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ISSUES ON SUSTAINABILITY IN EDUCATION: THE PHILIPPINE BASIC EDUCATION CURRICULUM CONUNDRUM

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Abstract

This paper presents some issues concerning Education for Sustainable Development (ESD) borrowing Stephen Sterling's proposal to use Sustainable Education (SE) instead of ESD. The issues raised in this paper about ESD is limited to educational paradigms and not the curricular contents in which the ESD recommends. The reason being is that SE highlights the change of educational paradigm and not focused on curricular contents. With these issues, the paper explores on what is response of Philippine Basic Education Curriculum to the call to ESD. The paper attempts to analyse the response based on the prevailing issues raised. The paper utilises qualitative research design. Document analysis is the technique used in analyzing the empirical materials. The empirical materials presented in this paper are: (1) Department Order number 14 series of 2013, (2) Department Order Number 13 series of 2012, and (3) Department Order Number 8, Series 2015). These three DOs are implementation documents which are meant to articulate the K-12 BEC. The analysis focuses on the exploration of these documents that are linked to K-12 BEC. This technique provides the authors inferences and the context of the paper was culled from the documents itself. With this, it provides insights and representations of facts that was used primarily to understand the conundrum posted. Learner-centered approach to teaching and learning is one of the main features of the K-12 BEC. This approach coincides with Sterling's definition of sustainable education and Barr and Tagg's new paradigm in teaching and learning. However, the three DOs show disjunct on the learner-centered feature of the curriculum. The empirical materials show elements of teacher-centered approach, an opposing paradigm to the learner-centered approach. The elements of teacher-centered approach that the empirical materials confirmed are (1) rigid instructional time per subject matter, (2) mass-produced textbooks, and lastly, (3) inflexible content standards. This paper opens further discourse on sustainable education and paradigms in teaching and learning. It has a potential to open a wider discussion on the curriculum implementation practices of the country.

Keywords: Curriculum, Education for Sustainable Development, Sustainable Education, student-centered learning paradigm

1.0 RESEARCH BACKGROUND

This paper focuses on sustainable education as a paradigm proposed by Stephen Sterling. It delves on the discourse on how education in general and curriculum, in specific, can address prevailing issues on sustainability in education. In this paper, the latest curriculum reform in the Philippines (K to 12) is used as the context to analyze two paradigmatic beliefs in sustainability – education for sustainable development (ESD) and sustainable education (SE). The characteristics of sustainable education is then discussed using Robert Barr and John Tagg's (1995) concept of *learning paradigm* to accentuate connections of sustainability efforts in education. The concept of Barr and Tagg on teaching and learning paradigms provides deeper understanding about how the dominant paradigm in teaching, *instruction paradigm* may no longer serves the purpose of the 21st century education. Likewise, the ESD as a paradigm is seen to be a 'stop-gap' measure in sustainability problems and seem to bypass fundamental skills thus arguably making ESD *atomistic* (Barr & Tagg, 1995). The tenets of instructional paradigm are similar to the concept of ESD as described by its growing literature (Gough & Scott, 2008; Kolenick, 2016). Sterling describes academic institutions' response to ESD as partial and accommodatory, rather than full and transformative. Having this response, Sterling believes that ESD is faced with a profound paradox:

> *…education is held to be a key agent of change, and yet is largely part of the unsustainability problem that needs to address. How do we work toward transformative learning in a system that itself is intended to be the prime agency of learning?* (2009, pp. 109–110)

Sterling presented a challenge in terms of teaching and learning. First, the 'structured learning' where learning is designed with teacher and subject-centric models and second, the social and organizational learning which focuses on the transformation of the students. Therefore, in this paper, overviews of sustainable education of Sterling and teaching and learning paradigms of Barr and Tagg are provided to understand the complexities of sustainability in education. Further, Philippine's Enhanced Basic Education Curriculum (EBEC or K-12) is used as a context to provide examples of how a state curriculum presents a conundrum in terms of sustainable education. This paper ends on the discussion of sustainable education and how curriculum experts can make sense of this transformative paradigm.

■2.0 PURPOSE OF THE STUDY

This paper presents some issues concerning ESD borrowing Stephen Sterling's proposal to use SE instead of ESD. With these issues, the paper explores on what is response of Philippine Basic Education Curriculum to the call to ESD. The paper attempts to analyse the response based on the prevailing issues raised.

■3.0 LITERATURE REVIEW

Education for Sustainable Development and Sustainable Education- A paradigmatic crises

The escalating problems and challenges in sustainability education and environment education has been a main talk in different national and international fora. The United Nations Educational, Scientific, and Cultural Organization (UNESCO) has been active in addressing these problems and challenges through the release of their 17 Sustainable Development Goals (SDG). One of the SDGs is Education for Sustainable Development (ESD) and it has been promoted since year 1992 (UNESCO, 2017). However, there is a emergent literature about the critic on ESD as it poses problem that is seen to be "behaviourist, excessively consumed with problem solving, sweltering under the thick blanket of scientism, or flirting with instrumentalist ideologies" (Jickling & Sterling, 2017, p. 3). Specifically, the works of Stephen Sterling (2001, 2004, 2009, 2010) proposing another paradigm that he believes to be a more logical answer to the swelling and enduring problems of sustainability. He coins it as sustainable education (SE). This section focuses on these two paradigms and how it creates a paradigmatic crisis on both sustainability and environmental education. This section describes both paradigms, ESD and SE, and how these two poses a crisis. The proposed paradigm of Sterling is used to understand the bleak problem of the current dominant paradigm. The understanding of these two paradigms increase awareness to environmental leaders, educators, researchers on this proposed paradigmatic belief and help makes sense through policies and praxis. However, to understand these two paradigms, we need to go back briefly on the basic problems of sustainability and why UNESCO proposed ESD. It is important to state on the onset that the issues raised in this paper about ESD is limited to educational paradigms and not the curricular contents in which the ESD recommends. The reason being is thst SE highlights the change of educational paradigm and not focused on curricular contents. This will be discussed in greater detail in the succeeding sections.

UNESCO (2017) states in their paper that most people in the world today feel the need to be in a sustainable future because they can clearly 'sense danger' on the surroundings that they are living. People sense danger because they "smell the problem in the air; they taste it in their water; they see it in more congested living spaces and blemished landscapes; they read about it in the newspapers and hear about it on radio and television…" (p.7). Although, this 'sense of danger' is commonly accepted by most people, concretizing it is another story. One of the most accepted solutions to sustainability problems is the UNESCO's 17 Sustainable Development Goals (SDG).
In the words of UNESCO's Director-General;

> *A fundamental change is needed in the way we think about education's role in global development, because it has a catalytic impact on the well-being of individuals and the future of our planet... Now, more than ever, education has a responsibility to be in gear with 21st century challenges and aspirations and foster the right types of values and skills that will lead to sustainable and inclusive growth, and peaceful living together.* (UNESCO, 2017)

From this perspective, ESD aims to;

> *…integrate[s] ecological thinking and the wise use of natural resources - conservation - with the equally important concerns of social, economic and political sustainability. The aim of education for sustainability is to develop skills that can enable all citizens and, through them, our social institutions, to play a role in the transition to sustainability. As such, it encompasses a vision for society that is not only ecologically sustainable but also socially, economically, and politically sustainable.* (Fien, 2001, p. 6)

Despite its popularity, ESD is not immune to criticisms. One of the major criticisms of ESD is Stephen Sterling's view on education and sustainability in general. He believes that ESD, the probable answer to sustainability problems, a cosmetic reform (Jickling & Sterling, 2017; Sterling, 2009; Sterling & Thomas, 2006). Further, he posits that ESD's sustainability concepts are just being added to the existing heavy curricular offerings that makes is more *atomistic* (Barr & Tagg, 1995). It appears that making a population aware of environmental and ecological problems, lies a critical problem of the development of foundational skills of the learners. Therefore, academic institutions' response to ESD became partial and accommodatory rather than full and transformative. In this perspective, ESD faces a profound paradox. In the words of Stephen Sterling (2009, p. 109) …

> *…education is held to be a key agent of change, and yet is largely part of the unsustainability problem that needs to address. How do we work toward transformative learning in a system that itself is intended to be the prime agency of learning?*

This is where the rise of Paradigmatic crisis from the conflicting paradigms of ESD and SE. The concept of ESD, popularised by agencies such as United Nations Educational, Scientific, and Cultural Organization (UNESCO) has been the overarching paradigm that emerged from the "movement to mobilize the educational systems in response to the ills of human activity…" (Kuzich, 2015). Further, the emphasis

of the curriculum is on 'learning for change' with the inclusion of "values and capability bias" (Butler, 2001). This, in turn, results into a mechanistic view of the curriculum because of the predetermined nature of the outcomes (Butler, 2001). As the need and urgency of the people to be educated about sustainability, so as the need for a holistic approach in thinking and learning about Sustainability. Sterling (2001), in his text Sustainable education and Sustainable schools, posits that this shift engages the whole person and the learning institution" that leads to human empowerment to be an active and capable agent for change in the school/community.

Educational Paradigms of ESD and SE

There is a vast literature that has already been written about rethinking, restructuring, remodeling education since the beginning of the 21st century. The American philosopher John Dewey radically dismantling the education piece by piece starting on the epistemological tradition of *knowledge*, the *knower* (student), and the *knowing* (process of teaching) (Toulmin, 2008). The works of Dewey became instrumental in education reforms not only in the United States but also in the other parts of the world. Since then, educationists and researchers have questioned and continuously questioning on the nature of education (theory) and how *we* educate students (praxis). Fifty years after the 1929 work of Dewey, reverberating some of his ideas, a Brazilian philosopher and educational activist Paulo Freire made an influential contribution about the oppressive nature of education and teaching. In his famous work *Pedagogy of the Oppressed*, a foundational text on critical pedagogy, he argued that the *banking concept* in education oppresses student's identity, creativity, and the ability to be independent. He specifically argues that:

> *Education thus becomes an act of depositing, in which the students are the depositories and the teacher is the depositor. Instead of communicating, the teacher issues communiques and makes deposits which the students patiently receive, memorize, and repeat. This is the "banking" concept of education, in which the scope of action allowed to the students extends only as far as receiving, filing, and storing the deposits.* (Freire, 2000, p. 72)

This concept gave birth to the idea of teaching as a gift to liberate students from idiocy and negates what he believes the very essence of education as a form of inquiry. The roles of teachers and students are on the opposing spectrum. To be more precise, Freire deliberately expresses that:

> *In the banking concept of education, knowledge is a gift bestowed by those who consider themselves knowledgeable upon those whom they consider to know nothing. Projecting an absolute ignorance onto others, a characteristic of the ideology of oppression, negates education and knowledge as processes of inquiry. The teacher presents himself to his students as their necessary opposite; by considering their ignorance absolute, he justifies his own existence. The students, alienated like the slave in the Hegelian dialectic, accept their ignorance as justifying the teachers existence—but, unlike the slave, they never discover that they educate the teacher.* (p. 72)

This tone has continuously reverberated up to the 21st century education research. In the mid-1970s, a group of educationists and curricularists have emphasized this ideology through what they call reconceptualization of curriculum studies, see (Apple, 2012; Heubner, 1999; Kliebard, 1976; Pinar, 1978; Schubert, 1993). The reconceptualization of curriculum studies emerged when curriculum development is seen to be largely bureaucratic and procedural field. Reconceptualists point out that traditional curriculum development, The Tyler Rationale (Kliebard, 1970), is bounded by the idea of "technicism—that is, its emphasis upon procedure to the exclusion of ethics, and so on—and its political naiveté, as if procedure could resolve ideological differences" (Pinar, 2010, p. 735). Therefore, reconceptualists view research as "an inescapably political as well as intellectual act" (Pinar, 1978, p. 210).

Sterling's views on sustainability and education echo what Dewey, Freire, and the reconceptualists have long been postulating. Sterling uses these theoretical assumptions on the praxis of sustainability in education and environmental education. In the dominant paradigm, he argues that sustainability in environmental education is just an 'add-on' on existing structures and curricular offerings. He believes that sustainability is not another issue or ideology that needs to be added on a current overcrowded curriculum, but "a gateway to a different view on curriculum, of pedagogy, of organisational change, of policy and particularly of ethos" (Sterling, 2004, p. 50). This has been one of the problems in most curricular reforms. Barr and Tagg (1995) call it *educational atomism*. In this educational atomism, the parts of curriculum, the teaching and learning process are seen to be discrete entities. For instance, universities or colleges respond to the skill set required by the market by adding courses in the curriculum relevant to that. In Philippines, for example, senior high school students are trained in the rudiments of Business Processing Outsourcing (BPO) to ensure continuous supply of workers (Cacho, 2017; CNN Philippines, 2018).

Another critic of Sterling to the dominant paradigm in sustainability is that the current structure focuses on objectivism, not on reflexive learning. This is similar to what Herbert Kliebard's argument about *The Tyler's Rationale*, a dominant paradigm in curriculum studies. Kliebard (1970) strongly argues that objectivism is an old epoch that needs to be forgotten and it has served its very purpose. Consequently, Sterling posits that sustainability in academic institutions are not primarily engaged in deep and reflexive learning and that students are engaged in simple transmission of information and aligned to the perceived needs of the economy. Barr and Tagg similarly express this frustration on the instruction paradigm. They argue that in the instruction paradigm students are receivers and consumers of knowledge and teachers and the system are transmitters.

Both the works of Sterling and Barr and Tagg are intersecting. Sterling's main argument is that sustainability concerns both *paradigm* and *provision*. His focus is less details on curriculum, pedagogy and management, but more of how sustainability requires a change of paradigm. In which Barr and Tagg offer the details of the new paradigm that Sterling is proposing (Table 1). The details of the intersection are discussed in the next sections.

Table 1 Barr and Tagg's Summary of Comparisons of Educational Paradigms

Dimension	Instruction Paradigm	Learning Paradigm
Mission and Purpose	Provide and deliver instruction	Produce learning with students
Criteria for Success	Quantity and quality of inputs from student	Quality of the learning and student success outcomes
Teaching and Leaning Structure	Teachers are providers through lectures and students are receivers of 'knowledge'	Teachers and students negotiate structures with each other and students practice agency and they make decisions in their own learning
Learning Theory	Knowledge exist "out there" where students are passive recipients	Knowledge exists in each person's mind and is shape by individual experience
		which are continuously constructed and negotiated
Productivity/Funding	Focused on inputs (i.e. enrolment count)	Focused on the process and outcome (i.e. student learning and skills)
Nature of roles	Teachers are knowers and students are receivers	Teachers and students are co-constructing meanings and knowledge; where teachers are facilitators

Sustainable Education and learning paradigm

Sustainable education under Sterling's paradigm implies that the shift is not by piece meal but focus on the change of culture in education as a whole. He defines this change as both in theory and praxis of sustainability in which an individual will be critically aware of what is happening in his environment. He believes that, while ESD gives awareness to individuals about their environment and issues on sustainability, it does not provide introspection and reflexivity to the person. One can be sympathetic to the issues on sustainability and environment but does not necessarily embedded in the person's psyche. The embedding of this environmental care and perspectives can be achieved if a person transforms from viewing environment as "commodity to a community, from consumer to conserver, from short-term reactor to long term evaluator" (Singleton, 2015, p. 2). Sterling views this as 'emergent postmodern ecological paradigm' where a shift from reductionism to holism, from objectivism to critical subjectivity, form relativism to relationalism (Sterling, 2004).

Similarly, learning paradigm as coined by Barr and Tagg (1995) concretizes the sustainable education paradigm of Sterling (see Table 2).

Table 2 Intersection of sustainable education paradigm and learning paradigm

Dimension	Sustainable education paradigm	Learning Paradigm
Ethos and purpose	Change in education (from teaching to learning)	Produce learning with students
Philosophical underpinnings	Postmodern ecological paradigm,	Constructivism and postmodern views on learning
Teaching and Leaning Structure	Learner-centred environment which provides students to construct own meanings based upon their social realities	Teachers and students negotiate structures with each other and students practice agency and they make decisions in their own learning
Learning Theory	Knowledge is co-constructed by the student and its environment	Knowledge exists in each person's mind and is shape by individual experience which are continuously constructed and negotiated
Curriculum design	Competency-based design; curriculum is organized into coherent roles	Focused on the process and outcome (i.e. student learning and skills)
Nature of roles of teachers and students	Teachers facilitate in helping students make sense of their own learning	Teachers and students are co-constructing meanings and knowledge; where teachers are facilitators

The table shows that sustainable education focuses on learning rather than teaching (Habron, Goralnik, & Thorp, 2012; Müller-Christ et al., 2014; Sterling, 2004). This prompts Sterling in using Bateson's Learning Levels (1972) as cited in Sterling (2004) to conceptualize the distinctions between the traditional dominant paradigm to his proposed paradigm. The three levels of learning are:

Level 1 – Self-correction
Level 2 – Meaning making
Level 3 – Transformative learning

Level 1 learning is described as an individual adhering to its set environment. The learner legitimizes the status quo which keeps the theory-in-use unchanged. In this level, learners are expected to be non-critically reflective and accommodating. In educational paradigm of Barr and Tagg, this is the criticism of the instructional paradigm. It trains the learners to become receivers and consumers of knowledge. Therefore, in this paradigm, lecture and recitation are widely used methods in teaching. In the acclaimed book of John Hattie and David Yates (2014), Visible Learning and the Science of How We Learn and John Hattie's (2009, 2012) mega meta-analyses about learning, they argue that lecture and recitation have very low impact on student's learning. Further, Hattie and Yates (2014) described the oppressive nature of recitation and how it serves the teacher, not the students. In the same way that Terry Doyle (2008, 2011) suggests that discussion and facilitation must be used by teachers to achieve a more student-centered learning approach.

Level 2 learning is characterized by deep learning. This level promotes critical thinking and has a potential to assist the learners to achieve higher level of learning. Banathy (1992) as cited in Sterling (2004, p. 54) characterized the change to "positive feedback loops between the systems and its environment, whereby both attain a new state." However, this potential to assist learners to achieve higher state of learning and being can be impeded by how the dominant educational paradigm, the instruction paradigm, implement the teaching and learning in schools. Despite this promise, learning in the traditional educational dominant paradigm seems to have futile efforts. In the words of Sterling (2004, p. 55), 'change within changelessness' or learning new things the old way. Hence, Level 3 learning.

In Level 3 learning is described as 'transformative learning' or 'epistemic learning' which posits that the culture of education in general, teaching and learning in specific, must change its educational paradigm to achieve the successful outcomes from Level 2 learning, thus, requires a paradigm shift. Habron, et al. (2012) argues that the move from instructional paradigm to learning paradigm harmonizes in the paradigm of sustainable education. Barr and Tagg (1995, p. 25) argue that a change in paradigm happens "when a ruling paradigm loses its capacity to solve problems and generate a positive vision of the future." ESD offers an option to solve problems of sustainability and ecological backlash, but the dominant educational paradigm that governs most of our academic institutions from basic to tertiary impedes these efforts. This might sound very simplistic, but it is not. There are efforts done by influential educational reformist along this line on different era and yet as of this writing the dominant educational paradigm is still in the instruction paradigm. The complexities and identities of different countries regarding the dynamics of their education make this paradigm shift far-fetched.

The Philippine Response

In response to the global call of Education for Sustainable Development (ESD), the Philippine government mobilized various organizations to help bridge the cause. This gave birth to the Philippine Council for Sustainable Development (PCSD). This agency was tasked to "…provide the mechanism to realize the principles of sustainable development and to ensure its integration into the policies, plans, and programs of the country" (Valencia, 2018, p. 53). Further, this program builds on existing frameworks—during that time--that enables the people and nature to be hand in hand at the center of development initiatives. Years after the creation of PCSD, the Philippines adopted the Agenda 21, that focused on programs such as "eradicating poverty, managing globalization, attaining social equity, securing peace and solidarity, maintaining ecological integrity, and promoting empowerment and good governance." (Stakeholder Forum for a Sustainable Future, 2012, p. 3)

As the Philippines gears itself to the global call of Education for Sustainable Development, it resulted in the creation of the Republic Act (RA) No. 9512 or the National Environmental Awareness and Education Act of 2008. This law directs all "…concerned agencies to integrate environmental education into public and private school curricula at all levels, including barangay day care, preschool, non-formal, technical vocational, professional, indigenous learning, and out-of-school youth (OSY) courses" (Valencia, 2018, p. 54). Further, it serves as a defining step in realizing the commitment to prepare the "…youth of the country to challenges of globalization and sustainable development" (Halog & Balanay, 2016, p. 163).

Philippine's Enhanced Basic Education Curriculum (EBEC or K-12)

In 2012, a major curriculum reform was enacted as part of the 10-point educational agenda of then President Benigno Aquino III. A committee commissioned by the President prompted to make revisions of the 2002 curriculum due to the continuous deterioration of the quality of education of the country (Department of Education, 2010; Okabe, 2013). According to the department, the congested curriculum was partly to blame for this 'bleak situation.' The department claimed that forcing in ten years a curriculum that is learned by the rest of the world in twelve years is a challenge for both students and teachers. According to Southeast Asian Ministers of Education Organization (SEAMEO) Innotech, this reform is the "most comprehensive basic education reform initiative ever done in the country since the establishment of the public education system more than a century ago."

The major reform features are addition of mandatory Kindergarten and two years of senior high school (Grades 11 and 12). The Philippines as compared to other neighboring countries has the least number of years spent in studying in basic education (De Guzman, 2003; Magno, 2011; Yap, 2011). Furthermore, the standards and principles that will be set by the curriculum is "learner centered, inclusive, and developmentally appropriate" (Department of Education, 2013a).

Using the frameworks of Sterling and Barr and Tagg, the EBEC is designed to be learner-centered in which as a standing principle, all the materials and strategies that the teachers will incorporate inside the class should encourage the learners to be the center of the learning process. This is within the frame of the learning paradigm. However, this curriculum is state developed (written curriculum) and therefore its promise and potential are yet to be seen in the implementation and still needs to be concretized when it reaches the students (learned curriculum). The implementation of this written curriculum varies depending on the interpretation of the implementing bodies. In the case of the Philippines, the Department of Education is tasked to cascade this written curriculum, through Department Orders (DO) to its division offices across the archipelago. From the division offices, these orders will then be carried out to different schools which will be then carried out by principals, head teachers, and teachers. The far line from the Department of Education down to the teachers, make the written curriculum vulnerable to either different interpretations or being mechanistic. Shawer (2017, p. 297) argues that when teachers implement a written curriculum, they usually use *curriculum fidelity, curriculum adaptation or curriculum enactment*. In curriculum fidelity, teachers are consumers and deliverer of instructions from the written curriculum. Curriculum adaptation is a mutual process between the teachers and the curriculum developers. The role of the curriculum developers is supervisory to the teachers therefore the content and how it should be implemented is similar to curriculum fidelity. Lastly, curriculum enactment gives teachers a more active role. It enfranchises the teacher, given authority to change the curriculum depending on the needs of the class, thus, the written curriculum becomes a starting point of the adjustments. As described, EBEC is learner-centered, inclusive, and developmentally appropriate. If the teacher's paradigm is opposing learner-centered paradigm, the fidelity, mutual-adaptation, and enactment approaches maybe futile. There can be mechanisms to make sure that the principles of written curriculum can be implemented (i.e. teaching evaluation, faculty development program). However, these mechanisms cannot guarantee success implementation because at the end of the day teachers decide, knowingly or unknowingly on their teaching strategies based from their dominant paradigms (Fear et al., 2003; Habron et al., 2012; Kallen, 1996).

This conundrum is not only experienced by teachers. It is also experienced on a macro-level scale. When a written curriculum is approved by the legislative and executive branches of the government, the Department of Education prepares a wide-scale plan to implement it. The Implementing Rules and Regulations (IRR) is the responsibility of the department. The details of the implementation are then written in separate department orders (DOs) that are circulated in all the schools in the country. However, there are some department orders circulated by the Department of Education that are in conflict with the written curriculum. Taking the learner centered design of the curriculum, the DOs are expected to be aligned to this design

■4.0 METHODOLOGY

Study Site

The study is situated primarily in the Philippine educational setting. The Philippines has a deep sense of fascination about education in which they view it as a "primary avenue for upward social and economic mobility" (Florido, 2000). This democratic view of education as an avenue for social and economic growth highlighted the shortcomings of the previous curriculum and the eventual conception and implementation of the K-12 curriculum. Since its implementation, it is believed that this curriculum reform should—as Rivera (2017) stated— "increase the global competitiveness of the learners" (p. 60).

Gathering of Empirical Materials

Three Department orders from the Department of Education in the Philippines were used in this study, in which they are primarily downloaded on the Philippine Department of Education website; www.deped.gov.ph. For the purposes of this study, the three department orders (Dos) were chosen because of its primary purpose of transferring of instructions from the National education sector to its local counterparts about the K12 curriculum. Specifically, the three department orders were chosen because of their supposed adherence to the learning paradigm—by way of classroom assessment, development of textbooks and standardized instructional materials, and time.

Analysis of Documents

The documents were analyzed through the lens of Sustainable Education Stephen Sterling and Robert Barr and John Tagg's Learning paradigm. Stephen Sterling believes that while ESD gives awareness to individuals about their environment and issues on sustainability, it does not provide introspection and reflexivity to the person; while Barr and Tagg believes that learning should be co-produced with the students. The point of analysis from each Department Orders were the Instructional Time, Singularity and Textbooks, and Content Standards.

■5.0 RESEARCH FINDINGS

This section presents the Department Orders (DO) used in this paper as context. As further context, we viewed the Department orders as the response of the Philippine government to the call of ESD. After each presentation of the empirical material, it includes the discussion of the issues raised in Education for Sustainable Education (ESD) as mentioned by Stephen Sterling and its connection to the learning paradigm of Barr and Tagg. Further, the analysis each Department order—in lieu to Stephen Sterling's Sustainable Education--are viewed as the conceptual experience of the quest of the government to heed the call of ESD. There are three department orders that were analyzed:

Department Order	Code	Title
Department Order Number 14 series of 2013	DepEd order no. 14, s. 2013	Strengthening the K to 12 Basic Education Program Delivery System for Elementary Education
Department Order Number 13 series of 2012	DepEd order no. 13, s. 2012	The Guidelines on the Allocation, Delivery, and Distribution of Instructional Materials to Support the K-12 Basic Education Curriculum
Department Order Number 8 series of 2015	DepEd order no. 8, s. 2015	Policy Guideline on Classroom Assessment for the K to 12 Basic Education Program

Department Order Number 14 series of 2013 (Department of Education, 2013b)
Strengthening the K to 12 Basic Education Program Delivery System for Elementary Education

This department order is about the implementation of Elementary Education (Grade 1 to Grade 6) and how it should be delivered in the classroom. The first part of the DO states that:

> *In view of the implementation of the Grades 1 and 2 Curricula of the K to 12 Basic Education Program and per DepEd Order No. 31, s. 2012 entitled Policy Guidelines on the Implementation of Grades 1 to 10 of the K to 12 Basic Education Curriculum Effective School Year 2012-2013, the public elementary schools are advised to adhere to the following guidelines:*
>
> ***Instructional Time***
> 1. *For Grade 1, instructional time for the first semester is 240 minutes or 4 hours per day, and 270 minutes or 4 hours and 30 minutes per day during the second semester;*
> 2. *For Grade 2, a total of 310 minutes or 5 hours and 10 minutes per day for each semester shall be alloted;*
> 3. *The instructional time for both Grades 1 and 2 should be able to temporarily address the urgent needs for the classrooms and teachers;*
> 4. *Time spent for the special instructional programs is part of the required number of working hours for teachers;*

Barr and Tagg (1995, p. 19) strongly express how *instructional time* is under the tenets instruction paradigm that opposes learner-centered paradigm. They argue that time is focuses on instruction rather than student learning. Specifically, they argue that:

> *Time is learning's warden. Our time-bound mentality has fooled us all into believing that schools can educate all of the people all of the time in a school year 180 six-hour days…If experience, research, and common sense teach nothing else, they confirm that truism that people learn at different rates, and in different ways with different subjects. But we have put the cart before the horse: our schools… are captives by clock and calendars. The boundaries of student growth are defined schedules…instead of standard of student learning.*

From the point of view of the learning paradigm, time provides immense barrier to achieve student's full potential, not to mention how teachers are expected to finish the planned lesson for the day to cover the content recommended.

Department Order Number 13 series of 2012 (Department of Education, 2012)
The Guidelines on the Allocation, Delivery, and Distribution of Instructional Materials to Support the K-12 Basic Education Curriculum

This department order is about the guidelines set by the Department of Education about the allocation, delivery, and the distribution of Instructional Materials for the K to 12 Basic Education program.

> *The Department of Education (DepEd) has allocated fund from the fiscal year (FY) 2012 Textbook Funds and subsequent years until FY 2015 for the provision of the centrally procured learning activity packages (LAPs), modules, and other instructional materials (OIMs) to support the initial implementation of the K to 12 Curriculum. These materials will fill-in the gaps of the textbooks, and teacher manuals (TMs) currently being used in public elementary and secondary schools"*

Department Order Number 8 series of 2015 (Department of Education, 2015a)
Policy Guideline on Classroom Assessment for the K to 12 Basic Education Program

This department order is about the Policy Guidelines on Classroom Assessment for the K to 12 Basic Education Program.

> *In line with the implementation of the Enhanced Basic Education Act of 2013 (Republic Act No. 10533) and per DepEd order No. 8, S. 2015, the Department of Education is adopting the enclosed Policy Guidelines on Classroom Assessment for the K to 12 Basic Education Program*
>
> *What is assessed in the classroom?*
>
> *Content Standards - Identify and set the essential knowledge and essential knowledge and understanding that should be learned. They cover a specified scope of sequential topics within each learning quadrant, domain, theme, or component* (Department of Education, 2015b).

In the case of this Department order, the idea of identifying and setting the essential knowledge that should be learned is teacher-centric and devoid of the negotiations fundamental under the tenets of the learning paradigm. A curriculum which is content centered overlooks foundation skills because it focuses on 'knowing' the content. A curriculum cannot possible contain the vast content of a specific discipline in limited time (i.e. 12 years in Basic Education, 4 years in university), therefore in learning paradigm, development of skills is a priority.

■6.0 DISCUSSIONS AND CONCLUSION

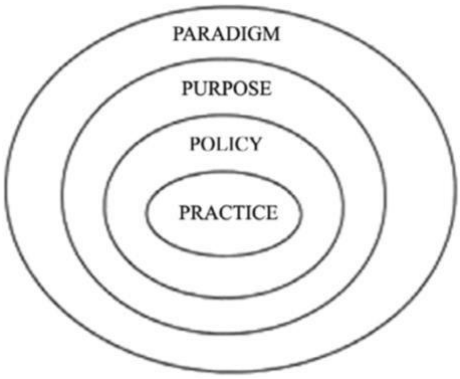
Indeed, the response of the Philippine government to call of ESD centered on bringing the initiatives that would prepare the coming generations to the challenges of sustainability and be aware of its repercussions. As seen from the literature and materials presented, it seems to follow the educational philosophy of ESD that is "…to educate and produce citizens who have the values which encourage sustainable practices, and enable learners to come up with choices and decisions that endorse sustainable development" (Valencia, 2018, p. 2). The series of Department Orders that were circulated that were of analysed seem to prove that the government is working its way to provide its citizens the quality of life, and the values necessary to build a sustainable future. However, one of the major issues ESD is that while it gives citizens the avenue to be aware and knowledgeable about sustainability, it does not give them the sense of introspection and reflexivity. In words of Sterling, the learning of sustainability should "…necessitate a deep learning response in educational thinking and practice" (Sterling, 2008, p. 63). As with the case of the Department orders, the linear directive from the policy makers to the stakeholders of the Dos seem to protrude a "…bolt-on…" (Sterling, 2008, p. 65) approach. An example of which in the content-standards in the Department Order Number 8, series 2015. According to Bada (2015), the "teacher disseminate information and the students viewed as the recipients of knowledge" (p. 68). In turn, the idea of content inside the learning environment are then considered in what, according to Scott (2017) "one-size-fits-all" and "reactive" that the students need to master regardless of their speed and performance. Further, the content that is set are sequentially arranged within each learning quadrant, thus linear and are in chunks. The topics that are set by the content standards are seen as individual entities therefore it becomes "atomistic". The idea of "educational atomism" presumes that "the parts are seen as discrete entities. The parts exist individually from the whole" (Barr & Tagg, 1995). The curriculum is traditionally arranged in a rigid structure and set course, thus focusing on the content rather than the skills that they should learn (Maftoon & Shakouri, 2013). Thus, it seems to accentuate the idea that response of the government may be fragmentary, rather than holistic. Moreover, the learning environment is somewhat removed of creativity and collaboration that is required to establish a learning culture. In connection to the learning paradigm, the structure (e.g. content standards) should be negotiated and the assessment, according to should focus on the development of deeper learning skills (i.e. Critical thinking, problem-solving, collaboration, communication, and metacognition).

In the instructional paradigm, the idea of producing a centrally procured instructional material assumes that it will increase productivity by mass producing modules, learning materials that are "one-size-fits-all". The textbooks are written for a general audience, which opposes the idea of learning paradigm because in this paradigm, learners co-construct meanings based on their situatedness and realities (Barr and Tagg, 1995). The development of general textbooks perpetuates the singularity of knowledge that came from centralized views of writers. For example, a textbook in Civics and Culture written from an urban setup, may not be relevant to learners from the countryside. Further, textbooks are seen as potentially power tools for hegemony of knowledge (Pandhiani, Memon, Qureshi, & Memon, 2016). Therefore, production of centralised instructional materials, such as textbooks falls under the instructional paradigm. In order to ensure a holistic change in learning about sustainability, there should be a systemic change in thinking and practice that can cater to the values and qualities of "…adaptability, creativity, self-reliance, hope and resilience" (Sterling, 2008, p. 66). In connection to the learning paradigm, learners must be active agents of their own learning. They should actively seek for the most effective and efficient path to learning. Both teachers and students should be actively negotiating, and contributing in the development of the course content, while demonstrating learning outcomes through performance and the production of ideas (Biggs & Tang, 2011, p. 3)

In retrospect, the case of Education for Sustainable Development in the Philippines is an honest call of the government to respond to the growing need of awareness and knowledge about sustainability. Further, as a progressing country, it considered the integrating ESD in the basic education curriculum to educate the Filipino people to be responsible and civic-minded citizens. However, as what the issues of ESD raised above, it needed a shift in paradigm as recommended by Sterling. It should also be noted that while the integration of the ESD produced significant results, the "narrow instrumentalism and managerialism" (Sterling, 2008, p. 65) affects the educational thinking and practice of the stakeholders. In accordance to the tenets of Sustainable Education, an emphasis on Transformative learning, capacity building, creativity and adaptive management could provide the necessary theories and practices to build on for the next generation

■7.0 CONCLUSION

The response of the Philippine Basic Education Curriculum to the global call of Education for Sustainable Development may arbuably produced significant results. However, in order to maximise the full potential of ESD, it should transform an individual to become critically aware and reflective on their own environment. Achieving this requires a systemic solution—a change in epistemic culture in education, paradigmatic beliefs of teachers, education leaders, political leaders, researchers, and even the learners. The paradigm shift from the traditional dominant paradigm in sustainability in education necessitates a major overhaul on the system that everyone is accustomed to. Terry Doyle (2008) and Maryellen Weimer (2013) make insightful arguments about how teachers and students resist learner-centered teaching and learning and provide workable solutions on how we can shift to the learning paradigm. Stephen Sterling focuses on the umbrella of how to deal with issues and problems on sustainability and environment education. He diagrams it in what he calls the *The nesting four "Ps" of education systems* (Sterling, 2004).



The purpose, policies, and practice in the education systems must be governed by paradigm. If the paradigm is clear, it will give rise to a change of ethos and purpose, policy, and practice.

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