life cycle. Studies on lifelong learning often look at the access to and impact of adult learning courses (Hammond, 2004; Simone and Cesena, 2010) or opportunities provided for adults to learn in local schools, e.g. as a parent governor or via parenting classes (Orchard, 2007). Non-formal workplace or on-the-job training also comes under lifelong learning.

Curriculum

Being able to do more things as a result of a learning activity provides greater options for autonomy and deliberate choice in the future, but evidence suggests that the teaching of certain curricular subjects during formal education better improves young people's subjective well-being and helps ward against future mental health problems, e.g. depression. Resilience programmes have had some success in reducing the future likelihood of a young person developing depression (Gillham et al., 2006; Brunwasser, Gillham and Kim, 2009), and personal health or positive psychology curricula are also gaining ground as being an additional way to impact well-being (Durlak and Wells, 1997; Challen et al., 2009; McGrath and Noble, 2011; Boniwell and Ryan, 2012).

Curriculum thought of more broadly as all the learning occurring in a school also means that research considering non-formal education and the practices surrounding schools – e.g. behaviour policies, assemblies and extra curricular activities are also important. A meta-analysis undertaken by the Collaborative for Academic and Social and Emotional Learning (Durlak et al., 2011) of 213 research studies into the effectiveness of school-based social and emotional programs identified that there were significant improvements in students' social-emotional skills and their sense of feeling more connected to their school (Durlak et al., 2011) as a result of participating in Social and Emotional Learning (SEL) programs. The participating schools also documented a 44% decrease in suspensions and a 27% decrease in other disciplinary actions. Academic achievement scores improved by 11 to 17 percentiles that illustrates the strong interdependence of student well-being with student academic learning. The school-based programs were also most effective at increasing academic achievement when taught by the classroom teacher, rather than a visiting specialist. A classroom teacher can embed the program into their classroom and school practices, and integrate the social-emotional learning with the academic curriculum. The teacher can also customise the program for individual student's needs or their class as a whole.

Diekstra (2008) also conducted a meta-analysis of worldwide research studies into the effectiveness of school-based social and emotional learning programs. The study concluded that enhanced social & emotional development is the key

to the overall development of students in terms of their personality, academic progress, school career and societal functioning. Universal whole school-based social and emotional learning programs were seen as highly beneficial for children and adolescents, especially those implemented with students aged between 5 and 13 (ie in primary/elementary schools). Young people from low socio-economic status and different ethnic backgrounds were found to benefit at least as much as other young people (and often more) from social and emotional programs.

Future surveys might therefore consider whether students are accessing a wide variety of curriculum provision and future policies might support initiatives that provide students with access to such positive curricula.

The intrinsic value of the domain

The claim that education is an intrinsically good thing can be supported by observations that achieving in education can feel good. In studies on 'flow' – the euphoric feeling of being fully engrossed in doing something – researchers found that students in lessons get into this zone when the tasks they are doing are moderately challenging for the learner and the right level of feedback is provided (Carli, Della Fave and Massimini, 1988). The positive affect arising from flow is intrinsically rewarding because it *feels* good. Where education provides 'flow' opportunities, education feels inherently valuable.

Speaking and being educated in one's first language increases feelings of authenticity and increases confidence in the education system (Watkins, Razee and Richters, 2012). In studies of Korean immigrants in California, language was so important that perceived language barriers accounted for the variance in health and well-being among the students (Ding and Hargraves, 2009). Literacy can therefore have a significant impact on our physical as well as our subjective well-being.

Folk and local history's impact on well-being is not well studied in the academic literature at present, but folk customs are important because these customary practices often develop to avoid problems of the past, e.g. illnesses or conflicts. Nevertheless, formal education is also important for survival, and in some cases can be even more important than custom. Levang, Dounias and Sitorus (2005) studied tribal groups in Africa and found that tribal groups who moved out of their forest living areas and no longer had the natural resources they previously relied on for survival nevertheless had a declining death rate when compared to forest-dwelling groups who remained in the well-endowed forests but who could not access formal education. Hence, while folk literacy is important and should currently be captured to ensure measurement of education in Bhutan among older generations, the benefits of formal above informal education

should also be understood, and as younger generations become more educated this part of the survey should become less prominent.

From the perspective of 'value' in the pejorative rather than evaluative, 'values' are intrinsic to all that a school does. A starting point in building a supportive, respectful and connected school culture is to help a school community clarify and reach agreement about the values that guide the school's practices. If a school articulates pro-social values through it's vision statement, policies, structures and teaching practices, then these values form a 'moral map' that guides how everyone in the school community interacts and communicates with each other and the positive choices they make. The importance of learning to act in accord with one's pro-social values for sustained well-being in one's youth is illustrated by a longitudinal study that tracked high school students over fifty years into late adulthood. The students were interviewed every ten years and the results demonstrated that 'giving' adolescents became both psychologically and physically healthier adults (Wink et al., 2007). Hence, any education that provides a positive 'moral map' – whether formal, non-formal, or informal in nature – is like to promote intrinsic psychological health.

Instrumental value of the domain

Education matters not just for intrinsic reasons for also for instrumental reasons, e.g. monetary and physical well-being. Academic achievement and the completion of high school leads to greater employability, less reliance on welfare support and a higher likelihood of participation in further education. These outcomes in turn further increase the likelihood of sustained employment, adequate income, higher living standards and self-sufficiency (Department of Premier and Cabinet, 2005; Muir et al., 2003)

In the United States the effect of education quality impacts income growth and mortality rates (Jamison, Jamison and Hanushek, 2007). Improved access to quality education improves income growth due to the likelihood of a country being able to understand, adopt and create new technologies. This adoption of technology brings cognitive and social capital to the individual who through their new skills are more likely to become employed (Granovetter, 1992). It also means individuals spend more on upgrading to new technology which therefore increases a country's GNP. In Mozambique, the presence of an additional adult female completing the first stage of primary school increases household per capita consumption by 18% in rural areas, and the addition of a male completing the second stage of primary school increases household per capita consumption by an additional 12% (Handa, Simler and Harrower, 2004). Maternal education in Mozambique is also strongly associated with the health and nutritional status of preschool children, two variables which consequently impact on a child's likelihood of continuing in education.

The problem of the current economic paradigm, however, is that it uncritically perpetuates the idea that greater consumption is going to increase well-being, whereas it may merely be a consequence of greater education because of the greater financial capital gained as a consequence of more formal education. Hence, while there is an instrumental value of well-being in that an individual may be more able to make decisions and consume more goods, there is also a potential ecological pitfall if more education leads to greater consumption and greater depletion of the world's natural resources.

The instrumental value of educational achievement can spread across generations. If a person's formal educational attainment is low and this impacts their personal well-being this 'unhappiness' can affect their ability to transmit well-being to their child, in turn meaning the child is less likely to have strong school achievement thereby influencing attainment, and so on (Samuel, Bergman and Hupka-Brunner, 2012; Engin-Demir, 2009). This cycle occurs because while education increases well-being, high levels of well-being also appear to increase the probability of successful intergenerational transfer of educational attainment. Raising education attainment levels, or well-being, can therefore both have a positive effect on the other one.

Health is particularly correlated with education in a relationship labelled the 'education gradient' within the health literature. The education gradient refers to the fact that mortality, injury and illness rates are significantly different across groups with different levels of education (Meara, Richards and Cutler, 2008). Part of the difference between groups is explained by more educated people often having greater monetary capital and therefore being more able to access health insurance or effective treatments. However, differences in knowledge and cognitive ability account for 30% of the variance because people with more education typically make more informed choices about their 'health behaviours', i.e. eating, smoking, exercise (Cutler and Lleras-Muney, 2010). Knowledge of HIV/AIDs, as measured in the GNH survey, is an example of important knowledge that helps people avoid risky sexual behaviours that can lead to HIV transmission. Education reduces risky behaviours because people know the consequences of actions and also more alternative strategies for dealing with a situation.

Good health particularly critical for children and adolescents whose health patterns and habits developed during these years often continue into adulthood (Tountas and Dimitrakaki, 2006; WHO, 2008). Individuals with higher rates of education report fewer illnesses and have better mental health and well-being than those with lower levels of education (Turrell et al., 2006). Schools can have a direct and indirect impact on student health and well-being - for example schools can directly teach the benefits of good nutrition and exercise and the

adverse effects of substance abuse and smoking. However it is also likely that non-formal and informal education will matter – for example, the attitudes and knowledge of parents towards food is likely to influence the eating behaviours developed by children (Campbell et al., 2012).

Traditional public policy

Traditionally, national education policy debates are most frequently about a country's competitiveness in terms of skills (particularly reading, maths and science), or the debate focuses on the country's ability to produce economically productive workers through its education system. Few countries pay serious regard to debates about education's influence on intrinsic well-being though much discourse is tangentially related to physical and monetary well-being through discussions of education's impact on employment or government expenditure in other public services (e.g. crime or health).

Traditional education policies also focus on children aged up to 18 (or younger in countries with more limited formal education access). Mainly debates centre on the access to and quality of the compulsory education system. Wealthier nations are somewhat fixated on data comparing the abilities of their nation's pupils on standardized tests, mostly in the areas of reading, writing, mathematics and scientific knowledge. The three studies most commonly quoted are the Third International Mathematics and Science Study (TIMSS), the Programme for International Student Assessments (PISA) and the Progress in International Reading Literacy Study (PIRLS). The 2012 Pearson report, "The Learning Curve" used all three measures to create an overall index of cross-national educational attainment (Economist Intelligence Unit, 2012). Approximately 150 countries do not currently take part in the studies; the suggestion is that at present they would score far below thresholds require for their inclusion to be statistically possible when standardising scores (Naumann, 2005).

Using these comparative indices, countries 'copy' the top-performing countries, especially their policies on teacher training, teacher pay, national curriculum and annual standardised testing for school accountability purposes (Breakspear, 2012). A discourse regarding the impact of such policies on students' well-being is almost entirely missing. This absence is problematic as there is some evidence that systems of high-stakes examinations combined with a culture of strong parental pressure can result in substantially reduced well-being for young people (Qin, 2008). Yang and Shin (2008) found that the desire of Korean parents for their children to achieve highly meant that their children's developmental needs for leisure, pleasure and sleep as well as their psychological and emotional well-being needs were ignored. On the other hand, one of the most continually high performing countries is Finland – a country

that also scores highly on well-being and academic measures (Chapple and Richardson, 2009). Finland's success is an opportunity for marketing the importance of well-being more widely and, if considered correctly, government desire to appear 'top of the league' table in well-being provides a strong incentive for countries to promote well-being.

One potential downside of using countries' desires to move up achievement league tables by creating a 'World Class Well Being' measure similar to TIMSS or PISA, is that it might unhelpfully invoke feelings of supremacy or nationalism and detract from considerations about the global interdependence of well-being. It also sends the wrong message, placing those with the greatest economic consumption at the top of the league, when those at the bottom may actually be more ecologically sustainable, or higher on other measures of well-being such as 'family' or 'local knowledge'. League tables, unfortunately, can have the perverse incentive of causing isolationism rather than positive collaboration and could harm the ability of a country currently struggling to meet standards to do so in the future if another country felt its entry into the league might jeopardise their own standing (Alexander, 2010).

A second traditional characteristic of education policy is the concept of 'returns on investment' – usually calculated as a cost-benefit of education policies and which equates cost spent on education with economic productivities recouped or saved 'averted' costs. For example, the Chicago Longitudinal Study is a longitudinal cost-benefit analysis of Chicago Child-Parent Centres that provided additional schooling for low-income young people aged 3-20 during the 1980s and 1990s. Young people who received the additional schooling are now 26. The most recent report showed the pre-school program has provided a total return to society of $10.83 per dollar invested, and the school age programme returned $3.97 per dollar invested (Reynold et al., 2011). The researchers calculated the return on investment by accounting for earnings, taxation and 'averted criminal justice costs' including prison or legal services. What are not calculated however are either aspects of well-being nor other dimensions of the GNH such as health. Therefore cost-benefits may look at savings via employment and crime, but fail to take into account the impact on – say – less negative mental health problems or more improved environmental behaviours that children who received more education might demonstrate.

A third traditional characteristic of education policy is a focus on 'schooling' (or 'formal education') above non-formal or informal education. The latter spaces are less easily defined and less easily managed, for this reason they are therefore often ignored in favour of studies analysing formal education and considering impacts on income, GDP and consumption rather than more esoteric concepts such as civic literacy or kinship.

Major research findings of potential relevance to new public policy

New public policy about education could take a lead from the OECD studies on child well-being. The OECD gathers multi-dimensional indicators of child well-being and compares them across several nations. One of the six dimensions included is education and it is measured by looking at the resources available to young people for education purposes, e.g. a desk, a quiet place to study, a computer, internet access, textbooks, calculator and dictionary. Rated in this way only one in 200 children in Iceland or Germany are educationally deprived. In Mexico and Turkey more than 10% of the population can access only four or fewer of the eight educational items. Though only a basic measurement, these items can affect a person's well-being.

These measures are, however, primarily consumption related and may therefore repeat the mistakes of a previous paradigm. An alternative measure developed by GPI Atlantic instead draws on the OECD's "core competencies" to develop non-instrumental learning goals, such as knowledge of ecology, nutrition and the media (Panozzo, Hayward and Colman, 2008). Such alternatives would encourage a genuinely new paradigm based on knowledge of intrinsic importance which also relate to other GNH domains, such as health or leisure.

Any new policy paradigm regarding education should also focus on educational *equality* if well-being is to be promoted. Access to education in many countries is different based on a child's gender, with females far less likely to access education than boys (Hausmann, Tyson and Zahidi, 2008). Given the impact of maternal education on children's future educational achievement, health and well-being, then limiting female access to education is very likely to cause persistent inter-generational problems. Furthermore, where women have unequal access to the workplace – a usual consequence of unequal educational access – they are more likely to be in poverty, and have higher rates of depression, anxiety and suicide (Gaviria and Rondon, 2010). Sahn and Younger (2006) argue that reducing educational inequality is so powerful that benefits well-being even if income inequality in a nation is still growing. For example, within Latin America the income gap between top and low earners is increasing, however educational inequality is shrinking and therefore well-being in the nation remains at least static. Disrupting the reproduction of inequality based on wealth is also possible. In Mexico, wealth in the childhood home is a major factor in explaining educational level and socio-economic well-being, both of which are likely to influence subjective well-being; in Chile, however, a child's well-being and attainment is more affected by their parent's education than it is by their parents' level of wealth (Wong, 2012). If all people in a country can access the same level of education, then the benefits conferred from having an educated person in their household will be equally distributed.

Policies designed to promote equal educational access will therefore increase well-being for an individual and also increase the likelihood of intergenerational transfer of that well-being.

This is not to say that wealth inequalities do not matter. They matter substantially, with strong correlations between family income and educational attainment, as well as wealth being correlated with many other GNH domains (Wilkinson and Pickett, 2009). A new policy paradigm will therefore work to address this inequality.

Once people have equal access to education, however, it is possible that they would still not experience subjective well-being. Life satisfaction is impacted by the achieving of our own goals, whether those are short-term individual goals (e.g. "I would like some food") or longer-term career identity goals (e.g. "I want to become a doctor"). When young people's needs for relationships, positive parenting or physiological requirements, e.g. food and sleep, are not met then this is detrimental to well-being. Unfortunately the pressures of some education systems, especially in countries with high-stakes exams such as China and Korea, means the well-being of young people is being adversely affected (Yang and Shin, 2008). A more positive environment in schools must be created to rebalance these stressors.

Recommendations

What not to do

Two factors appear to cause considerable harm within education policies: overt stress placed on young people in high-stakes examinations and inequality in accessing education. Policies reinforcing either idea could become damaging. Measures of well-being must therefore be careful not to promote an over-idealistic notion that a country can become better at something simply by forcing people to focus on it. One would not wish for a situation where a country, by overly focusing on well-being, actually undermines well-being.

What to do

a. Ensure equal access to education for all children, regardless of gender or wealth. This is absolutely imperative for the health and well-being of future generations.
b. Develop metrics that test education as a broader concept rather than merely the outcome of 'schooling', Metrics such as those developed by GPI Atlantic media (Panozzo, Hayward and Colman, 2008) and the OECD's development of "core competencies" should provide alternatives to measuring 'educational success' which are more rounded and sustainable than those related to employment, GDP and consumption.

c. Create guidelines for the responsible reporting and use of performance tables regarding student's academic skills. The pressures felt by young people to perform to a high degree to satisfy adult needs is very strong in some countries. Two things contribute to this pressure: One is a strong feeling that the only way to have a monetarily secure future is educational achievement while young, and the second is a message from the government that the country is being let down if their children are not 'winning' at international tests of literacy and numeracy. From the perspective of political and governmental will the creation of guidelines regarding reporting and the use of cross-national data would help ensure ethical reporting of the international studies and ease stress. With regard to parent pressure it would help if governments encouraged and promoted lifelong learning opportunities, rather than 'one-shot' education systems where students are given 'one-shot' at exams at a specific point in time. This would reduce the pressure on children to perform when young. Cultural shift on this issue however is unlikely to be easy.
d. Encourage countries to develop a 'national policy' on student well-being which promotes a holistic education of the whole child; encourages a whole school approach that engages the entire community; and which works from a positive 'strengths-based' rather than deficit-based approach. Opportunities in formal and non-formal schooling would include access to activities which develop psychological capabilities that promote well-being, e.g. resilience, social-emotional competencies, critical, creative and ethical thinking as well as developing broader cultural knowledge in civics, nutrition, and finance.
e. Provide access to a broad set of experiences in schooling that will allow students to experience 'flow' – i.e. a sense of being 'lost' in a moment because the activity is inherently engaging. Some children do achieve flow in academic work, however it is also commonly achieved through sports, music and other non-formal education opportunities. Traditional public policy in education often focuses on results in academic subject areas, however providing access to these other opportunities could promote greater levels of subjective well-being.

Processes for building policy

Education is often a national or regional policy however it is important that education policies involve local communities in consultations on changes. The research showing the importance of authenticity to local culture and language in education suggests that changes which only provide one 'mono-national' system may be unsuitable and can undermine the education of minority ethnic, language or cultural groups.

Examples such as the Australian National Safe Schools Framework (NSSF) launched in 2004 and revised in 2011 as a response to concerns about school bullying, harassment and violence also show how important it is to seek agreement, evidence and build consensus in order to make changes in education which promote student well-being. Almost 90% of the educational 'experts' and over 95% of the school practitioners involved in feedback on the framework considered the following factors as 'very important' or 'important' to the successful implementation of a student well-being framework.

- Strong systemic and school leadership and a strategic plan
- Developing a collaborative whole school student well-being strategic plan
- Providing ongoing and wide-reaching professional learning opportunities for teachers
- Planning for parental involvement

Practitioners also reported that building common agreement of key elements in the education policy, reflecting research evidence, building on work in local communities and encouraging schools to develop their own pathways were also critical to the success of well-being policies.

Involvement in policy creation is also an opportunity for people to learn. Castro and Camp-Redondo (2006) found that ICT can help people be included in the policy process. By using online technologies such as Policy Delphi methodology ordinary citizens can give voice to their ideas about education (Turoff, 1970). This sort of inclusion in the process then educates people further on the process of politics and democracy, thereby ensuring learning *through* the policy creation process as well as creating policy *for* the purpose of expanding learning.

Urgent priorities

The two areas of most pressing need are the adequate measurement of educational well-being and improvements in educational equality. Many groups are already measuring educational well-being (e.g. GPI Atlantic, the OECD, the New Philanthropy Capital group, and many academics) but more co-ordinated cross-national approaches would benefit nations in identifying countries with good practice of well-being in their education system.

In terms of educational equality, some areas are already moving quickly to address imbalances. For example, in 2007 Uganda became the first sub-Saharan country to offer universal secondary education however there are currently not enough schools built. Social enterprises such as PEAS Africa are now funding the building of schools so that central government funds can then be used for day-to-day education. Where food is provided at school and security risks are

minimized (e.g. the building is safely built, and the children feel safe at school) there is evidence that attendance in the schools increases (Stith, Gorman and Choudhury, 2003). More research and funding for both well-being measurement and opportunities for building schools would help further goals of well-being and the UN Millennium Goals on education (United Nations, 2012).

Barriers to implementation

Institutional factors

Many countries pride themselves on the importance of education for their culture and productivity and it is inescapably true that social progress in many countries has been delivered through education. However persisting imbalances in education are often borne out of a religious view that women are inferior or, because their 'proper' role is in domestic work, then their need for education is more limited. Such strong cultural and religious values suffuse many institutions within such a country, e.g. in laws and welfare systems, and are usually strongly held by education stakeholders – e.g. teachers, administrators, parents. Changing these institutions is likely to be a lengthy and difficult challenge, though not an impossible one. Few countries that now have equal education access for males and females started out that way. It is only within the past 150 years that America and Western European countries evened out educational access among genders; while progress may be slow, nations may yet develop more equal formal education if pushed to do so.

With regard to the pressure of parents and governments, countries that use high-stakes knowledge-heavy exam systems are currently looking towards countries with better well-being or with more creative school curricula, aware that these qualities can improve their education system and, possibly, the productivity of workers. This change has been most evident in Shanghai and Hong Kong, both of whom have developed more 'creative' curriculum in recent years (OECD, 2010)

Political

Many nations now use the international education test league tables as a way of marketing their successes (or the opposition's failures) in times of elections (Breakspear, 2012). Politicians' habits of focusing solely on traditional academic skills will be a barrier to implementing any new public policy paradigm on education. Thinking of new ways to frame education policies is paramount for winning over political support for a new public policy paradigm rooted in well-being.

The popularity of in-group/out-group policies is also problematic for ensuring that local languages and folk histories are retained in the education systems of

countries with historically divided communities. Retaining a first language and traditional customs is important for people's well-being but historical conflicts sometimes mean countries are unhappy to support the teaching of knowledge from another culture in state-funded schools. A recurring example is in the choice of acceptable languages for school instruction in countries with bilingual communities, e.g, Belgium, Canada, and Hong Kong. Politicians wishing to gain the largest vote often trumpet the teaching of the majority language or culture and posit a reduction in resources for other languages by arguing that its teaching is vital for overall social integration. While integration undoubtedly works better when all students are educated in a national culture, it is also important that space is provided for appreciating a student's initial language and customs. For example Bhutan has included this space within the GNH. Arguably, any successful education policy paradigm wishing to encompass well-being will need also to be locally aware and encompass these different ideas. If politicians push back and require the paradigm to tout 'nationalistic' principles, then the education policy paradigm will be undermined.

Economic and financial barriers

In Uganda funds are now available for universal secondary education. However there is not always capital available for school building and even where a local school is built families cannot always afford to have their child away from the house all day; they are needed for domestic chores that bring in money for the family (Gelli, Meir and Espejo, 2007). In other countries education is still limited, especially beyond the primary years. Without finance in the right places, educational access is therefore stunted and future monetary growth and well-being is diminished for children who do not continue at school.

In other countries education is increasingly becoming a privately financed affair. In the US effective schools chains, such as the Knowledge Is Power Program (KIPP) school network, are funded primarily through government taxation but are also supplemented by enormous philanthropic campaigns or sponsorships. Countries who reform their system to allow state-funded 'independent schools' typically involve a number of private capital backers or involve business tie-ins – e.g. textbook publishers will fund school buildings if schools agree to sign long-term textbook deals with the one publisher. In these countries well-being may well only make it onto the government agenda if it is felt that philanthropists will align with it or businesses could profit from it.

Human resources

Increasingly better education means that the generation currently in education are inevitably the most well-educated. If there are not enough older educated people available to teach younger people, it can lead to teacher shortages and if

the young are rapidly overtaking the older generation in schools this can lead to high rates of unemployment amongst the over-50s.

Improving teacher quality has been the particular focus of education policies in many countries, with Finland and Singapore focusing on getting the most academically qualified people into school teaching, with some evidence that more highly qualified teachers improve student achievement and have better relationships with students.

Policy actions

Case Study 1: The Australian Safe Schools Framework (NSSF)

A national school policy that focuses the attention of both Government ministers and school leadership to the crucial role of schools in promoting student well-being and resilience is illustrated by the Australian Government's (2011) National Safe Schools Framework; a framework endorsed by all State Ministers of Education and distributed to all schools in the nation. This policy appears to be a world first in guiding all schools' curriculum and practices and highlights the Australian Government's endorsement of the important role of student well-being for learning and achievement. A safe and supportive school is described in the following way:

In a safe and supportive school, the risk from all types of harm is minimised, diversity is valued and all members of the school community feel respected and included and can be confident that they will receive support in the face of any threats to their safety or well-being.

The Framework identifies the following nine elements to assist schools in fulfilling this vision:
1. Leadership commitment to a safe school
2. Supportive and connected school culture
3. Policies & practices
4. Professional learning (Teacher education)
5 Positive behaviour management approaches
6. Engagement, skill development and a safe school curriculum
7. A focus on student well-being and student ownership
8. Early intervention and targeted student and family support
9. Partnerships with families, community agencies and the justice system.

Schools are encouraged to conduct an online evaluation of their school's strengths and limitations based on these nine elements. The Framework provides examples of many evidence-based practices and resources for enhancing their school's capabilities for whole school, staff and student well-

being and school-community partnerships. An online 'safe schools hub' to support schools and teachers in their implementation of the Framework includes case studies of schools that place a high priority on sustained student well-being.

Case Study 2: Teaching Strategies for Thinking Skills & Social-emotional learning

The following strategies all combine critical, creative and ethical thinking skills, social-emotional skills and employ cooperative learning (McGrath and Noble, 2010). The topics the children research and discuss could readily be issues that contribute to their understanding of ecological sustainability and a just and peaceful local and global community.

Ten Thinking Tracks is a sequenced cooperative problem-solving/decision making scaffold where students work in groups. Each student in the group takes turns in leading the discussion and recording their group's answers in relation to two or three tracks. The tracks challenge children to think of the bright side, the down side, their feelings, suggest improvements, think ethically and to consider issues of social justice and finally to negotiate a group solution eg patenting of seeds so farmers have to buy their seeds.

Multi-View encourages perspective taking and empathy. Students consider a problem such as cyber-bullying, organ donation or the case of the Kerala women against Coca Cola plant from different people's perspectives.

Under the Microscope encourages students to explore a controversial issue through different lens that includes their responsibility and the impact of the issue or event on their own lives and on others lives.

Cooperative Controversy provides a scaffold for conflict resolution. Students work in groups of 4 where pair A identifies two arguments in support of a topic-related controversial proposition and pair B identifies two arguments against it. Each pair presents their arguments to the other pair. Then each pair's perspective is reversed and pair A thinks of new disadvantages and pair B advantages. Finally the group of 4 negotiate the strongest argument for and against.

In *Socratic circles* half the class becomes the inner circle as discussants and the other half work in the outer circle as observers. The observers have a checklist to provide constructive feedback to the discussants on the quality of their thinking and their use of social-emotional skills. The two groups then swap roles and responsibilities.

Case Study 3: University of the Third Age

The University of the Third Age is an international organization that aims to educate and stimulate retired members of the community, also known as people in the 'third age' of life. The organization is commonly referred to as U3A and though started in France in 1973, the movement spread across the UK, USA, South Africa and Australia. In 1993, U3A created an 'online university' with courses targeted at older people and focused on providing community to people who otherwise could not get to a physical university. Similar to organizations such as The Open University, U3A have pioneered the way for traditional universities who are now opening access to their courses through 'MOOCs' – Massive Open Online Courses – whereby anyone with an internet connection can connect to others through online conferencing software. Online learning opportunities like these not only provide employment-enhancing skills to people across all generations, but the learning experience they provide can bring a sense of community and increase social capital, especially where users have previously been marginalized in the education system, perhaps because of a disability or lack of funds.

Policies designed to ensure access to virtual schools provide a cost-effective way of helping people have the benefits of learning without the requirements for physical infrastructure which that so often held up learning in the past. Providing internet facilities in local libraries, sponsoring the reconditioning of old computers so they can be sold more cheaply within needy communities and free training courses for adults hosted by schools and teaching about new technologies all encourage greater involvement with online education and could bring about greater lifelong learning.

Data and measurement for policy

The three education-related areas in the GNH survey are: education attainment, folk/local history and local/national language. Education attainment is already widely measured; however folk history and local language are less commonly measured. Language is shown to have implications for well-being and information on access to education in one's native language could therefore form part of a multi-dimensional measure on education for well-being purposes.

Other indicators for child well-being are also possible. As discussed previously, GPI Atlantic have already created measures of literacies focusing on knowledge central for intrinsic well-being. The NCP "Feelings Count" measure also includes broader aspects of 'education' such as feelings, relationships, self-esteem, resilience and environment.

These scales, along with most other well-validated instruments, are currently only available in English. Rolling out a new public policy paradigm in several countries would require questionnaires to be validated in other languages, however there has already been some success with this in other well-being scales suggesting it is possible that any agreed questionnaires could also operate across multiple languages (Franz et al., 1998; Bravo, Gaulin and Dubois, 1996).
Linking levels of education attainment and years in education to measures of non-income well-being would strengthen arguments made for improving education in ways that take account of children's social and emotional, as well as cognitive, needs. Studying whether well-being relates to lifelong learning could also lend support to organizations considering working with lifelong agencies to improve adult learning e.g. U3A or Coursera.

Monitoring

It is perfectly possible for the impact of education on well-being to become part of the remit of any institution already charged with responsibility for education within a country's national or local governments. Gaining the political will to carry out the actions involved is a bigger issue. The United Nations' Millennium Development Goal already asks governments to work towards girls being more equal in education. However much of the pushback is from within communities among people who had little education themselves.

As education moves forward to develop a paradigm that is about equal educational access, delivered more broadly and with a broader set of aims there is likely to be difficulty in getting people to agree. Agreement among stakeholders, setting out principles for education, and ensuring that outcomes can be measured in ways that transcend GDP and look instead towards a 'more educated' rather than simply a 'more wealthy' country will therefore be important.

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