Factors affecting the implementation of Green Schools in Bhutan
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Abstract—The Green School for Green Bhutan programme, an educational reform, was initiated by the Ministry of Education (MoE), Bhutan in 2010. This programme constitutes eight dimensions: environmental greenery, intellectual greenery, academic greenery, social greenery, cultural greenery, spiritual greenery, aesthetic greenery, and moral greenery. Since 2010, schools in Bhutan have implemented the Green School for Green Bhutan programme by initiating different activities for the eight dimensions. Although this programme has been implemented in the schools since 2010, in the absence of studies, nothing much is known about the factors affecting its implementation. The present study investigated the factors that affected the implementation of green school.

Data for the study were gathered from 28 participants from six school in Samtse district, Bhutan using a semi-structured interview. NVivo was used for data management and analysis. The data were analyzed using thematic analysis. The findings from the study showed that the implementation of green school was affected by factors at three different levels: intrapersonal (knowledge, interest, confidence, commitment and self-efficacy), interpersonal (support from different stakeholders) and organizational levels (opportunity and/or lack of opportunity for professional growth, resources, academic focus, time constraint, workload, infrastructural facilities and change fatigue).

Keywords—Green school, implementation, intrapersonal, interpersonal, organizational.

I. INTRODUCTION
The Green School for Green Bhutan programme emerged under the auspices of the Educating for Gross National Happiness (EGNH) initiative (Powdyel, 2014) to ultimately help achieve Gross National Happiness (GNH) (Tshomo, 2016). Although the concept of green school exists around the world, the ‘green school’ concept in Bhutan is used metaphorically for the eight different greeneries (being environmentally, academically, intellectually, morally, aesthetically, socially, culturally, and spiritually sound) required for the wholesome development of each individual in the school (MoE, 2012a). Hence, the educational reform Green School for Green Bhutan programme was instituted to nurture every student in these eight different dimensions of education. Schools across Bhutan have implemented the Green school for Green Bhutan programme in 2010. Although this programme has been implemented in the schools since 2010, in the absence of studies, nothing much is known about the factors affecting its implementation. The present study investigated the factors that affected the implementation of green school in schools in Samtse district Bhutan. The study aims to address the gap in the research quantum on green school and add to the body of literature and knowledge within the Bhutanese context, along with the intention of contributing new information to the wider body of international literature.

II. LITERATURE REVIEW
2.1 Green school
The green school concept and its equivalents such as Green Schools Alliance, Australian Sustainable Schools Initiative (AuSSI), EnviroSchools, Sustainable Schools, Green School Project and Green School Award exist in the US, Australia, New Zealand, UK, China, and Sweden (Rickinson, Hall, & Reid, 2016). In these countries, green schools are a medium for imparting environmental and sustainable education to the pupils (Eames & Barker, 2011; Gough, 2005; Kadji-Beltran, Zachariou, & Stevenson, 2013; Salter, Venville, & Longnecker, 2011; Wang, 2009; Zhao, He, & Meng, 2015; Zhenya, 2004; Zhongguo, 2004), creating sustainable green school buildings that provide conducive learning and working environments for teachers and students (Edwards, 2006), or greening of school grounds and environments (Dymant & Bell, 2008). The conceptualization of the ‘green school’ in Bhutan, however, is quite different. The term ‘green school’ is used as a metaphor for the external and internal environments that
each child requires to be able to grow into a well-rounded individual. The green school concept in Bhutan, therefore, is broader than other green school concepts around the world.

According to Powdyel (2014, p. 4), who is the key proponent of Green School for Green Bhutan, “a green school engages and empowers all the elements of the learner including the environmental, intellectual, academic, social, cultural, spiritual, aesthetic, and moral”. In addition, according to the MoE (2015), a “green school is a holistic approach to promote values and principles of Gross National Happiness in the school system and nurture students who are infused with the GNH values and principles” (p.121). Accordingly, the green school approach requires:

The use of the whole school behaviour starting with school management and administration, morning assembly, classroom teaching, co-curricular activities, formal and non-formal teacher-student interactions, school community relationships and all the other dimensions of school behaviours. However, it is all the more important for teachers and principals to collectively realize... the sacred onus to make this possible through whatever specific innovative strategies that work best in their schools. (MoE, 2015, p.121)

The importance accorded to the Green School for Green Bhutan programme was manifested in the adoption of the theme ‘Nurturing Green Schools for Green Bhutan’ for the 14th Annual Education Conference in 2010. Additionally, one of the resolutions endorsed during the 14th AEC was:

In order to deliver the pledges made in the Performance Compacts and to advance the overall aim of Educating for Gross National Happiness through building Green Schools for Green Bhutan, the whole of the education system, from the headquarters to the Dzongkhags and schools, must channel all resources towards realizing the mandates of education by the end of the tenth five-year plan. (MoE, 2012b, p. 3)

However, Powdyel (2014) claims that “while some good materials have been developed to help implement the elements of a green school, there is a pressing need for resources which support educators and students to obtain a more profound understanding of the concepts themselves” (p. 5).

Green schools can be nurtured through a “harmonious co-existence of the various areas that shape a child’s development in the school system, which are cultivated and distilled through eight dimensions of a green school” (MoE, 2012a, p. 3). All these eight dimensions are perceived to be essential in shaping a child into a GNH graduate, who would be able to “release much goodwill and positive energy and make the society and the world a better place to live in” (Powdyel, 2014, p. 4).

Fundamentally, these eight dimensions provide “organizational and philosophical guidance for schools” (Schuelka & Maxwell, 2016, p. 9). In addition to the eight dimensions, a green school also ensure[s] that no child is left out of the educational opportunities and that learning is worthwhile and purposeful; builds and maintains basic amenities for boys and girls and ensures basic safety standards; maintains individual children’s personal health status and monitors changes; is open, fair, transparent and conducive to every child’s growth; prepares students for the world of work as well as for life; and builds and promotes an active involvement of the parents and the community in the education of the children. (Powdyel, 2010, p. 5)

Above all, in a green school, everyone’s uniqueness and contributions to school improvement are valued and teachers and students treat each other fairly (Powdyel, 2014).

### 2.2 Dimensions of green schools in Bhutan

A green school in Bhutan is characterized by eight different dimensions. Powdyel (2014) describes the eight dimensions as follows:

1. environmental greenery is the ability to discover and honour our vital link with all life-forms around us and beyond us and that sustain us;
2. intellectual greenery is the positive disposition to new ideas, knowledge, and information; openness of mind to seek and to value new discoveries and insights and examine their merit;
3. academic greenery is the ability to discover and to value the great ideas that define and give vitality to the many academic disciplines that we study in schools;
4. social greenery is the ability to build relationships, goodwill, and positive energy and release these to the society around us and beyond us;
5. cultural greenery is the appreciation of who we are and what makes us who we are, our values, sensibilities and world-view;
6. spiritual greenery is an acceptance of the need for a higher, nobler, and sublime object to realize
The implementation of green schools around the world and in Bhutan has been shown to have some positive results. International studies have indicated that green schools have physical, social, mental, financial, health, and spiritual benefits (Bell & Dyment, 2008), lowered pupil absenteeism (Edwards, 2006), improved academic achievement (Edwards, 2006; Ghent, Trauth-Nare, Dell, & Haines, 2014; Volk & Cheak, 2003), and enhanced environmental awareness for teachers and students (Henderson & Tilbury, 2004; Li & Lang, 2015; Wu, 2002; Zhongguo, 2004). Additional benefits comprise increased play opportunities (Malone & Tranter, 2003), safer outdoor environments (Evans, 2001), increased learning opportunities (Dyment, 2005), and improved social relations (Dyment & Bell, 2008).

Similarly, in Bhutan, following the implementation of the EGNH through building Green Schools for Green Bhutan, “several schools have reported visible and substantial improvements in terms of physical ambience, mindfulness, students’ understanding of and regard for culture and nature” (MoE, 2012a, pp. 3–4) and enhanced academic performance, improved student behaviour, and reduced discipline issues (Powdyel, 2014). The implementation of the Green School for Green Bhutan programme has also helped to promote team spirit in the schools (Gayphel, Jose, Yangdon, Giri, Sonam, & Dorji, 2014). Although there is evidence of the benefits of green schools around the world, more studies need to be conducted in Bhutan as there is very limited research on the full extent of Green School for Green Bhutan achievements even though it is a major educational reform.

2.4 Educational Reform

Educational reform, as defined by Syomwene (2013, p. 80), refers to “actions or recommendations by those in authorities that are intended to make education provision better or to put right any faults or errors in the provision of education”. The educational reform Green School for Green Bhutan programme, “which emerged as an offshoot of GNH” (Namgyel & Rinchhen, 2016, p. 64), was instituted to nurture every student in eight different dimensions of education. Change, as maintained by Fullan (1985), is “at once simple and complex…in one setting, successful educational change seems so sensible and straightforward; on another day, in another situation, improvement cannot be attained with the most sophisticated efforts” (p. 391). A clear understanding of the range of variables at work in conjunction with what is working and what is not working is required for effective change to occur.

A change process as outlined by Fullan (2001) is accompanied by three overlapping phases:

1. initiation stage, which consists of the process that leads up to and includes a decision to adopt or proceed with a change;
2. implementation stage, which involves the first experiences of attempting to put an idea or reform into practice; and
3. continuation stage, in which the change is incorporated as an ongoing part of the system or disappears by way of a decision to discard or through attrition.

In addition, Cheung and Wong (2012, p. 41) assert that there are numerous factors operating at each phase and that:

The change process is by no means a linear process, but rather one in which events at one phase can feedback to alter decisions made at previous stages, which then proceed to work their way through in a continuous interactive way. Whether the phases will move forward smoothly depends on how much the problems or obstacles affecting these phases are successfully resolved.

In a similar vein, Fullan (2001) maintains that if obstacles to implementation at the different phases are not addressed, instead of moving ahead from the implementation phase to the continuation phase, a change would suffer from the failure to be used in the intended manner. He further asserts that if there are more factors that scaffold implementation, it will lead to the accomplishment of more change in practice.
of educational reform is echoed by Hargreaves (2001), who maintains that teamwork is an important source of moral support and can reduce the work burden, reduce uncertainty, increase the capacity for reflection, increase efficiency, and increase opportunities to learn and develop professionally. However, Chissick (2011) cautions that “teacher educators should be aware that collaboration or controlled teamwork might cause complacency and encourage teachers to rely on others and relieve themselves from responsibility” (p. 210).

Teachers’ beliefs also play an essential role in the implementation of educational reform. Cohen (1990), however, mentions that there are difficulties associated with changing teachers’ beliefs, as they have been forming their beliefs for many years. Teachers may only change their beliefs “when they are not satisfied with existing beliefs or when options for change represent challenges rather than threats” (Cheung & Wong, 2011, p. 456). Change in teachers’ beliefs and attitudes may possibly take place only after they notice the evidence of changes in student learning (Guskey, 1986). The congruences between the change design and teachers’ beliefs, and teachers’ beliefs and practice are essential factors of implementation (Duke, 2004).

The literature on educational change also indicates that reform efforts are often complex. Change agents encounter resistance, anxiety, and confusion due to lack of skills, attitude, collaboration, support, confidence, materials, and ownership from themselves (Fullan & Stiegelbauer, 1991). In a study on educational reform that involved the use of technology in the classroom, it was found that teachers’ confidence was one of the greatest predictors of the use of technology (Wozney, Venkatesh, & Abrami, 2006). Moreover, it has been found that educational change agents—principals and teachers—find it difficult to cope with change because they work within their own beliefs, values, and practices, many of which have been developed and reinforced over time (Fullan & Stiegelbauer, 1991). It is, therefore, imperative that the level of readiness and preparedness of the change agents are considered for successful implementation of educational reform for little change is going to happen without considerable attention to these ground realities (Fullan, 1992; Sherab & Halloway, 2006). In addition, since change agents are key players in any reform (Thinley, 2016), they need to possess the skills, motivation, and efficacy (Sherab et al., 2016) to advance the reform. Some of the sources of a teacher’s motivation, as identified by Kocabas (2009), are a positive climate in school, cooperation, positive relations and solidarity with colleagues, and support. Bandura (1977) identified four sources of efficacy: mastery experience,
vicarious experience, verbal persuasion, and physiological arousal. He contends that:

(i) enactive mastery experiences are the most powerful source of information for changing efficacy beliefs as they provide authentic evidence of one’s performance in a given task per se;

(ii) vicarious experiences are another source of information for changing efficacy beliefs that are based on role modelling;

(iii) verbal persuasion by someone who is trustworthy, competent, and reliable serves as an effective source of information for enhancing one’s self-efficacy; and

(iv) physiological and emotional states refer to the level of physiological and emotional reactions that a person experiences in a given situation (Bandura, 1977). Sherab (2013) found the self-efficacy beliefs of principals and teachers to be the major influential factor in successfully implementing GNH Education. There is also evidence to show that effective professional development programmes are instrumental in raising the level of efficacy beliefs of teachers (Ross & Bruce, 2007).

Conversely, implementation of educational reforms may be accompanied by implementation barriers such as poor judgements on the part of the leaders, time constraints, a low degree of organizational complexity, and inadequate staff development (Fullan, 2005a). It is reported that long-term professional development programmes are essential for achieving lasting changes in teachers’ practical knowledge (Van Driel, Beijaard, & Verloop, 2001). Further, Van Driel et al. (2001, p. 37) indicated that practical knowledge “integrates experiential knowledge, formal knowledge, and personal beliefs”. In addition, lack of materials (Bennie & Newstead, 1999; Hew & Brush, 2007; Ryan, Kang, Mitchell, & Erickson, 2009), parental expectations, and public examination have been identified as factors that can restrict curriculum innovation (Bennie & Newstead, 1999).

The importance of educational leadership for successful implementation of change initiatives is emphasized by Fullan (2002) and Stoll (1999). The change process is affected by the principal, the spirit of collegiality and collaboration, and internal and external support personnel (Clarke, 1997). In addition to support, educational reform is also affected by the frequency of change, as workers become less able or enthusiastic with frequent change (Berneth, Walker, & Harris, 2011). Similarly, Fullan (1993) claims that one of the great problems in educational reform is “not resistance to change, but the presence of too many innovations mandated or adopted uncritically and superficially on an ad-hoc fragmented basis” (p. 23).

Change agents can also experience resistance, anxiety, and confusion due to lack of skills, attitude, ownership from change agents, support, confidence, collaboration, and materials (Fullan & Stiegelbauer, 1991). Fullan (1992), therefore, asserts that educational reforms that do not consider the important role teachers play in change are often met with resistance. Sherab (2013) found that some of the main reasons for the inability to efficiently infuse GNH values and principles in the teaching lessons included teachers’ lack of awareness, knowledge, skills, and methods; a culture of academic and examination focus; a heavy workload for both principals and teachers; teacher resistance; and teachers’ lack of positive attitude and commitment. He further found that there was inadequate support from DCRD, EMSSD, and DEO in the implementation of GNH initiatives (Sherab, 2013). A high level of teacher resistance was also identified as one of the barriers to educational reforms by Bingimlas (2009) and Cho and Nadow (2004).

Other factors that negatively affect educational reform include high levels of conflicting attitude and teachers’ initial anxiety, tension, and scepticism; low levels of resources, teacher confidence, competence, and effective training; severe time constraints, infrequent reinforcement, unsupportive leadership, and low attitude (Bingimlas, 2009; Cho & Nadow, 2004); heavy teachers’ workload (Cheung & Wong, 2012; Nolder, 1990; Sherab & Dorji, 2013); poor teachers’ understanding and support for the reform (Cheung & Wong, 2012); and lack of infrastructure facilities and inefficient school management (Syomwene, 2013). Additional factors that affect educational reform include unclear reform, importance attached by teachers to old practices, examination-dominated teaching, mismatch between teachers’ belief systems and curriculum goals, low levels of teachers’ motivation, few incentives and rewards, lack of professional development, lack of student interest, lack of support mechanisms, lack of resources, lack of community participation (Memon, 1997), focus on academic performance (Sherab et al., 2016), disconnection between classroom practices and strategies in policy documents (Tshomo, 2013), and failure by stakeholders to consider the knowledge, skills, and attitudes of the reform implementers (Sherab et al., 2016). Not taking into account the knowledge, skills, and attitudes of the reform implementers has resulted in unsuccessful reform efforts (Van Driel et al., 2001). Such factors or complications can be expected when implementing educational reforms (Fullan, 1992; Fullan & Stiegelbauer, 1991).

III. METHODOLOGY
A semi-structured interview was used to gather data from 28 teachers. These participants were from six schools in Samtsed district, Bhutan. The use of the semi-structured interview provided insights into the research questions. To ensure methodological soundness, the interview questions
were pilot tested with four teachers outside the study sample. All of them have the experience of implementing green school activities in schools in Bhutan. The pilot test, therefore, was conducted with participants who were similar to those who participated in the interviews. The aim of the pilot test was to assist in “identifying ambiguities, helping to clarify the wording of questions, and permitting early detection of necessary additions or omissions” (Noor, 2008, p. 1603) so as to enable the interview questions to be refined and revised before implementation. Moreover, the pilot test was considered necessary to establish the effectiveness of the instrument in terms of both the content and process of administration. The pilot phase enabled the data collection instrument to be edited, fine-tuned, and refined, resulting in the development of a methodologically sound data collection instrument. The data collected in the pilot phase was not included in the final analysis because the modification of the data collection instruments precluded the comparison and/or merging of the data sets from the modification of the data collection instruments precluded the comparison and/or merging of the data sets from the pilot and the main study. After obtaining responses from the pilot test, the suitability and content of the questions were verified. The pilot test also provided the researcher with valuable experience in conducting the interviews.

The concern of qualitative research is to obtain an in-depth understanding of the issue being investigated (Lampert, 2013). Since the research participants influence the quality of the data, it is essential to select participants from whom rich information and evidence relevant to the purpose of the research and the research questions could be obtained (Creswell & Clark, 2007; Denzin & Lincoln, 1994). According to Patton (2002), qualitative research depends heavily on a purposeful sampling strategy. Additionally, Carpenter and Suto (2008) maintain that purposeful sampling is a technique widely used in qualitative research for the identification and selection of information-rich cases. A purposeful sampling strategy was employed in this study. An email was sent to all 28 participants inviting them to participate in a semi-structured interview. An email was also sent to the principals of the six participating schools to apprise them of their staff members who had been invited to participate in the semi-structured interviews.

Prior permission for the interview was sought from the principals of the six participating schools and the participants themselves. Prior to the commencement of the interview, participants were provided with an information sheet and a consent form for them to sign. They were encouraged to ask questions and seek clarification on the Information Sheet, consent form, and any other matter related to the interview. Participants were given the right not to respond to questions if they found them sensitive or uncomfortable to answer. Permission to record the interview was sought from each participant. All interviews were conducted in English and recorded using a digital recorder, which helped to “secure an accurate account of the conversations and avoid losing data since not everything can be written down during an interview” (Noor, 2008, p. 1604). The recording also promoted “greater rapport by allowing a more natural conversational style” and enhanced “validity by this [the] preservation of authentic data” (Minichiello, Aroni, & Hays, 2008, p. 117). The recording also enabled the researcher to generate a verbatim transcript of the interview and eliminate bias. The participants were informed that their identity and the school’s identity would not be revealed, and that the interview content would not be used for anything other than research purposes. The researcher carried out a verbatim transcription of both the questions and the responses provided by the interviewees. All 28 transcripts were sent via email for participants to check whether the interviews were transcribed in accordance with their recollection. The participants were requested to delete any information that they did not intend to share and/or provide additional information that they wished to share. This member-checking process is described as the most crucial technique for establishing credibility in a study (Lincoln & Guba, 1985). Thematic method of analysis was used for analyzing the data. The data were managed and analyzed using NVivo.

### 3.1 Inter-coder Reliability Index

Lombard, Snyder-Duch, and Bracken (2002) define intercoder reliability as “a measure of the extent to which independent coders evaluate a characteristic of a message and reach the same conclusion” (p. 2). According to Campbell, Quincy, Osseman & Pedersen (2013, p. 279), “Inter-coder reliability requires two or more equal capable coders operating in isolation from each other to select the same code for the same unit of text”. Emphasizing the need for inter-coder reliability, Lombard et al. (2002) assert that although inter-coder reliability does not ensure validity, the data and the interpretation of the data can never be considered valid if this process is not established. Therefore, an inter-coder reliability index was computed for the codes from the semi-structured interviews. Five different transcripts were randomly selected and coded by six coders who were sufficiently knowledgeable about the subject matter in question to identify subtle meanings in the text. Two of the coders also had prior experience of coding data for their own research studies. Campbell et al. (2013) claim that:

> The need for knowledgeable coders is especially important when working with in-depth semi-structured interviews. Coding this type of data
often involves interpreting what respondents mean in their answers to questions. Doing so correctly requires that coders have sufficient background knowledge in the subject matter of the interviews. Each coder was provided with a copy of the codes with definitions and code identifiers. There was a one-to-one correspondence between a code and its numerical identifiers. Each unit of the response was also numbered. The coders were briefed on the coding procedures, such as using the code identifiers against each numbered response unit, and, wherever required, each response unit could be coded against multiple code identifiers. The coders worked independently; that is, they were ‘blind’ in terms of the coding applied by the other coders. Their coding was checked against the researcher’s coding, which was used as the criterion. After the coders completed the coding, the code identifiers were entered into a template and computed for reliability.

An index of inter-coder reliability was computed by comparing each coder’s code identifier(s) for each response unit with that of the researcher. As 124 response units were coded and there were six reviewers, there was a maximum of 744 possible agreements. The process revealed 657 agreements; hence, the reliability index was 88% (657/744), which reflects a very high level of reliability (Campbell et al., 2013). Owing to the very high level of agreement, it was not considered necessary to base an index on all possible pairwise comparisons, which would have involved 2604[2] judgements.

IV. RESEARCH QUALITY CRITERIA
According to Liamputtong (2013), “trustworthiness or rigour refers to the quality of qualitative enquiry and is used as a way of evaluating qualitative research” (p.24). Trustworthiness is established when findings reflect the meanings as described by the participants as closely as possible. Trustworthiness of a study can be established through credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). Each of these criteria is outlined in the following sections.

4.1 Credibility
Lincoln and Guba (1985) maintain that an essential factor in enhancing trustworthiness of a study is ensuring its credibility. Credibility is defined as the confidence that can be placed in the truth of the research findings (Holloway & Wheeler, 2002). Credibility establishes whether or not the research findings represent plausible information drawn from the participants’ original data and is a correct interpretation of the participants’ original views (Graneheim & Lundman, 2004). Since qualitative research may focus on multiple realities and multiple truths, “research evidence is credible if it represents as adequately as possible the multiple realities revealed by the participants” (Chilisa, 2012, p. 165). In this study, credibility was established in the following ways: (i) the research project was scrutinized by a panel of experienced researchers and the feedback was incorporated into the project and (ii) feedback on the data and interpretations were obtained from the participants (member checking).

4.2 Transferability
Transferability relates to the question “To what degree can the study findings be generalized or applied to other individuals or groups, contexts, or settings?” or “Do the findings apply to other contexts?” (Bryman, 2012, p. 49). Transferability in this study was promoted by providing the details of research methods, sampling strategies, and the contexts and assumptions underlying the study. In addition, the description of the research setting provided in the study could help the readers assess whether the findings might be applicable to other settings with which they are familiar.

4.3 Dependability
Dependability relates to the notion of whether the research findings “fit the data from which they have been derived” (Carpenter & Suto, 2008, p. 150). Dependability in this study was enhanced by providing detailed descriptions of the research process (such as methodology), conducting peer review, calculating inter-coder reliability, and explaining the assumptions and theory underpinning the study. Furthermore, sufficient examples of data analysis and interpretation were included to both illustrate and substantiate the findings and interpretations.

4.4 Confirmability
Confirmability is the degree to which the research findings can be confirmed or corroborated by others as an empirical fact. Tobin and Begley (2004) describe confirmability as the demonstration that the findings and interpretations are clearly linked to the data, or the extent to which the findings of a study are shaped by the respondents and not researcher bias, motivation, or interest. Intercoder reliability and auditing were used in this study to establish confirmability. The researcher maintained a transparent description of the research steps taken from the start of the research project to the development and reporting of findings (Lincoln & Guba, 1985).

V. RESULTS AND DISCUSSION
The findings of the study showed that the implementation of green school was affected by factors such as knowledge,
interpersonal, organizational, and infrastructural factors. These factors are discussed as intrapersonal, interpersonal and organizational factors.

5.1 Intrapersonal factors

The intrapersonal factors include knowledge, interest, confidence, commitment and self-efficacy. Participants associated these five factors to implementation of green school: a high level of these factors enabled the implementation of green school while a low level of the same factors negatively affected its implementation. The literature shows that professional knowledge is essential for successful implementation of educational reform (Fullan, 2005; Hargreaves & Fink, 2006). The literature also highlights lack of knowledge as negatively affecting educational reform. For example, Bennie and Newstead (1999) identified lack of knowledge as a barrier to curriculum reform. Additionally, Sherab et al. (2016) maintain that the implementation of educational reforms is accompanied by implementation barriers such as failure by the stakeholders to consider the knowledge, skills, and attitudes of the reform implementers. This process, as argued by Van Driel, Beijaaard, and Verloop (2001), has resulted in unsuccessful reform efforts.

Interest has also been identified in the literature as essential for successful implementation of educational reform (Fullan, 2005; Hargreaves & Fink, 2006). The literature on educational change indicates that reform efforts are often complex. Change agents encounter resistance, anxiety, and confusion due to lack confidence (Fullan & Stiegelbauer, 1991). In a study on educational reform that involved the use of technology in the classroom, it was found that teachers’ confidence was one of the greatest predictors of the use of technology (Wozney, Venkatesh, & Abrami, 2006). Additional factors that affect educational reform include commitment (Hayes, 2010). The importance of efficacy is highlighted in the literature. For example, Sherab et al. (2016) argue that change agents need to possess efficacy to advance educational reform. Moreover, Sherab (2013) found the self-efficacy beliefs of principals and teachers to be the major factor in successfully implementing GNH Education.

5.2 Interpersonal factors

The interpersonal factors include support and or lack of support from the Ministry of Education (MoE), administration, colleagues and parents. The findings from the study indicated that support and/or lack of support from these stakeholders affected the implementation of green school: the availability of support enhanced implementation of green school while a lack of support negatively affected its implementation. Congruent with the finding concerning the importance of support from the principals, studied have emphasized the importance of school leadership for successful educational change initiatives (Chissick, 2011; Fullan, 2002; Stoll, 1999). Conversely, there is evidence that the lack of a supportive mechanism hinders educational reform (Memon, 1997). Additionally, the research literature shows that the change process is also affected by the principal, the spirit of collegiality and collaboration, and the support of internal and external personnel (Clarke, 1997). Moreover, literature shows that teamwork and peer support are important factors in the successful implementation of educational reform (Chissick, 2011). Hargreaves (2001) maintains that teamwork is imperative as a source of moral support, increased efficiency, reduced overload, reduced uncertainty, increased capacity for reflection, and opportunities to learn and develop professionally. Moreover, the literature reveals that change agents encounter resistance, anxiety, and confusion due to lack of inadequate support and minimum collaboration (Fullan & Stiegelbauer, 1991). An implication of this finding is that if the implementation of green school is to succeed, there has to be ongoing support from the different stakeholders.

5.3 Organizational factors

The organizational factors include opportunity and or lack of opportunity for professional growth, resources, academic focus, time constraint, excessive workload, lack of infrastructure facilities and change fatigue. Participants indicated that these organizational factors affected the implementation of green school. Consistent with this finding, literature also highlights factors that negatively affect educational reform such as lack of resources and severe time constraints (Bingimlas, 2009; Cho & Nadow, 2004); heavy teachers’ workload (Cheung & Wong, 2012; Nolder, 1990; Sherab & Dorji, 2013), lack of infrastructure facilities (Syomwene, 2013); and focus on academic performance (Sherab et al., 2016). In addition, with regard to change fatigue, Bernerth, Walker, and Harris (2011) assert that frequency of change also affects educational reform, as workers become less able or less enthusiastic due to frequent change.

In the Bhutanese education system, heavy emphasis is placed on examinations and successfully completing the prescribed official curriculum. Teachers have to prioritize covering the syllabus and this increases the likelihood that they will not focus on the implementation of green school.
Consequently, students’ experience in the green school may be limited. Moreover, teachers are also faced with the additional burden of having to meet the school’s and parents’ expectations of children’s high performance in examinations. In a study by Sherab and Dorji (2013), it was found that Bhutanese teachers shoulder a heavy teaching load in addition to having large class sizes. Also, the teachers have to shoulder multiple responsibilities outside the classroom. In many remote schools across the country, access to the internet is either unavailable or intermittent. Access to high internet connectivity may enable the teachers to explore online information on green school and implement them in the classroom.

VI. CONCLUSION

The implementation of green schools is affected by factor at the intrapersonal, interpersonal and organizational levels. If the implementation of green school is to succeed, strengthening as well as addressing these factors should be a priority for the different stakeholders. If these factors are not addressed, the gap between expectation and implementation may continue to exist and the successful implementation of green school may be at stake. One of the findings of the present study is that the levels of implementation of green school are not determined by one main factor alone, but rather they are determined by many factors at the intrapersonal, interpersonal and organizational levels. Additionally, the findings show that the introduction of any educational reform such as green school should be preceded by investment in terms of studying the practicality, necessity, and other ground realities that the reform would entail. This process may help to prevent or reduce difficulties and ensure the effective implementation of the reform. As anticipated, it is expected that the green school programme helps to achieve the Educating for Gross National Happiness initiatives and ultimately help achieve Gross National Happiness.

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