

Article

# I Want to Teach Sustainable Development in My English Classroom: A Case Study of Incorporating Sustainable Development Goals in English Teaching

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**Abstract:** Previous studies indicated that K-12 teachers generally felt reluctant to incorporate sustainable development in their teaching due to a lack of skills, knowledge and interest, particularly language teachers. This qualitative case study, grounded in the Social Cognitive Career Theory, aims to identify the significant factors influencing English teachers' motivation of incorporating the United Nation's Sustainable Development Goals (SDGs) into their teaching. Data were collected from multiple sources including semi-structured interviews and classroom observations. By examining how teachers' self-efficacy develops in relation to outcome expectations and performance goals, the findings showed that teachers' personal beliefs, attainment of teaching goals and supportive school management can positively influence their self-efficacy and boost their motivation in incorporating SDGs in their English teaching. Such findings can be useful for educators, school management, educational institutes, universities and policy-makers to develop strategies to facilitate teachers' active roles in ESD by fostering greater collaboration across disciplines and providing relevant professional development and goal-relevant supports.



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**Keywords:** education for sustainable development; sustainable development goals; K-12 teachers; social cognitive career theory; motivation; self-efficacy; case study; semi-structured interviews; classroom observations

## 1. Introduction

In 2015, the United Nations put forward the 2030 Agenda for sustainable development with 17 Sustainable Development Goals (SDGs) to look for greater collaboration, commitment and endeavour to attain a win-win situation among people, planet and prosperity [1]. SDGs are critical steps toward human development. It offers further opportunity for Education for Sustainable Development (ESD) to empower students to make decisions, take up responsibilities and devise solutions to achieve environmental integrity, economic viability and social justice, whereby students are equipped with self-directed learning, critical thinking, problem-solving and future-oriented skills [2–5].

There are two reasons why teachers take a pivotal role in ESD. First, they have to transcend from the traditional fragmented approaches to holistic and interdisciplinary approach [6]. Biasutti et al. [7] also pointed out that while reorienting a curriculum in ESD, a holistic framework and an interdisciplinary approach should be included, whereby integrating sustainability themes aligning students' learning goals and contents of the subject is necessary. This can be a challenging task if no adequate support or training is provided. Second, teachers' beliefs and attitudes directly influence their teaching outcomes in ESD. In order to attain the desirable teaching outcomes, teachers' attitudes about sustainability and ESD, alongside their course design skills and teaching pedagogies, have to be taken into account. According to Biasutti and Frate [5], the sustainability attitude can be measured in the Attitudes towards Sustainable Development scale (ASD), whereby dimensions like environment, economy, society and education have to be taken into consideration. The

scholars highlighted the importance of education as a crucial component of ESD to improve people's capabilities to address the SD-related issues.

Although scholars [2,3,5–13] pointed out that the importance of teachers' role in ESD and an interdisciplinary effort is needed for a successfully ESD, K-12 school teachers generally felt that some subjects should be more suitable for ESD, particularly language teachers. This situation can be alarming since the reluctance of the language teachers can be detrimental. Language teachers' negative attitude and beliefs can be reflected in their teaching and interaction with students, thereby hampering the students from being responsible for our economic development, civil society and natural resources [3,10,11,14]. Among the current studies related to K-12 education, some focussed on curriculum and teaching practices [10,12,15–17], some focussed on an interdisciplinary approach of ESD [8,9,13], while some focussed on sciences or social sciences subjects [18,19]. A very few studies focus on the implementation of SDGs in languages or how to reorient a curriculum in ESD. Encouraging more teachers to ESD is a potential solution to the current situation [2,3,11,12]. However, such transformation is never a simple task as it requires great effort, motivation and reflectivity on the teaching pedagogies among teachers [5]. Among these factors, motivation is important as it is a driving force for teachers to persist and continue to attain their teaching goals amongst the perceived challenges and difficulties [20–22]. Hence, a further discussion is necessary to draw on ways to motivate K-12 language teachers to incorporate sustainable development in their teaching.

#### *Purpose of the Study*

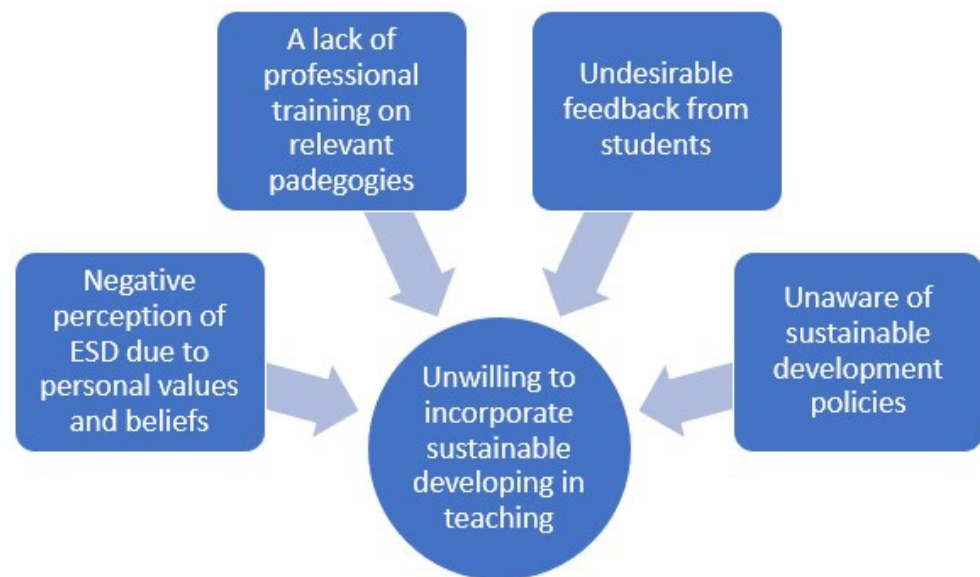
This study aims to study the significant factors influencing English teachers' motivation in incorporating SDGs into their teaching. By looking into their efficacy during the implementation, the researcher identified the personal and contextual variables for a successful implementation of SDGs in English teaching, which can be predictors of the future directions of ESD in language learning [23–26]. Moreover, an SDG approach can address the importance of multidisciplinary in ESD, whereby language teachers do not merely focus on language skills. They have to engage students in a myriad of activities like discussion, debates and presentations with topics in the environment, economy and social justice to develop their knowledge and competencies holistically alongside systems thinking and critical thinking skills, thereby attaining the transformative learning objectives in the cognitive, socio-emotional and behavioural domains in ESD [2,7,9]. With the aim stated above, the research is guided by two research question:

1. How do English teachers describe their experiences of implementing SDGs into their teaching?
2. Why do English teachers decide to implement SDGs into their teaching?

## **2. Literature Review**

The current studies showed that there were some attempts in implementing SDGs in education; however, it is far away from developing students' awareness on sustainable development [1–3]. First, most of the studies [4,5,14,27–31] were posited on the implementation in SDGs at higher education level by analysing the relevancy of the course contents to the SDGs. A very few focussed on implementing SDGs in K-12 education [8–13,15–18,32].

The section below categorises and summarises the challenges of implementing ESD in K-12 education. Attention has been paid to the reasons for K-12 teachers feeling powerless and reluctant to implement sustainable development in their teaching. Such identification is critical, as teachers' motivation is strongly related to the successful implementation of ESD [10,11,33,34]. Such a review also facilitates the later discussion on how personal and contextual variables can influence teachers' motivation, outcome expectations and performance attainment [23–26]. Figure 1 summarises the challenges of implementing ESD in K-12 education.



**Figure 1.** Challenges of implementing education for sustainable development in K-12 education.

First, scholars [9–12,14,18] suggested that teachers’ values and beliefs negatively influence their perception of ESD, which was reflected in their lack of interest in implementing sustainable development in their teaching. For instance, teachers felt that sustainability was a complicated concept with various definitions, and the interconnection between different aspects of sustainable development was hard to understand [18]. Although teachers were recommended to abolish the traditional dichotomy between humans and the environment, they generally felt that sustainable development was more related to the environmental issues than other disciplines like economy [13,18,35]. As a result, they perceived that some aspects of sustainable development were beyond their expertise and tended to ignore those areas in their teaching. For instance, language teachers felt that language was a tool for reading and learning. They put greater emphasis on students’ personal development and found that there was very little correlation between sustainable development and language acquisition [9,14]. Their limited experiences and knowledge of sustainable development hampered them from developing a holistic conception of sustainable development, thereby limiting their horizons in perceiving the possibilities of incorporating sustainable development in their language teaching [14]. As for STEM teachers, they believed that their professional role was to present factual information instead of addressing social or ethical issues or inviting students to evaluate or make a judgement [11,14,32]. Such personal beliefs on professional roles made them feel sustainable development was something beyond their main expertise areas and inhibits their interest in further incorporating SD in their teaching [9,29].

Second, scholars [9–12,14,15,19] also suggested that a lack of professional training on pedagogies could hamper teachers’ motivation of implementing ESD. Scholars [8,11,13] generally believed that an interdisciplinary approach in ESD could unfold each discipline’s contribution to allow a holistic understanding of various interlocking parts of the problem. Theoretically, teaching methodologies like transdisciplinary problem-oriented teaching, real-world pedagogies and project-based learning across a broad range of subjects were recommended [31,32,36–38]. When it comes to actual implementation, teachers still found the definition of interdisciplinary approach too abstract, whereby they showed insufficient understanding of the reciprocal relationships between different approaches to sustainability [9,32,39]. During execution, teachers felt that the interdisciplinary practice was limited as the boundary between subjects was not clear, making collaboration, synthesising the related teaching materials and activities difficult [9,11]. At the classroom level, some teachers reflected that they had difficulties striking a delicate balance between encouraging critical thinking and imposing their stance [18]. Some sustainability issues could be contro-

versial and involve students examining their personal views critically, avoiding dogmatism and questioning the authority [13,40]. Without receiving adequate support and training, teachers found challenging and stressful in acquiring new skills to cope with such challenge within their limited lesson preparation time [9–11]. As a result, they preferred keeping their existing curriculum and pedagogies instead of bringing risks into their teaching [23–26].

Third, while employing ESD, teachers' professionalism was challenged due to undesirable feedback from students [11,18]. When it comes to classroom teaching, teachers reflected difficulties in arousing students' learning interests due to the remoteness of the sustainable development topics [18]. Students generally perceived that sustainability was something irrelevant to their curriculum. Due to pressure to catching up with the syllabus, they did not place a high value on ESD [11,18]. Besides, students also felt powerless to create an impact, particularly when they could only be involved at a local scale or even unable to influence people around them to take action [18]. With an unfavourable learning environment, teachers could not anticipate further successful teaching outcomes, and hence, they chose not to participate in ESD [23–26].

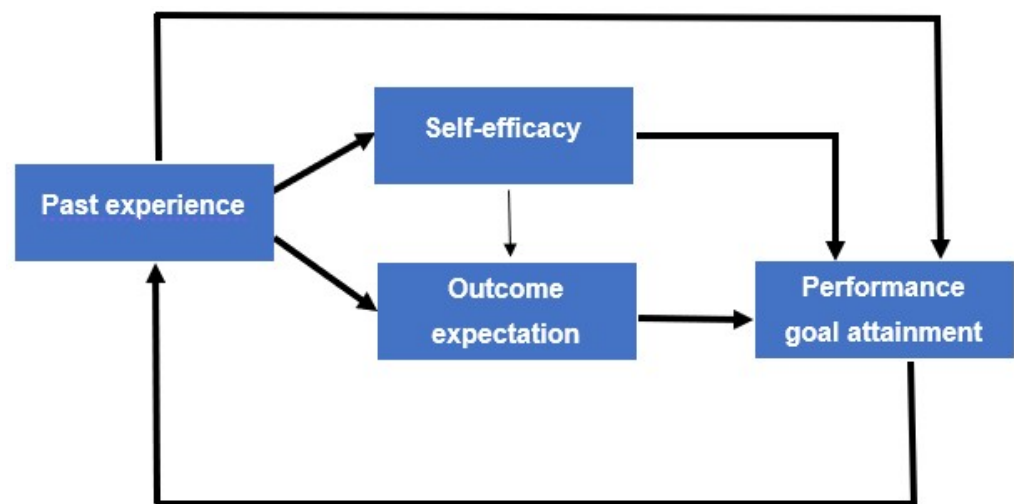
Fourth, reflected in the previous studies [10,12,31], another obstacle of ESD is that the schools were not aware of the sustainable development policies. Scholars [18,31] suggested that in ESD, a holistic school approach can allow students to acquire relevant knowledge and skills first, transform and behave in a certain way, and evaluate and justify their acts and positions through. Although previous studies [18,31] suggested that school support is a key to successful ESD, schools generally did not prioritise incorporating sustainable development or following the governmental action plans [11,12]. Some principals felt like they had to do so due to peer pressure or a boost of school reputation [12,41]. As a result, very few schools incorporated all SDGs in their curricula, while some of the schools focussed on some SDGs related to the environment or education, which is the "short-cut" of ESD [9].

Although previous studies [9–11,18] have made a contribution that K-12 teachers' lack of interest, confidence, knowledge and relevant pedagogies hampered them from implementing sustainable development in their teaching, they generally perceived individuals as passive respondents to the environment. Teachers' capabilities to create changes were neglected, and hence there was no further longitudinal investigation on how teachers can be motivated through taking actions to respond to the challenges [42,43]. By making effective decisions and generating positive teaching outcomes, teachers can develop interest and gain confidence to persist in ESD [44,45]. Some scholars [23–26] suggested that self-efficacy can be a useful indicator of career actions as it plays a pivotal role to determine an individual's willingness to persist in their tasks while facing difficulties. In ESD, teachers who have high self-efficacy can be more likely to expect similar successful performance in the future, hence making them more motivated to continue ESD. Therefore, further investigation can be done in examining holistically how teachers' self-efficacy develops in their decision-making process of implementing sustainable development in their teaching so as to identify the critical personal and contextual factors which favour the implementation of ESD in K-12 schools [23–26].

### 3. Theoretical Framework

The Social Cognitive Career Theory (SCCT) is chosen as the theoretical framework of this study as first, it can scaffold the interconnection between personal, social and cultural elements influencing teachers' decision on ESD; second, it is a career-oriented theory to look into teachers' sense-making process in relation to their motivation, expectations and teaching outcomes during their professional development [23–26]. Indicated in previous literature [9–11,18] that there were a myriad of factors leading teachers' reluctance in ESD, this study can understand how English teachers' motivations and decisions of incorporating SDGs in their teaching develop and persist by adopting SCCT as a theoretical framework [23–26].

The SCCT is a powerful theory to unfold the teachers' career trajectories leading to success in teaching within one's specialisation in relation to their self-efficacy as an influential factor of their actions and choices [46]. Adapted from Bandura's Social Cognitive Theory [43], SCCT is designed to examine career-related decisions by looking into how self-efficacy, outcome expectations and career performance form a triadic causality and regulates one's behaviours [23–26]. Figure 2 outlines the key constructs of the SCCT and their relationship.



**Figure 2.** The relationship of the key constructs of the Social Cognitive Career Theory.

Self-efficacy is a central component of the SCCT [47]. It is a set of beliefs how people assess their capabilities to take actions and put persistent effort amid obstacles [24,43]. Specifically, teachers' self-efficacy is a set of beliefs related to teachers' confidence, capability to consider a choice, plan and actions to accomplish some teaching-related tasks [48,49]. It influences an individual's motivation, outcome expectation and goal attainment. Self-efficacy can be achieved from how it is derived from: (a) self-experience, (b) vicarious learning, (c) verbal persuasion and (d) physiological and psychological states [42]. Self-experience refers to previous successful performance, whereby individuals are convinced by their abilities to bounce back from setbacks and attain the desired outcomes in the midst of challenges. Vicarious learning refers to the observation of successful models. By witnessing how other people succeed, it raises an individual's self-efficacy that they possess the same capabilities to achieve their goals. Verbal persuasion is an encouragement from others, whereby strengthening an individual's belief of possessing the abilities to master the assigned tasks in social occasions is done. Physiological and psychological states refer to the positive emotions and the emotional-triggered sensations in the body, whereby positive mood and good physical health influence positively on an individual's assessment of his/her abilities and thus enhance one's self-efficacy [42]. Generally, individuals who have higher self-efficacy tend to set higher goals, show resilience in facing obstacles, persist in their action and are more ready to take on challenging tasks [50]. By examining the development of English teachers' self-efficacy, this study is able to unfold the personal and contextual factors influencing their motivation, self-efficacy and the mental representation of their career decisions in ESD [24,43].

## 4. Methodology

### 4.1. Research Design

The current research is guided by two research questions: (1) How do English teachers describe their experiences of implementing SDGs into their teaching? and (2) Why do English teachers decide to implement SDGs into their teaching? To answer the research questions, a qualitative case study design was selected in order to examine English teach-



ers' motivations and decisions of implementing SDGs [51–54]. A qualitative case study is appropriate as this study intends to understand a specific issue of English teachers' self-efficacy in relation to implementing sustainable development in their teaching [52]. The school selected for the case study is the best to understand the issue due to a few reasons [52]. First, this school is the first school in the territory to map all the SDGs into their course units throughout their Secondary One to Six English curriculum. Second, the school is renowned for its effective green school policies; third, the school has a motto of developing students to become global citizens by emphasising their independent thinking skills and positive attitudes, which align with the missions of ESD. This setting can provide rich information to study how sustainable development can be implemented and how contextual variables can influence English teachers' self-efficacy.

Data from multi-sources were collected from September 2017 to June 2019 through in-depth semi-structured interviews and classroom observations of 10 English teachers in the school [51,54]. Before the case study began, the documents related to curriculum-planning, literature related to teachers' self-efficacy and ESD were studied [51,54,55]. These data gave the researcher a broader perspective on the existing challenges of implementing sustainable development in K-12 schools. It also provided an angle to examine whether the implementation of SDGs in English teaching in this case could overcome the existing challenges of ESD by investigating the development of teachers' self-efficacy throughout the implementation [51,54,55].

#### 4.2. Research Site

The research site is a co-educational government-aided secondary school in the north-eastern district in Hong Kong comprising students from the age of 12–19. Students in this school mainly come from a lower socio-economic or migrant background. At the time of the study, this school had 800 students and 60 teaching staff. Among them, there were 10 English teachers.

#### 4.3. Participants

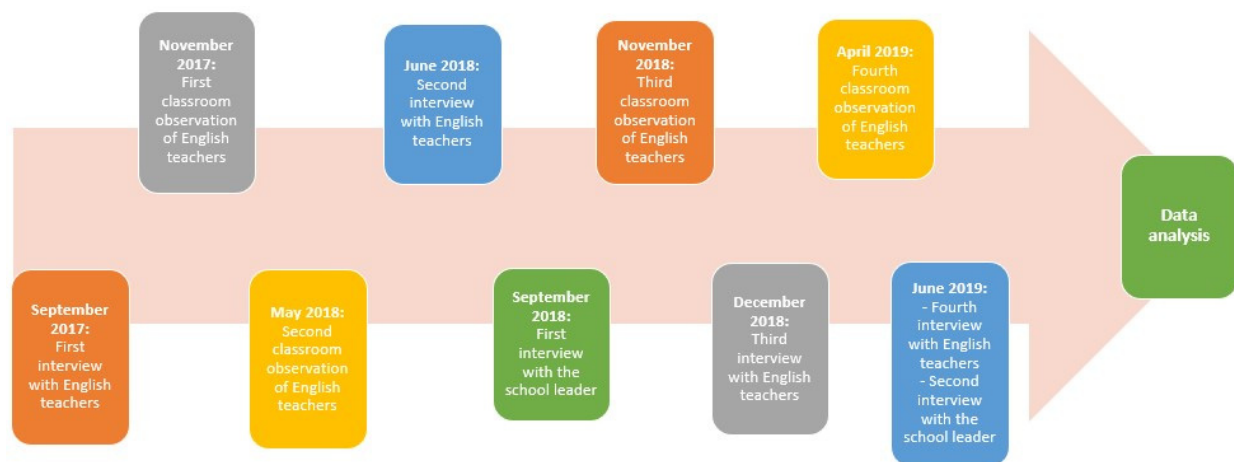
All 10 English teachers in the school, together with the principal, agreed to participate in the study. All of the participants are the registered and qualified teachers in Hong Kong. They were responsible to teach Secondary One to Secondary Six (equivalent to Year/Grade 7 to Year/Grade 12) English in the research site during the research period. The average age of the participants was 36.4 with a standard deviation of 10.8. Their detailed demography is listed in Table 1 to understand their background [56–63]. Since all participants are still in-service teachers, the researcher used pseudonyms to protect their identities and mask all the recognisable personal details [53,61,62]. Table 1 presents their demographic details.

#### 4.4. Data Collection

To gain insights into the teachers' efficacy, the researcher collected a variety of data from September 2017 to June 2019 to find support evidence from multiple sources [51]. Data sources included in-depth semi-structured interviews and classroom observations with field notes with the 10 English teachers, alongside semi-structured interviews with the school leader (i.e., the principal). Such multiple sources of data added trustworthiness and credibility to this study through triangulation [64–68]. The later section explains how different sources of data were collected in details. Meanwhile, Figure 3 summarises the timeline of the data collection process.

**Table 1.** Demography of the participants.

Name	Age	Gender	Nationality	Highest Education Qualification	Countries Previously Taught In	Previous Teaching Experiences	Years of Experience
Lisa	Mid-30s	F	The United Kingdom	Master of Arts in Linguistics	The United Kingdom, Hong Kong	High school, Primary school	Over 10 years
Ryan	Early-30s	M	Hong Kong	Master of Arts in Applied Linguistics	Hong Kong	High school	Over 10 years
Mary	Mid-50s	F	Hong Kong	Bachelor of Arts in English Education	Hong Kong, China	High school, Tertiary institute	Over 20 years
Emma	Early-20s	M	Hong Kong	Bachelor of Arts in English	Hong Kong	High school	2 years
Harry	Mid-20s	M	Hong Kong	Bachelor of Social Science in Resources Management	Hong Kong	High school	4 years
Joe	Mid-20s	M	Hong Kong	Master of Arts in Applied Linguistics	Hong Kong	High school	4 years
Ariel	Early 40s	M	Hong Kong	Bachelor of Arts in Education	Hong Kong, China	High school, Primary school	Over 10 years
Karen	Mid-30s	F	Hong Kong	Master of Arts in Applied Linguistics	Hong Kong, China	High school	8 years
Miranda	Mid-30s	F	Australia	Master of Arts in English Literature	Australia, Hong Kong, China	High school, University	8 years
George	Early 50s	M	Australia	Bachelor of Commerce	Australia, China, Thailand, Hong Kong	High school, Primary school	Over 10 years

**Figure 3.** Timeline of the data collection.

#### 4.4.1. Interviews

The primary data source was four in-depth one-on-one semi-structured interviews with 10 English teachers in September 2017, June 2018, December 2018 and June 2019 [69]. Based on the advice from the scholars [53,60,67], the researcher first developed a set of interview protocol and interview questions. Interview questions were developed with a reference to the SCCT constructs, such as outcome expectation and goal attainment [24,26]. Please see Appendix A for the individual interview questions for the teachers.

The first interview was to establish rapport and empathy with the participants. A positive relationship between the researcher and interviewees was established so as to prevent the interviewees from withholding some important personal experiences which

might impede the credibility of the collected data [53,60,70]. The first interview focussed on the English teachers' personal backgrounds, lived experiences, previous experiences in sustainable development and their beliefs towards English learning and sustainable development. The second to fourth interviews explored their teaching experiences, challenges and actions taken to attain their teaching goals. Teachers' self-efficacy was assessed based on how they planned, organised and executed the actions to accomplish their teaching goals while incorporating SDGs in their teaching [26,71]. These included how they attained the literacy goals such as vocabulary, reading, writing and speaking stated in the English curriculum, the interdisciplinary knowledge of sustainable development on issues such as poverty, life on land and under water and the generic skills which could be acquired in ESD, such as critical thinking skills and problem-solving skills [3,72]. As for teachers' motivation, it was assessed based on their perceived teaching capabilities, personal values and beliefs (e.g., work-life balance and belief on sustainable development) and social contribution (e.g., empowerment for students and attaining social equity), whereby their personal conditions and external contexts were embraced [73,74]. Thus, the second to fourth interviews provided data to explore the changes in English teachers' efficacy with respect to their personal life and school policies [53,60,69,70].

Two semi-structured interviews with the school leader (i.e., the principal), which lasted 32–41 min, were conducted in September 2018 and June 2019 to gather supplementary information to substantiate the data given by the teachers and shed light on how the school policy and school management's attitude interfered English teachers' efficacy in ESD [68,75]. Please see Appendix B for the individual interview questions for the school leader.

Since the participants' lived stories can contain private or confidential information, all individual interviews were hosted in a private meeting room at the school [69]. Setting the interviews in a familiar environment without third-part interruption allowed the participants to share their lived stories without stress and anxiety [60,69]. Each interview lasted from 48–71 min. All the interviews were recorded and later transcribed [61,62]. Each interview contributed to 75–91 pages of written transcripts, and the researcher collected more than 3300 pages of written transcripts filled with rich and in-depth sharing from 10 English teachers and a school leader in 42 interviews. The researcher later employed member-checking for the participants to read and approve the transcription before data analysis [61,62].

#### 4.4.2. Classroom Observation

Four classroom observations of the 10 English teachers were conducted in November 2017, May 2018, November 2018 and April 2019. The researcher observed and video-recorded each participant's 60-min English lessons. During the classroom observation, the researcher took the advice from scholars [53,76] to adopt both a wide and narrow perspectives to examine how the English teachers' teaching goals were attained. While adopting a wide perspective, the researcher focussed on the overall situation, whereby the lesson design, teaching quality, the richness of teaching contents, student engagement in activities, teacher–student relationship and the relationship between the teacher and student behaviours alongside the physical environment were scrutinised [76–78]. While adopting a narrow perspective, the researcher focussed on a single person or activity. For instance, while the researcher was focussing on the teachers, their enthusiasm for engaging their students in meaningful activities, clarity in delivery and body gestures were carefully watched. While focussing on students, the researcher paid attention to whether they understood the relevant concepts, acquired the relevant skills such as reading, speaking, critical thinking, expressed their thoughts clearly in an organised manner and reflected their learning [76–78]. Field notes were taken during the classroom observations, whereby the researcher noted down the physical maps of the settings, keywords of the teacher–student and student–student conversations and other relevant background information to describe the behaviours of teachers and students during the classroom observations so as to gain additional evidence of students' responses and their learning outcomes [68,75,76].



#### 4.4.3. Data Analysis

The data sources used in the analysis included 40 interviews with English teachers, two interviews with the school leader and field notes from 40 classroom observations. The interview data of the English teachers were used as the primary source with field notes of classroom observations and interview data of the school leader as additional supporting evidence [64,65,67,68].

First, the recorded interviews were transcribed. The researcher followed the scholars' suggestions [58,60,68,70] to start data analysis by reading the transcripts several times. For each round of the interviews transcribed, the researcher read through the transcripts to identify significant statements and quotes. The researcher repeated the same procedures with the new interviews and re-read the old ones to outline each participant's ideas' correlations. Such inductive and iterative processes allowed the researcher to move closer to the participants' actual meanings and gain the "gist" of the subject matter [60,68].

A general inductive approach was used to narrow down and reduce the large chunk of data into meaningful themes and subthemes based on the SCCT constructs [24,79]. Using the open-coding technique, the researcher generated 22 themes and 42 subthemes at the first level [51,53]. However, according to Merriam [53] and Yin [51], the number of themes and subthemes for standard reporting of findings should be less than 10. The researcher took the recommendations and applied the axial-coding technique for the second-level themes and subthemes [51,53]. After the axial coding, three themes and six subthemes were emerged for reporting.

### 5. Findings and Discussion

In a qualitative study, the researchers are recommended to describe what the participants experienced and how the experiences happened in relation to the setting and context [60,68]. Some qualitative researchers [80–84] advocated a combination of textual and structural reporting to reflect a holistic view of how claims are supported by the evidence [85,86]. The researcher took their suggestion to put the participants' textual descriptions of their teaching experience along with the analysis of the development of their self-efficacy in relation to the influential personal and contextual factors.

To answer the research questions, the researcher categorised the findings into three themes and six subthemes. Table 2 summarises the themes and subthemes of this study. For the summary of each participant's sharing, please see Appendix C.

**Table 2.** Themes and subthemes.

Themes and Subthemes		
5.1		Personal Beliefs
	5.1.1	Personal Commitment of SDGs
	5.1.2	Vicarious Experiences from Family Members
5.2		Attainment of Teaching Goals
	5.2.1	Developing Students' Critical Thinking Skills
	5.2.2	Expanding Students' Vocabulary
5.3		Supportive School Management
	5.3.1	Clear School Policy
	5.3.2	Collaboration across and within Departments

#### 5.1. Personal Beliefs

Previous studies [9,11,29,35] showed that teachers were more reluctant to ESD due to their personal beliefs and values. Although this study also identified a strong correlation between teachers' beliefs and ESD, the findings of this study showed that teachers' personal belief could influence such implementation positively, which differed from the previous studies [9,11,29,35]. Such difference stems from language teachers' personal commitment towards SDGs and their vicarious experiences of previous successful cases. These beliefs

then boost their self-efficacy in postulating successful teaching outcomes, and hence they are more motivated in implementing SDGs into their teaching [26,87,88].

#### 5.1.1. Personal Commitment of SDGs

This study showed a positive relationship between teachers' personal commitment towards SDGs and their self-efficacy, which aligned with the SCCT hypothesis [26,87,88]. Teachers who have a strong personal belief that sustainable development is a "whole-world business" have higher motivation to bring SDGs into their curriculum. One said,

*"I joined the Scouts when I was young . . . I understand we have to preserve our nature. We have to be aware of Life on Land and Life below Water [SDGs 14 and 15] . . . We have to aware of climate change [SDG 13] . . . I want to bring this message to my students in the new [English] curriculum . . . We work together to create a better world... I believe we can make it happen."* (George)

Unlike the previous studies [9,11,29,35] showing that teachers' negative personal values towards education for sustainable development, this study showed that language teachers' values towards sustainable development were generally positive due to their personal experiences. Although the participants may not be aware of this, the results of their actions and events in the past influenced their cognitions about sustainable development, whereby reflected in their beliefs and decisions of implementing SDGs in their teaching [24,26]. One of the participants, Mary said,

*"I was grown up in Shunde [a district in Guangdong province in China] . . . a land of fish and rice. My mom always told me to be grateful for the gifts from Mother Nature. Now the village is no longer there. The fish ponds, the rice paddies . . . changed to factories and buildings . . . Modernisation is inevitable but can we do something to strike a balance between economic development and environmental protection? I hope my students can think over that. After all, that's their future."* (Mary)

Early childhood is a golden time to embark a lifelong learning for sustainability, whereby it demonstrates the greatest ability to learn and develop a socio-environmental resilience, a care for living and non-living things and a respect for the environment at their later stage of life [89,90]. This study reflected that teachers who have stronger personal commitment towards implementing SDGs into their teaching are based on their personal belief developed when they were young. This affirmed with the SCCT hypothesis that the language teachers' past experience can be a positive source of their self-efficacy to make them have stronger interest and greater resilience to enter or persist in ESD [24,26]. When language teachers can actualise their personal belief in their teaching, they are more motivated to incorporate SDGs in their English classrooms [91,92]. For example, one of the participants said,

*"I attended the United Nations conference in August [August 2017]. There I met some scientists and human right activists worked so hard to bring gender equality to women, even they were men or fashion models . . . I saw scientists tried to install portable solar panels in remote villages in Africa. That impressed me . . . I know many of my students may not have to join these kinds of conference, I hope through sharing my experiences, they know it's One World One Dream."* (Miranda)

These findings aligned with the observations in classrooms. When Miranda shared her experiences at the UN conference, her tone of delivery and body gestures showed enthusiasm and urgency in delivering such a message. From the findings, it can be seen that the formation of teachers' personal belief stemmed from their previous experience of joining activities related to sustainable development, which is before their commencement of teaching SDGs in their English classrooms. It affirms the proposition of previous studies [93–95] that factors influencing teachers' self-efficacy can extend beyond the time before their teaching. Reflected in the teachers' positive affections and confidence, teachers with stronger personal beliefs on sustainable development have a positive expectation of the successful

teaching outcomes of empowering students to become responsible global citizens [26,87,88]. As a result, they are more motivated to execute an SDG English curriculum.

#### 5.1.2. Vicarious Experiences from Family Members

Personal belief in incorporating SDGs in teaching is not just confined to teachers' personal first-hand exposure to sustainability. It can be related to their personal understanding by observation [49,96]. In this study, teachers observed how their family members attained sound understanding of sustainable development and perceived that as a successful learning experience. Such cases shaped their belief that they could obtain similar success while implementing SDGs in their English teaching. One said,

*"My son did a school project on marine life. He shared with me what is sustainable fisheries . . . I asked him where he got the information. He said that's from infographics from the UN website. He's just nine years old. I was really impressed . . . I started thinking whether my students could do that after learning [SDGs]." (Ariel)*

When the researcher observed Ariel's lesson, she also shared about what her son was learning at home while expressing her expectation to students. It affirmed the SCCT hypothesis that vicarious experience can be the additional source of teachers' self-efficacy to boost their career commitment [49,97,98]. Similar views can be seen among the other five participants. One participant, Mary, said,

*"My daughter asked me to have a look at her IES [Independent Enquiry Study] project. The topic is about sub-divided flats in Hong Kong. I thought she would just investigate poverty in Hong Kong. I was surprised that she mentioned that there were billions of people in the world not having any social protection. That's thinking big from a global perspective. My senior [Secondary Four to Six] students have to do IES too. I hope that my students can look [at the issues] from local to global level." (Mary)*

According to SCCT, this study affirmed that English teachers' self-efficacy on implementing SDGs is boosted by positive vicarious experiences [26,87,88]. Teachers are more confident and thus, more likely to postulate positive teaching outcomes with a stronger self-efficacy through vicarious experiences. These serve as a driving force for teachers in incorporating SDGs in their teaching [26,99].

### 5.2. Attainment of Teaching Goals

Previous studies [9,12] showed that language teachers felt a minimal correlation between language acquisition and sustainable development. Unlike the previous studies [9,12], this study showed that language teacher can be aware of the positive impact of implementing SDGs to language learning. The participants agreed that the generic skills and language skills can be better attained through the implementing of SDGs in English curriculum. Such awareness can equip them with relevant pedagogies to attain their teaching goals and thus boost their motivation and confidence in carrying out future teaching with SDGs [26,87,88].

#### 5.2.1. Developing Students' Critical Thinking

Critical thinking is the major skill set needed in the English curriculum in Hong Kong [72]. It is also an important life skill globally which involves how students can interpret and evaluate concepts and information with justifiable reasons and sufficient evidence [2,3,100,101]. In this study, teachers attained their teaching goal of developing students' critical thinking. Such successful experiences boosted English teachers' job satisfaction. One said,

*"Chinese students used to be shy to express their opinions . . . Now with the more discussion [on different SDGs], students are more used to give evidence and voice out their views. For example, in discussing effective measures to promote gender equality, while one student mentioned raising awareness on child marriage, another student could raise concerns on whether other vulnerable groups were worth more attention by pointing*

*out the number of women suffering from violence as evidence. I couldn't imagine my students can be that smart . . . I'm proud of their achievement."* (Harry)

Using higher cognitive and critical thinking skills is a crucial indicator of successful language learning [102–106]. In language learning, critical thinking takes a pivotal role for learners to attain the skills and proficiencies for proper assessment of expressions and exercise their proficiencies in various contexts through a mastery of professional and colloquial expressions [107]. Six other participants also agreed that there was an improvement of students' critical thinking skills after implementing SDGs in the English curriculum. One of the participants, Ariel shared a similar view. She said,

*"When students were discussing how to eradicate hunger or famine [SDG#2], they were not confined by their own perspective that they were living in a developed country. They can consider various perspectives such as the unequal access of land could bring a disadvantage to the people in developing countries. I'm glad that they can examine the issue critically and adopt multi-perspective thinking."* (Ariel)

In the classroom observation, the researcher recognised that Ariel frequently used provocative and inferential questions to develop and better her students' critical thinking skills in reading and writing. While engaging students in a closer examination of the texts through constant questioning, language teachers attained their teaching goals and felt contented [24,26,107]. Such contention serves an extra source of self-efficacy to motivate them to continue ESD. Such view was prevalent among the participants in this study. Another participant said,

*"I was really amazed that he [a student] can point out such a solid reason to support his idea. English is a communicative language. When discussing ways to help small business survive, he was able to point out financial supports from local governments, particularly in developing countries."* (Joe)

The researcher identified similar evidence in Joe's lessons. In a lesson on sustainable consumption (SGD 12), a student pointed out that the continuous growth of electronic waste as evidence to support a need for responsible consumption. From the findings, this study showed that implementing SDGs in English lessons creates a favourable learning environment for students to discuss some critical global issues and develop their critical thinking skills. According to the SCCT, such successful experiences were reflected in their positive affections and confidence and, in turn, brought a surge in teachers' job satisfaction due to the fulfilment of their teaching goals [26,87,88]. As a result, English teachers are more willing to continue incorporating SDGs in their teaching in future [26,87,88].

### 5.2.2. Expanding Students' Vocabulary

Effective communication is another important indicator of successful language education, and vocabulary building is perceived as a cornerstone of English language learning [102,104,108]. Participants in this study reflected that having SDGs in the course content could help students to expand their vocabulary, and such fulfilment of teaching goals fostered their professional identity and made them more motivated with incorporating SDGs in their teaching [109,110]. One said,

*"Students don't use English much in their daily life . . . Their parents also don't speak English. As a new teacher, I just knew dictation and vocabulary worksheets . . . but they [students] said they couldn't really remember those words. It's frustrating . . . Now with the real-life scenarios, they know when and how to use those words . . . I feel like I'm not a newbie anymore."* (Emma)

From the findings, English teachers developed their professional identity by gaining confidence in applying relevant teaching pedagogies to become didactical experts of their subject [109,111]. Generally, teachers felt positive towards the attainment of their teaching goals due to the implementation of the SDGs into their teaching. Another eight other participants shared similar views. One of the participants, Karen said,

*“Teaching English is challenging. Students felt that spelling and learning vocabulary are boring . . . Some of them don’t know phonics . . . It’s really hard. While teaching gender equality [SDG#5], I showed them videos of Emma Watson and Malala . . . We read an excerpt from Aung San Suu Kyi’s Freedom from Fear. That’s the first time I saw them search the meaning of the words from the dictionary. Somehow we are also in a patriarchal society. Somehow we are also facing social injustice. Perhaps they can connect with their powerlessness and their plight.” (Karen)*

Vocabulary acquisition is always perceived as the central part of language learning, whereby an extensive vocabulary bank is essential for a successful mastery [112]. For English as a Second Language (ESL) or English as a Foreign Language (EFL) learners, learning English can be challenging without an in-depth sense of when and how to use the appropriate words, phrases and collaboration. They often struggle with a lack of vocabulary to express their thoughts, thereby hampering their motivation of learning [108,112]. In this study, students’ vocabulary skill is developed as they have developed motivation and a need to express their thoughts and the vocabulary they learnt was contextualised [108,112]. Such contextualisation is based on the students’ empathetic understanding of the sustainable development issues through a reflection of their personal circumstances and the global phenomenon. Unlike learning receptive vocabulary, which students are unable to reproduce, this study showed that learning vocabulary through SDGs allow students to recall and reuse the words through elicitation and personalisation, thereby attaining the teaching goals of the English curriculum [24,26]. One of the participants, Lisa, said,

*“A competent learner should be able to discuss a variety of topics. There [SDGs] are topics about sustainable cities, poverty . . . They [Students] need appropriate language to talk about these topics . . . They did not have adequate words to express themselves. Now they have the relevant concepts and terms to discuss the pros and cons of the proposed solutions . . . That means it [incorporating SDG] is successful . . . We have to continue to equip them with relevant vocabulary so that they can communicate their views effectively.” (Lisa)*

During the classroom observation, the researcher listened to the discussion of Lisa’s students on urban revitalisation. Aligning with Lisa’s view, apart from some common terms like “pollution” and “population growth,” students were able to use more concise and sophisticated phrases like ‘upgrading slums’ “access to public transport” and “high-capacity transport” to illustrate their opinions on urban planning. Such observation aligned with the findings in the interviews that teachers constructed a positive professional identity through the acquisition and mastery of practical knowledge [110,113]. According to the SCCT, English teachers’ positive professional identity is built due to a boost of confidence and job satisfaction in adopting effective pedagogies in their classrooms, particularly on using SDGs to facilitate classroom discussion to create a favourable learning environment [26,87,88]. Such positive teaching experiences create their self-affirming beliefs that SDGs are effective means to attain their teaching goals [26,87,88].

### 5.3. Supportive School Management

Previous studies [10–12,31,41] showed that a lack of school management support could negatively influence teachers’ decisions of ESD. Meanwhile, school leadership can exert a strong influence on teachers’ intrinsic and extrinsic motivations [114]. In this study, the findings reflected that school management support could boost teachers’ self-efficacy by giving goal-relevant supports, such as giving clear direction on school policies and endorsing effective work allocation and collaboration strategies. These strategies can boost the English teachers’ confidence and work efficiency in implementing SDGs in their lessons. The accomplishment of the work goals yield positive affection among English teachers to foster their persistence in ESD [26,87].



### 5.3.1. Clear School Policy

Unlike previous studies [10–12] suggesting that the school leaders were reluctant and lack of awareness to ESD, this study showed that school policies, which school leaders devised, could be the extrinsic motivation for the English teachers to incorporate SDGs in their teaching. One said,

*“All subjects have to do it [Education for Sustainable Development]. We can’t avoid it... English is a core subject . . . People from other schools thought we are too ‘new’ or ‘innovative’... If we follow the school policies, we don’t have to be afraid that we go wrong.” (Mary)*

From the findings, although such extrinsic motivation is a controlled one directing teachers to behave in line with the school policy, it provides them with a sense of security to continue with incorporating SDGs into their English teaching [20,115]. All participants in this study realised that ESD is the school policy. Such findings were affirmed in the school leader’s interview:

*“Our school is a green school. We have to demonstrate the ability to implement sustainable development not just in our co-curricular activities, but also in our curricula . . . We announced the areas of concern in the first staff meeting... Everyone has to follow.” (School leader)*

The finding showed that that the school leader who has a clear vision can act as a change-maker to create a culture to pave the way for ESD [116,117]. Previous studies [12,41] also showed that teachers were not too motivated to follow the school policy due to unclear school policies. This study, however, showed that all participants are willing to follow the school policies due to a clear vision presented. One of the participants said,

*“When I was designing the scheme of work, I had to think about how the topics [course contents of the English curriculum] aligned with the areas of concern . . . That’s the school culture. Not just the English Department, all other departments are doing the same. We’re on the same boat.” (Karen)*

SCCT hypothesis gives a plausible explanation of such difference. According to the SCCT, background environmental influences can mediate teachers’ self-efficacy [26,87,88]. Clear school policies can create a more favourable environment for teachers to set and execute their teaching goals confidently [33,114]. In such an environment, teachers believe that they are on the right track and expect that they can attain the goals set by the school and in turn, they are more willing to incorporating SDGs into the English curriculum.

### 5.3.2. Collaboration across and within Departments

Previous studies [9,11,39] concluded that teachers felt frustrated due to a blurred boundary between the collaboration of subjects, and this made them not execute education for sustainable development. This study showed that with school management’s support to set clear guidelines on work division and duties, teachers’ workload could be alleviated and obtain higher work efficiency. Such accomplishment of job demands can boost their self-efficacy, and teachers are more likely to attain happiness [118,119]. One said,

*“Before I was confused with the appropriate course materials. I didn’t do science since Form Three [Secondary Three] . . . Those department heads got a meeting... Now the work is clearly defined. The teachers from other key learning areas selected the materials. They passed to us to develop reading questions and relevant writing topics.” (Ariel)*

Previous literature [9–12] also indicated that teachers were not confident to implement sustainable development into their teaching due to a lack of knowledge. This study showed that through cross-discipline collaboration endorsed by the school management, English teachers received goal-relevant supports to overcome these challenges [24,26,88]. They can pay more attention to pedagogical procedures and the actual implementation in the classroom, making them perceive their teaching more “manageable.” [24,120]. This view can be reflected in all the other participants. One of them said,

*“Now we don’t need much time to find the appropriate materials . . . We have two periods fewer than other teachers for lesson planning... In the meeting, we looked into each others’ timetable . . . and decided who and when to complete the tasks [developing new teaching materials]. Now I don’t have to bring work home that often. I can go jogging with my wife every Wednesday after work.” (Ryan)*

Affirmed with the SCCT hypothesis, the better management of life, time and teaching boost English teachers’ well-being through the attainment of both their personal and work goals [24,26,88]. In this study, it can be seen that the school management who has a clear vision of providing more administrative supports can alleviate English teachers’ workload of implementing a new curriculum to boost their well-being. This is affirmed in the school leader’s interview:

*“One of the SDGs is good health and well-being [SDG3]. Teachers have to keep with good mental health too. They [English teachers] should have fewer lessons. Preparing teaching materials is also a part of their teaching loads.” (school leader)*

From the findings, school management support positively influences teachers’ perception of manageability in terms of pedagogical consideration and time. Teachers can attain greater personal and job satisfaction and thus reinforces their positive outcome expectations on implementing SDGs into English curriculum and thus more likely to continue with ESD in future [24,26,43,49,88].

## 6. Limitations and Future Research Direction

Although this longitudinal study identified the factors motivating English teachers to implement sustainable development in their teacher by examining their self-efficacy, it shows several limitations.

First, this case study focussed on one school, thereby the findings of the study have to be used cautiously with a consideration of this study as a pilot one [5,7]. It is true that ESD implementation is often limited by external or institutional obstacles, such as traditional education structure, a packed curriculum and a conservative spirit within an institute [121,122]. This study still attempted to shed light that a favourable school setting can positively influence teachers’ motivation while implementing ESD. Further research can be done to expand to schools in different territories to examine how the school policies can be impactful to ESD.

Second, this study also shows a limitation on its few participants, which has reduced the generalisability of this study [123]. Nevertheless, it captured the detailed information such as emotions, behaviours and motivations of English teachers in implementing ESD in depth. It offers an opportunity to reflect on the assumptions of the previous studies that language teachers were generally demotivated in ESD and provided insights on how and why they could be motivated [3,10,11,14,123]. Thus, further research can be expanded to a larger scale involving a greater population [84,124]. For instance, multiple case studies can be done internationally to shed light on the development of teachers’ motivation within a different social and cultural context [23,88,125].

Third, this study shows a limitation of a lack of quantitative data. Although this qualitative case study aims at scaffolding English teachers’ mental representation of their decision-making of implementing SDGs into their teaching, a lack of quantitative data can limit its generalisability [123]. Further research can be done in mixed methods by including surveys to collect students’ opinions on ESD, whereby the researcher(s) can take different perspectives into consideration [5].

Fourth, this study also shows another limitation as it focused on the English teachers’ self-efficacy and motivation within their ESD experiences. Since sustainability comprises well-being, environment, social equity and prosperity [1], further studies can be done on other previously overlooked disciplines, such as Physical Education, History and Business Studies.

Fifth, this study focussed on teachers' motivation for ESD. Nevertheless, some problems identified in the previous studies [11,18], such as students' lack of interest and engagement in ESD, were not fully resolved. Further research can be done specifically to look into teachers' pedagogies and classroom management strategies to boost students' motivation in ESD [91,92].

Sixth, this study focussed on the teaching experiences of English teachers. Although indicators of transdisciplinary skills such as systems thinking, critical thinking and perspective-taking could be seen from English teachers' sharing of their students' performance, further research can still be done on investigating the importance of transdisciplinarity, the epistemic change and shift of worldview among teachers on implementing ESD in language teaching [126,127].

Seventh, this study was conducted before the COVID-19 pandemic. The impact of the pandemic has brought drastic changes to K-12 education [128–131]. Further studies can be done on the possible changes in teachers' perception and motivation for ESD due to the impact of the pandemic.

## 7. Conclusions

Despite the limitations, this study is unique in probing into English teachers' experience of incorporating SDGs in their teaching with a Social Cognitive Career Theory (SCCT) lens. It is a novel longitudinal study in the ESD field to examine how ESD is actualised in a language classroom by examining how teachers' self-efficacy develops throughout implementation. It also provides a holistic view of how English teachers' motivations develop in relation to personal and contextual factors and looks into their actions to attain their teaching goals [23–26]. This research's findings can provide insights for institutes providing professional development courses, school management and educators to execute ESD effectively at K-12 schools to promote sustainable development in language subjects.

To conclude, this study has contributed to the current ESD research in three aspects. First, the recent COVID-19 pandemic has disrupted the SDG progress drastically [132]. Endeavouring efforts to empower the current and future generation is a key to achieve the SDGs by 2030 [3]. The findings of this study can provide insights for the educators to their teaching goal attainment and work satisfaction by empowering students with subject-related skills and values as global citizens. This study also provides clear methodology allowing further research on greater and wider groups of participants, thereby contributing to the educational applications of the current ESD studies. For instance, further research can be done on language or other subject teachers internationally to examine how their motivation of ESD develop with various educational settings. Second, this study is one of the very few studies on language teachers' motivation for ESD. It reflected on the educational presumption of language teachers' lack of interest and motivation in ESD implementation. It has identified factors like personal beliefs, attainment of teaching goals and supportive school management, which can positively influence language teachers' motivation to implement SDGs into their teaching. Such insight can be useful for school management and policy-makers to develop strategies to motivate teachers who generally feel sustainable development is beyond their disciplines and foster greater collaboration within the school [2,3,31,36–38]. Third, this study reflected that teachers' personal beliefs can positively influence their decision in ESD. This can provide insight for educational institutes and universities to develop appropriate professional development courses and training programmes for both in-service and pre-service teachers to obtain both first-hand and second-hand exposure to sustainable development. With these contributions, this study brings a further implication on the possibility of transformation on not only teachers' motivation but also the school culture to develop a holistic and transdisciplinary school plan or curriculum reorientation for ESD implementation.

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**Conflicts of Interest:** The author declares no conflict of interest.

**Disclaimer:** This study's generalisability is limited due to a small number of participants in a single research site. Although this study provided a clear and rigorous research design and methods, caution is strongly advised while generalising the results. A need for further research using mixed methods or involving a larger group of participants is also advised to enhance future research's creditability.

## Appendix A. Individual Interview Sessions Questions

### Appendix A.1. Session One

1. Please tell me a bit about yourself
2. (Please include background information about the country of your origin, family, educational qualification, etc.)
3. What is your belief in English teaching and learning?
4. How would you describe sustainable development?
5. Do you have previous experience on sustainable development? Can you share more?
6. Why do you want to teach sustainable development in your English lessons?
7. Why would SDGs become a tool for your teaching? Why not other tools?
8. How would you describe your motivations and reasons for implementing SDGs in your teaching?
9. Have you ever considered implementing sustainable development in your teaching before? If so, may you please tell me more?
10. As an English teacher, how would expect implementing SDGs change your teaching experience?
11. Any follow-up questions.

### Appendix A.2. Session Two

1. How would you describe your present experience of teaching SDGs in your English lessons?
2. What were the most positive factors enabling you to conduct your SDG-oriented teaching successfully in the classroom?
3. Have you faced any obstacles? How did you overcome that?
4. How did you keep yourself motivated in incorporating SDGs in your teaching?
5. Have you attained the expected teaching outcomes? How and why?
6. What kind of support have you received from your colleagues and the school? How effective were they?
7. What are your suggestions for improvement for the betterment of incorporating SDGs into the English teaching?
8. What kind of support you want to receive to make your teaching more successful?
9. Any follow-up questions.

### Appendix A.3. Session Three

1. Compared with the experience in the previous school year, how would you describe your present experience of teaching SDGs in your English lessons?
2. Are there any refinement in the English curriculum? If yes, please tell me more.
3. Have you overcome the obstacles you have previously identified? How?
4. Have you received further support from the school or your colleagues? How effective were they?
5. How did you describe the collaborative culture in this SDG English curriculum implementation?

6. What made you continue your SDG teaching in your English lesson?
7. Do you feel rewarding or satisfying while having your SDG teaching? Why/Why not?
8. Any follow-up questions.

#### *Appendix A.4. Session Four*

1. Did teaching SDGs make a change in your lifestyle?
2. Would implementing SDGs in the English teaching positive or negative impact and influence your teaching experience? How and why?
3. Do you think you are more confident in implementing sustainable development in your lessons?
4. Would implementing SDGs in the English teaching positive or negative impact and influence your decision for continuing ESD in future? How and why?
5. Would implementing SDGs in the curriculum positively or negative impact and influence personal experience? How and why?
6. Overall, do you think SDGs as a useful tool for teaching and learning English? Why/why not?
7. Overall, do you think the goals of ESD attained while incorporating SDGs in the English teaching?
8. Overall, were there any educational advantages or disadvantages of implementing such measure?
9. Any follow-up questions

### **Appendix B. Individual Interview Questions for the School Leader**

#### *Appendix B.1. Session One*

1. Please tell me a bit about yourself
2. Please include background information about the country of your origin, family, educational qualification, etc.
3. How would you describe sustainable development?
4. How would you describe implementing SGDs in English curriculum?
5. How did incorporating SDGs into English teaching align with the school policy?
6. How did you perceive the obstacles and outcomes of the new curriculum? If so, may you please tell me more?
7. Did the school provide any initial support to the English teachers? If yes, would you tell me more?
8. Any follow-up questions.

#### *Appendix B.2. Session Two*

1. How would you describe the results of implementing an SDG-oriented English curriculum?
2. Did the school provide further support to teachers on incorporating SDGs in the English curriculum? If yes, would you tell me more?
3. How do you think the supports impact on English teachers' experiences?
4. Overall, do you think the goals of ESD attained while incorporating SDGs in the English teaching?
5. Overall, were there any educational advantages or disadvantages of implementing such measure?
6. Any follow-up questions.

### **Appendix C. Summary of Each Participants' Sharing**

#### *Appendix C.1. Lisa*

Lisa was born and received her education in the United Kingdom. Lisa believed that English is a tool for expression, whereby learners should be able to discuss various topic with the right lexical choices. Lisa was also pleased with students' improvement on their



clarity of expression and precision of word choices after the implementing of SDGs into her teaching.

#### *Appendix C.2. Ryan*

Ryan was born and received his education in Hong Kong. Ryan was first frustrated because of the heavy workload of curriculum reorientation and sourcing the appropriate materials. After the school management and head teachers worked on a clearer role division, he felt more relieved as he could also have the opportunity to schedule the tasks according to his availability. He could later enjoy a work-life balance and attained satisfaction upon the implementation.

#### *Appendix C.3. Mary*

Mary grew up in China and received her education in Hong Kong. She is upset by the modernisation and human destruction to the nature. She hoped that through implementing sustainable development in her English lessons, she could raise students' awareness on having sustainable cities. Mary had a daughter who was 16 years of age. She was impressed by her daughter's global perspective while complete her research project. She hoped her students could also adopt such global perspective. Moreover, she understood that ESD is a school policy and she felt secure to work align with the school policy.

#### *Appendix C.4. Emma*

Emma was born and received her education in Hong Kong. As a beginning teacher, she was concerned with her teaching performances and students' learning outcomes. She felt challenging in teaching vocabulary, whereby students generally lacked interest, skills or motivation to widen their lexical choices. With the implementation of the SDGs into her English teaching, the learning of vocabulary was contextualised, making her more confident in teaching as the teaching goals were attained.

#### *Appendix C.5. Harry*

Harry was born and received his education in Hong Kong. Harry felt that implementing SDGs in his teaching could bring a more fruitful discussion of the sustainable development topics, whereby students could give evidence to support their arguments, voice out their own opinions and refute the other students' opinions with sound reasons and solid evidence. He was pleased with students' achievement.

#### *Appendix C.6. Joe*

Joe was born and received his education in Hong Kong. Joe believed that English is a communicative language, whereby students had to use various ways to ensure that they could communicate accurately and effectively. He was happy that his students were able to give evidence to support their arguments after implementing SDGs into his teaching.

#### *Appendix C.7. Ariel*

Ariel was born and received his education in Hong Kong. She had a son who was 9 years of age. Her son's research skills in a school sustainable development project impressed her and made her feel she could equip her students in similar ways. Ariel first felt confused and unconfident while implementing SDGs into her teaching as she did not have adequate scientific knowledge. With the help from teachers from other Key Learning Areas, she received support and she could focus on developing the activities to equip students with the relevant language skills. Ariel felt implementing SDGs in her teaching rewarding as it could equip students with critical thinking skills, whereby they could transcend from their perspective and examine the issues from multiple perspectives.

### Appendix C.8. Karen

Karen was born and received her education in Hong Kong. Karen was struggling with teaching vocabulary to students due to their lack of knowledge of phonics. She felt that implementing SDGs in her English teaching can offer students a context where they are familiar with, thereby facilitate their learning. She mentioned that while implementing SDGs into the curriculum, she had to take the school's areas of concern into consideration.

### Appendix C.9. Miranda

Miranda was born and received her education in Australia. Her education background made her become very concerned with social equity and justice. She attended a United Nations conference and was impressed by the attendees' endeavour. She wanted to share such experience to students. United effort can bring the world together.

### Appendix C.10. George

George was born and received his education in Australia. He joined scouts when he was young, and this inspired him to bring the message of environmental protection and climate change to students. Particularly, he would like his students to be aware of human impact on wild life. He believed that joint effort could create a better world, and he would like to bring such message to his students.

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