

EDUCATION FOR SUSTAINABLE DEVELOPMENT IN MALAYSIA'S NATIONAL CURRICULUM REFORMATION: A THEORETICAL EXPLORATION

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ABSTRACT: *This article aims to examine the feasibility and potential of including appropriate Education for Sustainable Development (ESD) elements in the National Curriculum Reformation of Malaysia that is set to be introduced in the year 2017. This is done through the proposal of a theoretical approach for understanding ESD fit for Malaysia from an environmental epistemology. To start with, this article outlines dominant ideologies and epistemologies revolving around the concept of Sustainable Development (SD) and focuses on critiquing the underlying anthropocentric tendencies found within. Drawing principally from the ideas of Schumacher (1973), Orr (2004), and Sterling (1992), the article then sets out to examine the ideologies and epistemologies needed to support education reformation that are more environmentally sensitive in nature.*

KEY WORDS: *Education for Sustainable Development, Malaysia Education Blueprint, environmental epistemology, environmental empathy, and environmental equity*

Introduction

If today is a typical day on planet earth, we will lose 116 square miles of rainforests, or about an acre a second. We will lose another 72 square miles to encroaching deserts ... 40 to 250 species ... the human population will ... add 2,700 tons of chlorofluorocarbons and 15 million tons of carbon dioxide to the atmosphere (Orr, 2004, p.7)

The statement above is merely one of the many versions and variations of the same message about the impending environmental crisis that we have heard throughout most of the 20th century, and while we are celebrating our progress in the 21st century. Regardless of how it is worded, the impact of such an occurrence happening on a daily basis is without a doubt, a threat to the survival of all species on earth. It is an act that has placed the future of all in jeopardy, and a problem that is imperative to be addressed right now. In an attempt to address this problem, developmental experts, educationists, politicians, and concerned individuals have, in one way or another, looked to education and its influence in a community to derive a solution. Although it would be naïve to assume that education could solve this predicament that humans old and young, past and present, have contributed to, it is nonetheless one of the means by which a possibility of reversing or ceasing the damage done may be achieved (see Sterling, 2011 and 1992; Tilbury, 2012, for example). Education on its own may not be able to achieve much, but without it, change would not have any hopes of spreading far and wide, nor would there be a chance for it to sustain for more than a few months at best.

Sterling (2011), while devising a way to counter the widespread neoliberalism and unsustainable practice held by society at large, argues for the reformation of education revolving around the idea of infusing sustaining, healthy, tenable, and durable elements into the school curriculum. Similar sentiments may be found in the writings of authors such as Schumacher (1973), Orr (2004), and Khan (2010); all of whom in their own way assert that 'the kind of education we need begins

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with the recognition that the crisis of global ecology is first and foremost a crisis of values, ideas, perspectives, and knowledge, which makes it a crisis *of* education, not one *in* education' (Orr, 2004, p.126). In other words, minor structural changes and changes in practice will not fix the problem; what is needed is nothing short of an epistemological change with regards to knowledge, economy, and the environment.

This would in turn brings us to a preliminary discussion of Malaysia's National Curriculum, which is similarly devoid of concern for environmental health in its attempt to prepare the nation to be 'knowledge-economy ready' (Symaco, 2012, p.40). However, to ensure that Malaysians would not end up exacerbating the situation that leads to total environmental annihilation, as Schumacher (1973) dubs it, this article starts by arguing that there is a need for a change in the way Malaysia approaches education. As a developing country trying to progress amidst a stressed environment (Mat Said, et. al., 2003), there is a need to prepare for a future with an educational response that will answer the call of this crisis with the appropriate theoretical framework, knowledge, and skills. As such this article aims to examine the possibility of incorporating Sustainable Development (SD) ideologies and epistemologies that would be appropriate for the Malaysian context into the National Curriculum that is being reformed, and is scheduled to be introduced in the year 2017. By doing so, it is hope that this article may contribute to the international discourse on Education for Sustainable Development (ESD) through exemplifying the feasibility of an 'alternative educational paradigm' (Sterling, 1992, p.10).

Education for Sustainable Development (ESD): Anthropocentric or Bio-centric?

Schumacher (1973), in his book entitled *Small is Beautiful*, began his proposition for a moderate and environmentally friendly version of technology development, and economy, with a critique of society's approach to the environment:

We are not the least concerned with conservation: we are maximizing, instead of minimizing, the current role of use... we happily talk of unlimited progress along the beaten track (p.12).

It is interesting to think about what brought us to where we are — that is figuratively speaking — charging towards the 'collision course' (Schumacher, 1973). It is safe to say, many find that part of the problem lies in education (for example, see Khan 2010, Sterling 2012, and Bangay & Blum 2010). Stevenson (2007) elaborates on this point by stating that 'historically, schools were not intended to develop critical thinkers, social inquirers and problem solvers, or active participants in environmental and political (or even educational) decision making' (p.144). The problems embedded in education brought about a situation where learners were 'alienated from life' (Orr, 2004, p.3), environmentally illiterate (Khan, 2012), and entirely too anthropocentric (Garrad, 2012). Although these comments do not in any way paint a full picture of the problems perplexing the current education systems and the learners it produce, it is nonetheless sufficient in directing us to perceive the tip of the environmental iceberg into which the current population is boarding seem to be heading.

ESD: Historical Background and Current Crisis

According to Puteh (2011) education for the masses under the British Empire was meant to increase the efficiency of performance amongst the peasants whilst education for the elites (the Malay royalties) centred on knowledge of governance as per the British ideology. As Schumacher (1973) suggests, education is the most vital of all resources, hence as developmental efforts in the South gained momentum, so did the indoctrination of Western knowledge. Often, in the form of providing education as resources and infusing the ideologies of the West into the minds of the South in the process; especially ideologies of neo-liberal origin that championed economic progress at the expense of environmental health and social justice. As the neo-liberal model was stretched to

its limits trying to accommodate the world's population, there has been a growing dichotomy of opinions following the increasingly worrisome financial crises that governments worldwide have struggled to recover from.

Regardless of the dichotomy, it is unfortunate that education provisions are still being treated as a business with measureable cost and benefits. Orr (2004) goes one step further by stating that although various education reformations are underway, they have 'even less to do with the great issues of how we might live within the limits of the Earth' (p.16). Additionally, he argues that the reformation as a whole aims to produce learners whose sole purpose and outlook in life seems to be narrowly economic and self-centred, not to cultivate learners into being socially responsible citizens and certainly not 'citizens of a biotic community' (ibid). It seems disconcerting to see obvious signs indicating that we are marching blindly into an uncharted future with an increasingly volatile natural environment, threatening the world as we know now, while the supposedly rich and powerful deemed responsible for the masses' livelihood is unable to see past the transient riches. Indeed, echoing the sentiment of Schumacher (1973) voiced a few decades ago, it seems that as time progress, 'our reason has become [increasingly] beclouded by an extraordinary, blind, and unreasonable faith in a set of fantastic and life-destroying ideas inherited from the 19th century' (p.76). To make matters worse, we are nowhere near the discovery of a solution to this predicament that we have allowed ourselves, and the earth, to fall into. Malaysia's disposition is similar, as there seems to be no concrete measures in place that may serve as a response to the changing social, political, economic, and environmental climate.

Arguing against the life-destroying neo-liberal 'black box' notion of how education should be provided, Rose (2006) calls for a more holistic view of education by seeing it as 'a system of provision' and recognize the education system 'as an outcome of historically and socially evolved socio-economic practices [that is] specific to the particular country in which it is located' (p.179). Although I am inclined to agree with the need for context-specific education and the argument that education is more than the monetary benefits it might provide, there is also a need to view education beyond this lens, especially in this time of environmental crisis. For curriculum, this means reinventing the educational experience (Bourassa, 2011).

As we move towards the post-2015 era where the direction of development is one of complexity and uncertainty (if the current debate on it is to be believed), growing concern is voiced by environmentalists, educationists, economists, and politician alike on whether we can make it into the far future with sustained development, or would we meet with a series of crises one after another unlike anything we are capable of dealing with adequately¹? Even though attempts had been on-going since the Brundtland Commission in 1987 to address global issues related to sustainability (Dobson & Tomkinson, 2012), little effort has been made to link this issue with formal education until the world summit on SD was organised in 2002. The summit gave rise to the United Nation's (UN) decision to declare that there will be a decade of ESD (2005-2014) (Crossley & Sprague, 2013). It is the intention of this movement to mobilise global education resources to create a more sustainable future (UNESCO, 2012). It was explicitly stated during the declaration that although 'education alone cannot achieve a more sustainable future, without education and learning for sustainable development, we will not be able to reach that goal' (ibid). As much as I would like to agree with the rationale for a greater emphasis in ESD, there is a need to be cautious of the various differing epistemology and ideologies under the umbrella of ESD, environmental education, and SD. Resonating with this notion are Bangay and Blum (2010), who assert that 'educationists must recognize the dangers of labelling, and the preconception or misconceptions that often arise when using terms such as "environmental education" or "education for sustainable development"' (p.359). Selby (2008) too, resonates this by voicing the lack of 'thematic and epistemological breadth' (p.66) in ESD. Examination of the validity of these statements will bring us to the discussion of epistemology and ideologies revolving around ESD in the next section. It is hoped that this would aid the development of a curriculum based on a better understanding of ESD fit for various local context.

Epistemologies and Ideologies Revolving Around ESD

Ideologies

Stevenson (2007) points out that there are 'different ideologies underlying different visions of, and means to, environmental improvement' (p.142) and more often than not, they run in contradiction with each other. On one hand, there are two types of conservative reform, striving for minor changes within current system of governance, education, and economic activities. While on the other hand, activists propose two types of radical reform to the present system. In simple terms, for the conservatives, SD revolves around the continuance of financial sustainability and economic growth (King & Palmers, 2009), and the relative 'health' of the environment essential for the growth of their portfolio. Crossley and Sprague (2013) comments on the superficial commitments of governments, multilateral agencies, private sectors, and non-governmental agencies on the idea of SD from an environmental point of view by stressing that their practice run contrary to environmental health and their central focus is the 'ever increasing economic growth and consumption in both the conception and practice of development' (p.2). However, for others, SD is interwoven with concerns about the health of the environment. As a proponent of this ideology, Orr (2004) is adamant that:

All of us are joined in one fragile experiment, vulnerable to happenstance, bad judgment, and malice. If we hope to be safe and prosperous while drawing down the habitability of the Earth, we are hoping for what never has been and never can be (p. xiii).

His point is similar to that of Schumacher (1973) who passionately argue against our blissful ignorance of environmental crises and our lack of environmental sensitivity, as quoted in the beginning of this section. Being an educationist concerned with the welfare of the environment and the future of the current generation (not to mention those yet to come of all species), I have to agree that concern for, and careful consideration of, the environmental welfare is essential in the talk of the future in light of ESD's development.

To conclude on the differing ideologies present and to draw forth its relation to education, we are currently 'in a race between education and catastrophe. That race will be decided in the classroom around the world — and in all of the places that foster intelligence, thought, and good heart' (Orr, 2004, p.xiv). There needs to be flexibility in the embrace to ideologies instead of a dichotomous approach as currently adopted by many, there will definitely be numerous possibilities where an approach or a combination of them may be tailored for the purpose of SD in a given context. Therefore, the role of education in this sense is to expose its learners to the numerous approaches and ideologies revolving around SD in order to stimulate the awareness that as humans 'our organic relationship with earth is also intimately tied to our struggles for cultural self- determination, environmental sustainability, social, and material justice, as well as global peace' (Darder, 2012, cited in Khan, 2010, p.xii).

Epistemologies

Tilbury (2012) in a reflective piece on her personal learning through the journey of discovery along the ESD pathway concludes:

Themes come and go, but the global indicators for SD remain the same and point to accelerating levels of poverty, inequality, and environmental deterioration. Those engaged in education must help people connect the dots and see how their own realities contribute to, or detract from more sustainable futures for all ... [we must] challenge the silo mentality that undermines any progress towards SD. Learning to connect is becoming increasingly critical to the future of [the] people and planet (p.62).

While contemplating on the epistemology of SD which serves to inform ESD, Tilbury's (2012) statement is immensely useful in highlighting the vision for a sustainable future where economic health (an indicator of poverty levels), social justice (which represents the levels of inequality), and environmental health (reflecting the levels of environmental deterioration) are prioritized. At the same time, the statement beautifully underlines the contending relationships between these three elements while simultaneously presenting an endless possibility for the interpretation of relationships between them and the realities they may be translated into. It serves to bring forth various questions concerning epistemology; among them are two questions, which I believe to be particularly relevant to the discussion of ESD in this paper: (1) Shall we view the society and its economic health as a subset of the concern for overall environmental welfare, an epistemology that is more bio-centric, where environment's health is emphasized above all else (as shown in Figure 1)? Or (2) shall we view all three elements on an equal footing, an anthropocentric view emphasizing the need for each to complement and support the other for the ensured survival of human beings (as shown in Figure 2)?

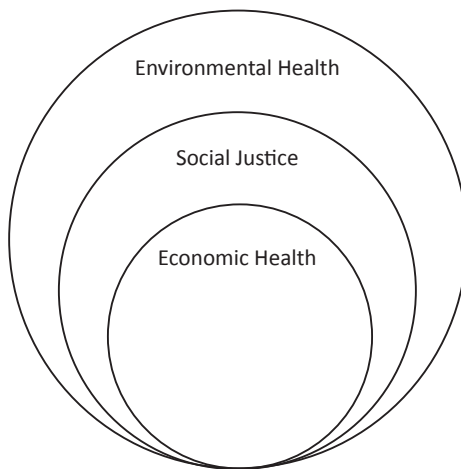


Figure 1: Environmental Epistemology (adapted from Strachan, 2012)

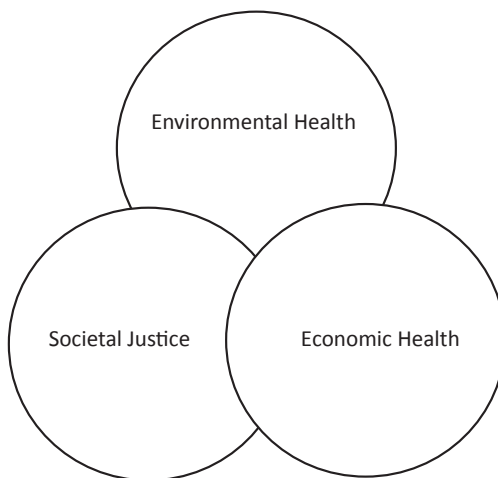


Figure 2: Balanced or 'Trade-Off' Epistemology (Strachan, 2012)

In an attempt at evaluating the merits of each framework, it is useful to perceive them from an ethics point of view. Through the evaluation of the ethical underpinnings surrounding the framework, answers on the concerns, conflicts, strengths, and drawbacks of each epistemology may be better understood. Before proceeding with the evaluation, it is prudent to address the questions as to why there is a need to examine the ethical underpinnings surrounding the framework. The answer lies in the preamble of the 2010 Earth Charter (ECI Secretariat, 2010) which is quoted below:

We stand at a critical moment in Earth's history, a time when humanity must choose its future. As the world becomes increasingly interdependent and fragile, the future at once holds great peril and promise. To move forward, we must recognise that in the midst of the magnificent diversity of cultures and life forms, we are one human family and one earth community with a common destiny. We must join together to bring forth a sustainable global society founded on respect for nature, universal rights, economic justice, and a culture of peace. Towards this end, it is imperative that we, the people of Earth declare our responsibility to one another, to the greater community of life, and the future generations (Sarabhai, 2010, p.156).

The ethical considerations and implications embedded in the preamble may be divided into three interrelated and converging parts. These are:

- (1) The ethicality of perceiving humans as the carers of Earth;
- (2) The ethicality of perceiving needs for universal rights, economic justice, and environmental health as equivalent and complementary; and
- (3) The ethicality of envisioning a sustainable future.

Garrad (2012) provides a compelling argument in favour of Figure 1, on the ethicality of our anthropocentric, human-centred, view on this world. He did so by reminding us of our insignificant presence on Earth, an Earth which had been in existence millions of years before our 'creation' (in a religious view), and 'presence or evolved existence' (in an evolutionary biology standpoint); an Earth which would undoubtedly continue existing past human's probable extinction. Our trivial ability in caring for the majestic ecology aside, we have not managed to properly care for our fellow human counterparts and the welfare of the future generation either. As evident by the constant political, social, and economical peril we have experienced throughout the history of mankind. Amidst all these big and small conflicts, valuable resources on earth are steadily depleted for various developmental purposes, prompting scientists to raise the red flag regarding the worrisome signs that our planetary boundaries are being stretched beyond the limits (Rockstrom, et. al., 2009). In this way, I would like to press for an Environmental Epistemology (as shown in Figure 1) by raising the question: What rights do humans have in claiming the responsibility to care for the greater community of life, one another, and the future generations when all signs point towards our failure to do so? Supplanting this question with a possible answer, Houghton (1999) asserts that nature has certain rights, while humans, as the Earth's steward have 'obligations to nature and to each other' (p.237) in ensuring that all species on earth and the ecosystem that surrounds us are not degraded beyond the point of sustainability.

Although it might be preposterous to assume that it is possible to arrive at one 'right' answer regarding rights, it is nonetheless the intention of this article to start the ball rolling so that here will be awareness regarding the underlying tensions between our anthropocentric epistemology and the call for environmental health. It is only when there is awareness, would we then be able to start the conversation on a future for education with the planet in mind.

What sort of epistemology then would be able to help us in envisioning a sustainable future and in guiding the development of education that can support such notion? Jucker (2012) in his review of a book on sustainable self, opines that it is precisely 'the very idea that we are autonomous individuals' that had landed all of us in this unsustainable state of the present, the very idea of being a sustainable self 'blinds us to the fact that we are not independent of the world, people, and nature around us, but indeed utterly dependent on them' (p.158). Houghton (1999) further supplants this notion by asserting that 'moving towards SD requires economic and social systems that encourage

the environmental stewardship of resources for the long-term, acknowledging the interdependency of social justice, economic well-being, and environmental stewardship' (p.234). Being in agreement with both, I would like to suggest that we would not be able to envision a sustainable future without considering the complex interplay between the environment, economy, and society. However, this does not in any way translate into the idea that these three elements are of equal importance. Emphasising the importance of the environment over economic health and the society, Schumacher (1973) passionately highlights that 'if we squander our fossil fuel, we threaten civilisation; but if we squander the capital represented by living nature, we threaten life itself' (p.13). Similarly, Orr (2004) asserts that the reason for today's ecological crisis may be traced back to our 'failure to comprehend our citizenship in the biotic community ... we cannot see clearly how utterly dependent we are on the "services of nature" and on the wider community of life' (p.23). This is a point which I would like to further elaborate by highlighting that as humans, we are dependent upon the blessing given to us by nature, not the other way round — a misnomer which some are inclined to believe in (Weesie & Andel, 2008). In the words of Garrad (2012),

the planet, in any meaningfully complete sense, is beyond our capacity to 'destroy'. We can disrupt the climate, wrecking large-scale human civilizations and annihilating thousands of other species, but life — the vast majority of its microscopic — will go on (p.23)

Following this line of thought, I would like to argue for the adoption of the Environmental Epistemology (as shown in Figure 1) in this article to reflect the notion that our existence depends on how well humans are able to consider its importance preceding economic development and social justice. It is time for us to acknowledge that we are not the masters of this Earth, but merely its steward. Our survival and wellbeing depends on the flourishing of nature, while nature would be able to flourish without our existence. With the environmental epistemology that calls for a more biocentric notion in mind, it is prudent to turn our attention to the next part of the discussion, the question on what should we (as educators) do so that we may start to make amends for the damage that we (as humans) have done.

Context for ESD in Malaysia

While contemplating on how to go about initiating change, Katzchner's (2011) warning that 'the absence of a clear view on what "environment" really is renders it open to all manners of interpretation and legitimization' (p.161) is pertinent. Hence for this paper, the 'environment' would be envisioned with Malaysia and its majestic rainforests. In the 19th century, Malaysia² was covered in a sea of green with area of peat and mangroves in some of the lowland and coastal areas (Aiken & Moss, 1975). At that time, it was claimed that 'except for scattered coastal and riverine settlements and a few aboriginal clearings in the interior, man had made little impact on the rainforests [of Malaysia]' (ibid, p.213). Particularly in Sarawak, Malaysia, where the majority of the rainforests is located, is home to some of the rarest and most important species of flora and fauna on Earth (Primark & Hall, 1992). However, as time progress, it seems that the majestic environment that should be cherished and valued had been slowly encroached upon by developments. As a result, the 'environment' as we see it today is only made up of the 3820ha of primary rainforests and 15,497ha of secondary forests (Koh, 2007) that still remains in Malaysia.

Approximately two decades ago, signs of a 'tremendous increase in the impact of human-induced change on the composition of rainforest' (Primark & Hall, 1992, p.829) emerged as Sarawak actively markets itself as a 'leading exporter of tropical logs' (ibid, p.830). This led to a situation in which the authors prior mentioned conclude that the logging practices in Sarawak is highly unsustainable. A study by German biologists a decade later in Sabah revealed a similarly desolating picture of biodiversity and ecosystem loss in Malaysia, he concluded that 'primary lowland rainforest in Sabah, Malaysia, has been largely reduced to, small- to medium-sized, often isolated forest islands surrounded by a highly altered agricultural landscapes ... species number and diversity in the forest

isolates were significantly lower' (Bhrül, et. al., 2003, p.1385). Similarly Koh (2007), an American scientist, asserts that out of all the developing South-East Asian countries³ Malaysia experiences the highest rate (up to 2.6-fold) of deforestation between 1990 to 2005. Agriculture, it seems, is the primary reason for the clearing of our primary rainforests (Sodhi, et. al., 2010).

Unsurprisingly, the negative implication of this ecological deterioration is not merely confined to its immediate surroundings. The biodiversity of rainforests is completely compromised as most of the land is converted into palm oil plantations (Danielsen, et. al., 2009). Specifically in Malaysia, the conversion of forests into palm oil plantations is linked to the dwindling amount of bees, known for their importance in pollination (Liow, et. al., 2001), and this does not bode well for the already dire colony collapse disorder afflicting most countries worldwide.⁴ Similarly desolating is the fact that the carbon capturing ability of rainforests is vanquished following its disappearance, a loss which would take normal agricultural plantations at least 86 years to repay (Fargione, et. al., 2008). Noting the importance of rainforests in capturing and balancing the world's carbon emission, Fargione, et. al. (2008) further asserts that biofuels 'need to be produced with little reduction of the storehouses of organic carbon in the soils and vegetation of natural and managed ecosystem' (p.1237). This in turn validates the need for an environmental epistemology (as shown in Figure 1) to be used as a basis for all initiatives. It is only through the conscious awareness that consideration for the environment should precede all actions and decisions that we would be able to start moderating and possibly minimising humans' destructive impacts on earth. To ensure that hope remains for the rainforests in Malaysia, I would like to proceed with the discussion of SD in the country and the reason why it should be made central in the on-going curriculum reformation. I believe it is only by ensuring the education in Malaysia provides its learners with knowledge of the 'biological and ecological conditions in which we lived and what these require of us' (Orr, 2004, p.157) that there will be hope for the continuance of biodiversity and ecosystem in Malaysia's rainforests.

Environmental Awareness and Concept of Sustainable Development in Malaysia

As an upper-middle income country (The World Bank Group, 2013), Malaysia is facing 'tremendous challenge' (Mat Said, et. al., 2003, p.306) in ensuring that its development towards being a high income country is sustainable. In the attempt to examine the state of environmental awareness amongst public school educators of primary and secondary level, the researchers ended up revealing a less than optimistic picture of the variable measured from the targeted population. If this study is meant to represent the 'environmental sensitivity and empathy' (Marcinkowski, et. al., 1990, p.180) of the teaching population in Malaysia as a whole, there is indeed a trying task ahead for those of us who are determined to fight for ESD in Malaysia.

Although the initiative of Mat Said et. al. (2003) in contributing to the literature of ESD in the education arena in Malaysia is commendable; the study would have been more informative if:

- (1) An indication of their ideologies and epistemologies on SD is explicitly stated and,
- (2) An explanation is provided as to why they have focused on consumer behaviour as a determinant of the participants' environmental concerns and awareness.

The anthropocentric nature of ESD in Malaysia, and a lack of breadth and depth where its epistemology is concerned seem to represent the state of SD in Malaysia at the moment. Hezri and Dovers (2013) went a step further by commenting that for Malaysia to move towards a sustainable future, it would require a policy shift from that dealt out on an ad-hoc basis (in accordance to a narrowly defined concept of environment) to one which is more holistic in view of long-term sustainability.

In defence of the incumbent government's approach to environmental sustainability, Foo (2013) asserts that Malaysia, as a developing country, had been an active participant to the global endeavour to build a sustainable future since the 1970s. It is claimed that this was done through the introduction of various regulatory measures to balance the country's economic development

and its environmental health. According to Foo (2013), prime examples of this 'regulatory measures' may be found in the Outline Perspective Plan and the Malaysian Vision 2020 'which called for a comprehensive quantum leap towards a knowledge-based society' (p.8). It is disappointing to note that the author had equate the country's emphasis on being 'a knowledge-based society', which is closely related to the World Bank's push for knowledge economy, to the endeavour to be truly environmentally sustainable. This again, points to a lack of breadth and depth where the epistemology and ideologies of SD in Malaysia is concerned.

To further supplant my argument, Malaysia, though claimed to be an active participant of the global endeavour to build a sustainable future, was reportedly performing abysmally on a study of Global Environmental Sustainability Index done in 2005. According to Hezri and Dovers (2013) Malaysia ranked thirty-eighth out of the 146 countries studied due to the 'substantial pollution stresses associated with rapid industrialisation' (p.283). This ranking is not particularly encouraging considering the fact that all other members of the 12 mega-(bio)diverse nations ranked comparatively higher on the index. Furthermore, Hezri and Dovers (2013) supplants that Malaysia ranked 56th out of 163 in the 2010 Environmental Performance Index, and the country appeared in the bottom-ranked group, along with countries like the Unites States, on the 2010 Climate Change Performance Index. Looking at the dwindling environmental health of Malaysia, it is my hope that the future would bode a more holistic picture of environmental stewardship, preferably with a greater inclination for an environmental epistemology, or a bio-centric worldview, with the help of more articles examining ESD.

ESD and its Centrality to Malaysia's Curriculum Reformation in 2017

In the latest attempt by the government to reform Malaysia's contested and faulty education system which seems to educate its learners out of critical thinking (Brown, 2007; Sarjit-Singh & Mukherjee, 1993), the Malaysia Education Blueprint was produced. For the first time in Malaysia's history of education policy construction, public opinion was obtained in the form of town hall meetings organised in every state, in addition to the standard consultation of expert opinions from international organisations and local universities (MOE, 2012). The year-long consultation resulted in the culmination of an ambitious 12 year plan in which a reformation of the entire education system from pre-school to high-school, from the curriculum to infrastructure, were all targeted for change. While not without some degree of ambiguity, it is possible to cover this Blueprint in brief as it has been comprehensively covered in the actual document (See MOE 2012). Instead, I would like to focus primarily on the proposed curriculum reformation that is scheduled to be introduced in 2017, and evaluate it against the concept of SD. According to the Blueprint, the curriculum reformation would be:

In line with the National Philosophy of Education (NPE) [which was introduced in 1988], the Ministry's approach is focused on developing student holistically. This means, the education system addresses intellectual, spiritual, emotional, and physical development, alongside a strong sense of national identity (MOE, 2012, p.4-2).

Disregarding the fact that the NPE which has not been changed for over two decades (making it less compatible with the education environment of this dynamic time and age), I find it disappointing that the concerns of Malaysia's rapidly degrading environment is conveniently absent. It causes one to wonder whether the past criticism of international environmentalists on the stance of Malaysia on conservation still holds true; that is, criticism of the Malaysian government's denial regarding negative environmental effects, and the insistence that overall economic activities at the expense of the environment is justifiable, not to mention positive (Primark & Hall, 1992). According to Yieng and Hamzah (2012) the emphasis of NPE is a two-fold attempt at developing an individual for the benefit of oneself, and the larger community. In line with the anthropocentrism of NPE, the perspective adopted for curriculum reformation concentrates on 'giv[ing] Malaysian students an internationally

competitive edge’ (MOE, 2012, p.4-2), and on ‘creat[ing] Malaysian students that are balanced, resilient, inquisitive, principled, informed, caring, patriotic, therefore being an effective thinker, communicator, and team player’ (ibid). This is all done with the intention of ‘produc[ing] globally competitive citizens’ (MOE, 2012, p.4-4) or in the words of Symaco (2012) ‘knowledge economy ready’ (p.40) learners. The main features of the ‘improved’ curriculum may be found in Figure 3. In this era of globalisation, where knowledge is power, it is of course understandable that a country is focused on producing globally competitive citizens in order to stay developed, or in Malaysia’s case, advance towards a developed status. That being said, in the face of an ecological degradation, focusing on being knowledge economy ready while missing the bigger picture of educating learners with the earth in mind is as if we are encouraging a life ‘estranged from reality’ (Schumacher, 1973, p.11); a life where nature is neither entwined with our life nor part of it.

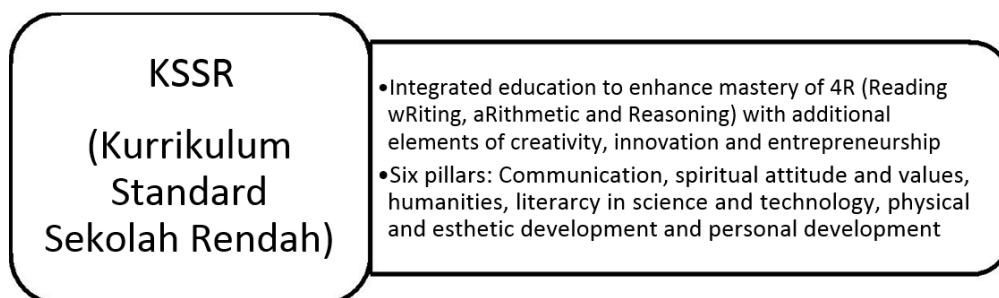


Figure 3: Standard Curriculum For Primary Education (MOE, 2012)⁵

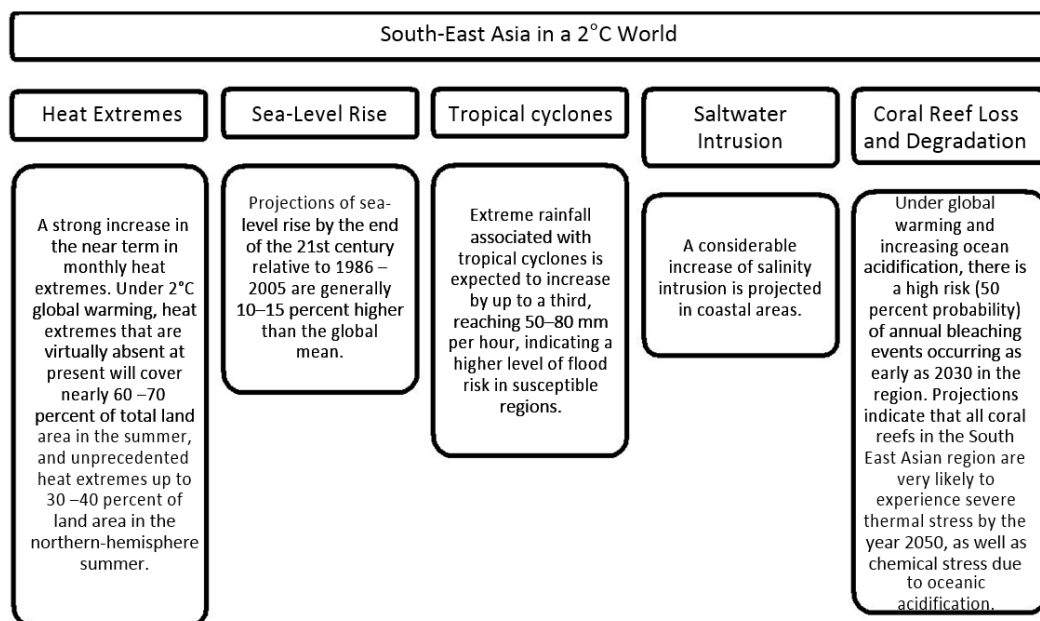


Figure 4: Projections of Global Warming and its Effects in the South East Asia Region

(Adapted from World Bank, 2013b)

Having established SD's state in Malaysia (or the lack thereof), and the curriculum reformation bereft of any hints on ESD, I am inclined to agree with Orr's (2004) stance that education reformations have generally been geared towards the neo-liberal epistemology rather than being biocentric. As seen in figure 3, the adaptation and mitigation measures of climate change and its effect towards Malaysia has not been taken into consideration in relation to education development, thus even less can be said about the embrace of environmental epistemology where education in Malaysia is concerned. It seems this orientation towards a mechanistic and knowledge economy discourse in education is not confined to Malaysia. Chapman (2004) highlights the same problem while discussing the curriculum development in New South Wales by noting that 'potentially significant environmental education initiative [is ignored] in favour of the more conventional and politically attractive rhetoric of 'raising standards'' (p.28). Similarly, Scotland seems to be facing the same problem, prompting McNaughton (2007) to liken the state of ESD there to Sleeping Beauty, where it emerge in the education arena in 1993, and has since been sleeping in the background before re-emerging again as an idea in 2007. Its re-emergence after an extended slumber was treated with scepticism, and the author can only hope that this time around, its presence will persist. Similarities with western countries aside, if the World Bank's report on climate change and its effect on South-East Asia is to be believed (as shown in Figure 4), there is a need to educate Malaysian learners beyond merely being ready for the knowledge economy and instead for life as the Earth's steward.

Conclusions

To conclude, I would like to reiterate the essence of my arguments laid out along the sections of this article. Firstly, although there seems to be various interpretations of ESD based on different ideologies (Selby, 2008) which might appear frustrating, there is nonetheless, as Wals and Bawden (2000) asserts a wealth of opportunities in this vagueness presented in ESD. To echo their statement, this ambiguity:

has an enormous canvassing and heuristic capacity if it is systematically [and wisely] used as a starting point or operational device to exchange views and ideas. These on-going discussions may generate fruitful working hypotheses for the concrete formulation of curricula ... (p.38)

Embedded in this statement is a call for educators and policy makers to be comfortable in the face of ambiguities and uncertainties. It is only then, would there be a possibility of painting a broader picture of education and knowledge that goes beyond scientific facts and to embrace traditional, indigenous, and local knowledge. This would in turn give rise to the opportunity for us to truly examine the issues revolving around Geographical equity, Inter-species equity (Houghton, 1999), and Environmental Justice (Thompson, 2008). Through the examination of the issues mentioned prior, it is hoped that we would be able to advance one step further towards the direction of answering questions such as

- (1) How do we decide what is the knowledge of environment?;
- (2) Who should we take as the authority on the environment (or should there be one?);
- (3) Whose knowledge counts?; and
- (4) Whose rights prevail?

While acknowledging that the answers to these questions vary based on our values, beliefs, and worldviews, nonetheless, it is necessary. To advance towards the embrace of an environmental epistemology, we need to start by examining our anthropocentric worldviews, which calls for the need to evaluate our assumptions on rights, the rights of other species, and those yet to be born. In doing so, we will be able to challenge ourselves with the task of finding a more appropriate answer to the questions on what sustainable development entails.

Notes

- ¹ For example, see Grundwald (2007), Al Gore (2010), and Selby (2008).
- ² Known as the Malay Peninsula at that time
- ³ With the exception of Singapore as it is a developed country with little to none primary forest areas remaining.
- ⁴ See Cox-Foster, et. al. (2007)
- ⁵ The KSSR stands for Standard Curriculum for Primary Education. An experimental version of this new curriculum has been rolled out in 2010 and the improved version is set to be introduced to primary one students in 2017. Likewise in the secondary section, a new curriculum reflecting the features of KSSR will also be introduced in 2017.

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