12 Learning and Teaching Practices Promoting Education for Sustainable Development: Case Studies from Social Studies and Language Education, University of Botswana

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12.1 Introduction

This chapter explores the types of pedagogical approaches and assessment practices in teaching and learning that are more likely to promote education for sustainable development (ESD) in social studies and language education courses at undergraduate level at the University of Botswana. ESD is credited for promoting learning practices that facilitate active engagement and social interaction in higher education (Armstrong 2011). Kevany (2007) and the United Nations Educational, Scientific and Cultural Organization, UNESCO (2005) aver that by its nature, ESD seeks to develop citizens who have knowledge, skills, and values that support sustainable behaviour. The idea is to prepare reflective and flexible learners to meet the social, environmental, and economic challenges. This process requires the reconceptualization of how and what learners should learn (UNESCO 2005). It also resonates with issues of identity and marginality. According to Armstrong (2011) social interaction requires learners to make personal reflections and tackle real-life problems as they interact amongst themselves and the world they live in.

Improved educational quality and lifelong learning opportunities are critical for the twenty-first century knowledge-based economy. Kang and Xu (2018: 339) contend that:

> …higher education is not only an integral part of sustainable development, but also a key enabler for it. Universities, with their social functions of creation and dissemination of knowledge and their unique position within society, have a critical role to play in the achievement of the Sustainable Development Goals.

Specifically, higher education institutions can help improve the quality of learning and teaching. Higher education has a unique role in helping to achieve sustainable development goals (SDGs) in that it is critical for equipping learners with requisite knowledge and skills needed for implementing the goals (Blessinger et al. 2018).

ESD is credited for promoting learning practices which facilitate active engagement and social interaction in higher education (Armstrong 2011). UNESCO (2005: 9) proclaims that there are five elements of ESD: (1) education that allows learners to acquire the skills, capacities, values, and knowledge required to ensure sustainable development; (2) education dispensed at all levels and in all social contexts (family,

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school, workplace, community); (3) education that fosters responsible citizens and promotes democracy by allowing individuals and communities to enjoy their rights and fulfil their responsibilities; (4) education based on the principle of lifelong learning; and (5) education that fosters the individual's balanced development. This chapter adopts the UNESCO definition of ESD:

> Education for Sustainable Development means including key sustainable development issues into teaching and learning; for example, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. It also requires participatory teaching and learning methods that motivate and empower learners to change their behaviour and take action for sustainable development. Education for Sustainable Development consequently promotes competencies like critical thinking, imagining future scenarios and making decisions in a collaborative way (UNESCO 2014).

According to this definition, effective learning and teaching under ESD requires strong linkages between content and pedagogy approaches. This definition is applicable to teacher education courses as it encompasses both content and pedagogy. In addition, the chapter draws from Longhurst (2014) who defines education for sustainable development as "the process of equipping students with the knowledge and understanding, skills and attributes needed to work and live in a way that safeguards their environmental, social and economic well-being, both in the present and for future generations". This definition outlines the learning outcomes students need to acquire in order to perform according to demands of sustainable development in the world of work and in society.

Although secondary school teachers are expected to infuse global issues in their respective subjects at the secondary school level, many of them are unable to do so. A common reason for this inability is that teachers lack the knowledge and skills to effectively integrate issues that are pertinent to sustainable development in their classroom settings. An evaluation study conducted to review the senior secondary school curriculum in Botswana revealed that some teachers infused emerging issues in their teaching subjects while others decried lack of knowledge on how to infuse them (Ministry of Education & Skills Development 2009). Generally, teachers felt that there were subjects in which infusion was easier but difficult in others. The 1993 Commission on Education recommended that in order to achieve the goals of the Junior Certificate curriculum, "compartmentalization of subjects should be avoided and every effort should be made to establish linkages between the subjects in a holistic way" (Republic of Botswana 1993: 155–156). At the time, the purposes of junior secondary education were; "firstly, to provide the knowledge and skills upon which further education and training can be built; and, secondly, to provide the competencies and attitudes required for adult life and the world of work" (Ibid: 155). It is evident from these objectives that the Botswana government has long embraced education for sustainable development. Failure by educators to embed ESD into their subjects and disciplines could be due to lack of being capacitated to do so by the then Ministry of Education. This situation is not unique to Botswana as studies conducted in some developed countries also show that ESD is not incorporated in many subjects in higher education. A study carried out at the University of British Columbia in Canada, Moore (2005) revealed that the discipline-focused organisational structure of the university was a barrier to implementing sustainability initiatives. In a study commissioned by the Higher Education Academy in the United Kingdom, Dawe et al. (2005) identified four major barriers to the successful embedding of ESD into many of the subject disciplines in higher education. These were: overcrowded curriculum, perceived irrelevance by academic staff, limited staff awareness and expertise, and limited institutional drive and commitment.

To overcome barriers, Moore (2005) recommends that higher education should put more emphasis on transdisciplinary research and teaching. In response to those who perceive ESD as overcrowding the curriculum, Moore cautions that "sustainability education is transdisciplinary in nature and should not be thought of as a new subject or discipline" Moore further recommends that

"educators should provide collaborative working spaces for learners where they could exchange ideas, feelings and experiences" (Ibid: 551–552).

It is against the foregoing discussion that this chapter explores the pedagogical approaches and assessment practices in teaching and learning that are likely to promote ESD in disciplines such as social studies and language education at undergraduate level at the University of Botswana. The chapter seeks to address these two key questions: (1) which pedagogical approaches can be employed in humanities disciplines to embrace ESD? (2) How can students be assessed to measure the extent to which they have acquired the knowledge, skills, and attributes needed to participate in sustainable development? The chapter shares experiences and attempts that have been made by two instructors in incorporating ESD issues into their courses in the Department of languages and Social Sciences at the University of Botswana (UB). The instructors have participated in ESD workshops since 2013 as part of capacity building targeting higher education institutions in Southern Africa. The section that follows describes how the University of Botswana (UB) has approached ESD and the policies that have been created to support it.

12.2 ESD at the University of Botswana

Education for sustainable development is the critical component of the UNESCO's promotion of United Nation's (UN) efforts to ensure that the education sector play a critical role in the sustainable development drive. This is part of the UN's United Decade of Education for Sustainable Development initiative. ESD is an ambiguous and contested concept which brings about uncertainty. Approaches to ESD also differ substantially from one context to the other. There is also no consensus about how to achieve sustainability given that the concept is complex and its implementation, problematic and contextual (Hensley 2017). Given the complex and ambiguous nature of ESD, discourses and approaches are varied and contested. Consequently, actors in this place make decisions based on their diverse viewpoints.

The University of Botswana has put in place policies that enhance mainstreaming of environmental issues in the curricula of all courses offered across its various faculties. The aim is to deepen awareness and ensure that environmental and sustainability issues are incorporated into teaching and learning, research and community engagement. These initiatives are also articulated in the University of Botswana (2001, 2010). For example, the Faculty of Education requires that all Bachelor of Education Secondary teacher education students take environmental education courses as core. This is in response to the recommendations (REC.44 para.5.10.29 b, e, and f) that were passed by the 1994 Revised National Policy on Education. The recommendations read:

(b) Environmental education has a key role in secondary education and should be incorporated into all subjects.
(e) Teachers must be trained in the methodologies, at both pre-service and in-service levels, for environmental education to ensure that learning results in attitudinal changes and citizenship participation.
(f) Educational institutions, starting with the teacher training institutions and the University of Botswana, should develop an environmental ethos and set an example to the rest of the community.

To deliver on these recommendations, in the academic year 2018/2019, the Faculty of Education at UB introduced Master of Education (M. Ed) in Environmental Education programme. This was prompted by various reasons which included providing opportunity for further studies for Bachelor's degree graduates who studied environmental education and those with the Post Graduate Diploma in Education (PGDE) qualification who majored in Environmental Science at Bachelor's degree level. This development is also part of the drive and emphasis to create an educated and informed nation that would be able to participate nationally and globally in issues to deal with environmental protection and conservation in view of climate change and other environmental risks and challenges.

In this context, the Government of Botswana shares the notion that higher education institutions have to lead the implementation of the SDGs. On February 22, 2018, the Ministry of Finance and Economic Development in conjunction with the UN and UB launched the Botswana SDGs roadmap. The president who at the time also was the UB Chancellor highlighted the importance of domesticating and localising SDGs. The alignment of SDGs to National Development Plan 11 provides a strategic tool for tracking, monitoring, and implementation of priority areas. One such priority area is policy research and innovation. It is envisaged that UB and other research institutions will drive research to fully achieve SDGs. This drive includes the development of relevant and quality courses and programmes at UB and other institutions. The government of Botswana has also systematically mapped SDG indicators into the current Vision 2036—the country's development plan (Government of Botswana 2016). This vision has four pillars relating to the SDGs. For example, Pillar 1 focuses on sustainable economic development including issues of affordable and clean energy, inclusive and sustained growth. Pillar 2 focuses on human and social development issues such as poverty reduction, quality education, gender inequality, and issues of health and well-being. Pillar 3 dwells on a sustainable environment and specifically on issues of clean water and sanitation and climate action. Pillar 4 highlights issues of governance, peace and security, promotion of inclusive society, and the development of partnerships (Government of Botswana 2016). The domestication of SDG indicators is an important milestone but requires sustained political will to ensure full and effective implementation.

12.3 Theoretical Framework: Teachers' Reflective Habits to ESD

The constructive discussion of learning and teaching approaches which promote reflective habits and mind-set are better framed through the application of theories that promote reflection and learning from own experiences. According to Fidller and Marienau (2008) and Rogers (2001), there is a close association between reflection inquiry and reflective habits. Rogers (2001: 41) contends that "the intent of reflection is to integrate the understanding gained into one's experience in order to enable better choices or actions in the future as well as enhance one's overall effectiveness". In fact, reflective habits are better understood within the context of reflection as an inquiry. The main idea is to prepare learners who are aware, sensitive, and able to make sense of and connect with the environment in which they live (Shapiro et al. 2006).

The general consensus amongst scholars is that reflection ideally goes hand-in-hand with active participation and the ability for a person to interrogate his/her social context. This resonates with the issue of reflexivity and critical reflection. Fook (1999) avers that the use of reflexivity helps learners to make connections with the broader social, cultural, and structural environment: that is, learners are prepared to understand how their ideas, beliefs, and assumptions are partly influenced by the social contexts. Learners are made to appreciate that "what we see, hear, touch, feel, think, taste, and smell" ideally should be accompanied by non-judging attitude and accommodation of multiple perspectives (Fidller and Marienau 2008). This chapter adopted issues of reflection as inquiry, reflexivity, and reflective habits because these are compatible with the conceptualization of sustainable development (SD), ESD, and SDGs, particularly in the context of promoting critical learning and teaching contexts.

In the context of the growing educational, economic, environmental, and social challenges, issues of sustainability and how they are approached are at the centre of policy development and practice (Hensley 2017). According to Hensley (2017), habits are not simply actions repeated by teachers but are rather deep and a complex set of activities. Reflective actions are habits which provoke teachers to think deeply and critically about their teaching. In doing so, teachers simultaneously think about the purpose and the uncertainty of education outcomes.

Understanding teachers' reflective habits is useful and represents a realistic approach to the reality of pursuing sustainability despite the inherent operational challenges. Teachers' habits are shaped contextually through interaction as part of their daily teaching routine. In addition, teachers' habits are shaped socially through their understanding of the purposes of education and customs which ultimately give rise to collective habit. Teachers also shape their pedagogical practices based on the best way to reach students and encourage active learning. It is also possible that some of the teachers are not able to articulate the deeper meanings of their habits. In the context of ESD, uncertainty and unpredictability of working towards sustainability is often ignored and taken for granted.

In terms of application, Hensley (2017: 23) posits that the "cultivation of reflective habits helps teachers deal with uncertainty and risk, which are an important part of the pursuit of sustainability in ESD". Several approaches can be used to cultivate critical reflection. For example, reflective questioning can help teachers to acknowledge their underlying habits and purposes in education and adjust their approaches appropriately. It is established that teachers' reflective habits and approaches provide some indication of their ideas about ESD; reveal purposes beyond teaching or ultimate goals for student learning and sustainable change. More importantly, the habits help teachers in terms of topic selection and deciding on themes and concepts that are important for student learning and promotion of critical thinking and analytical skills (Hensley 2017).

12.4 Methodology

The chapter is premised on narrative inquiry approach, a component of sociocultural theory. It focuses on examining and understanding how human actions are related to the social context in which they occur (Moen 2006). In spite of its contested nature, narrative inquiry is increasingly used in studies that explore educational practices and experiences. Some scholars see it as a method of inquiry located within qualitative and interpretive research while others portray it as a frame of reference in a research process (Gudmundsdottir 2001; Heikkinen 2002). Narrative inquiry is preferred because of its proximity to sociocultural theory and social constructivism. At the centre of the debates is the idea that individuals are part and parcel of our society. Similarly, the society exerts influence on human thinking and human behaviour and thus impacts society.

The authors have adopted the position taken by Moen (2006: 57) who perceives narrative inquiry as a "frame of reference, a way of reflecting, during the entire inquiry process, a research method, and a mode for representing the research study". Such an approach is informative in that it allowed the authors to explore pedagogical approaches which are associated with ESD particularly with respect to the teaching of social studies and language education courses at undergraduate level in the University of Botswana.

Data for the chapter are based on desktop literature, document analysis, and examples of practices from two courses taught by the authors of this chapter; one from Social Studies and the other one from language education. Having participated in ESD workshops, the two lecturers infuse ESD issues in the courses they teach. The social studies course is used to illustrate ways in which students could be assessed to measure the extent to which they reflect on issues critically, thereby demonstrating achievement of the crucial outcome of social justice in this area of learning. Past examination papers of a course titled "Social studies and nation building" were analysed, employing qualitative research methodology utilising document analysis of primary and secondary sources of data. We acknowledged that document analysis is an important research tool in its own right capable of producing reliable data (O'Leary 2014). It is a process of "evaluating documents in such a way that empirical knowledge is produced and understanding developed" (Bowen 2009: 33). The process entailed three steps. In the first step, we appreciated that the documents we used were the original work of 200 students which constituted part of their summative assessment. Under the second step, we

recognised that the use of student work has implications for ethical and credibility issues—fortunately students' identities have been safe-guarded and their work is purely used for academic purposes. Last, students' answers were interpreted as reflected in examination booklets against the corresponding questions which primarily dealt with issues of identity and marginality.

The language education course is used to illustrate the benefits of incorporating sustainable development issues in the teaching of English language to prospective secondary school teachers. The illustration is based on a particular assignment that was given in the course "Interdisciplinary Approaches to Literacy Education". There were only seventeen (17) students enrolled for the course. The students were divided into four groups and assigned to develop thematic units on indigenous plants that are edible or medicinal. Each group was asked to research on one plant, take notes, and pick a topic from the junior secondary school English syllabus, and demonstrate how they could teach it using the information they have gathered about the plant (the exact question of the assignment is given under the discussions section). The students were given 2 weeks to complete the research assignment and prepare power point notes to present their output on a set date. They were directed to go and research in the Botswana collection section of the university library where they could easily find relevant sources for the assignment. The assignment was to be strictly carried out in groups. Bruner (1996: 84) posits that "learning is best when it is participatory, proactive, communal, collaborative, and given over to constructing meanings rather than receiving them". Before class presentations, each group was asked to give the instructor copies of their research notes. This was meant for the instructor to check if students had grasped note-taking skills; assess the suitability of the selected topic to be taught and the suitability of the planned activities to impart the communication skills of speaking, listening, reading, and writing in a language classroom. During the presentations, attention was paid to how far the students displayed reflection, analysis, and critical thinking skills. The manner in which each group collaborated to respond to questions was also observed. The final task was to find out if the students could relate some of the issues they raised in their deliberations to the SDGs. The SDGs were taught long before this assignment and students had copies of relevant notes.

12.5 ESD and Social Studies Education at the University of Botswana

As outlined earlier, the twenty-first century era requires higher education institutions to prepare reflective and responsive students to meet current, future, and diverse needs. Issues of identity and marginality are not only relevant to SDG 4 but also increasingly occupy centre stage in various platforms: teaching and learning, political and academic debates. The analysis of narratives of identity is important in understanding construction of dominant and subordinate identity categories (Johnson 2005). Further, Johnson (2005: 37) contends that "narratives that foreclose empathy facilitate the denial that discrimination or subordination is taking place. Similarly, privileged narratives of identity facilitate subjects' ability to think well of themselves and their treatment of others".

This section explores how level 200 undergraduate students enrolled in the Social Studies and Nation Building course at the UB construct and/or deconstruct narratives around identity and marginality. Particular attention is paid to ways in which marginalisation experiences and practices are reproduced, normalised, or resisted (if at all) by level 200 undergraduate students coming from different ethnic contexts. The intention is not to go into the formation of identities but how they are shaped and shape wider social, political, economic, and cultural interactions. This is extensively covered in the extant literature on ethnic identities which has long reminded us that "we are entirely made up of bits and pieces, woven together so shapelessly that each of them pulls its own way at every moment. Moreover, there is as much difference between us and ourselves as

between us and others" (cited in Gomzina 2012). Put differently, the role of "othering"/"otherness" that is, us vs. them a form of social categorization is embedded in our daily lived experiences and interactions. What is critical is the analysis of how majority and minority identities are constructed, deconstructed, perceived, represented, or experienced.

In most nation-states, strong socio-political contexts exist where assimilation and suppression of ethnic minorities are justified in favour of the "genuine" members represented by the majority ethnicity (Tanyas 2016). Botswana's nation-building project is premised on the construction of the *Tswana* identity as the privileged and hegemonic over the "other" cultures. Ethnic minorities are historically dominated and assimilated into the dominant culture. This leads to the branding of Setswana, the national language, as the main marker of national "unity"; hence, the nation-state is idealised and packaged as a linguistically "homogeneous entity". The idea of a "homogenous" nation-state pushes minorities to identify with a national identity which is not inclusive of them; that is, one that is founded on processes of marginalisation and "othering" (Tanyas 2016). In the next section, we use the end of semester examination paper and students' scripts to appreciate the extent to which the students embrace issues of inclusiveness which are central to SDG4.

12.5.1 End of Semester Examination Paper: Social Studies and Nation-Building

The rationale behind the use of end of semester examination in social studies and nation-building course is to strengthen sustainable learning using alternative assessment as opposed to typical examination questions. The key focus is on the promotion of critical thinking and application of learning experiences. The intention is to place student learning experiences and reflections at the centre of pedagogical and assessment practices. This is deemed critical for transforming the quality of higher education in general and student's learning outcomes. The assessment processes recognise the complexity of learning, teaching, and integrating skills, knowledge, judgements, and multiple goals (Hammerness et al. 2002).

12.5.2 Sample Examination Question: Social Studies and Nation-Building

Usually, this is a compulsory question and it seeks to equip students with critical thinking skills. The students are presented with a sample narrative extracted from the research work produced by faculty members within UB. Students are then expected to read the narrative and answer the structured questions. An example of a narrative used in the past (Box 12.1).

Below, we present students responses under the sub-headings generated from the structured questions. We have randomly identified three students and looked at how they answered the sampled three questions. The students are identified as ST 1, 2, and 3. Students' responses were picked verbatim from the answer booklets and have not been tempered with. Our critique is presented immediately after each of the students' responses.

12.5.3 Students' Identification of the Narrator

The students were asked to identify the narrator using analytical skills, which they practised during the semester. The student responded as follows:

Box 12.1: Sample Narrative

Most of them are very wild, when you teach you to have to use both Setswana…and English and yet they will say that they don't understand Sekweni…you will be surprised to hear a form 2 or form 3 student reasoning like a standard 3 student!!

—personal communication from Mafela, June 2014

ST 1: "Teacher because he is trying to teach Basarwa children and they fail because they cannot understand the language which is used to relay education to them".

What comes out is that ST 1 has not conceptualised the teachers' identity to help contextualise the narrative. There is also the assumption that the fault lies with the marginalised San children. In others, the children fail due to their poor literacy in Setswana, a language, which is not their mother tongue. The student also falls in the trap of "othering" where San children are referred to as out-groups and the teacher as in-group.

ST 2: "Teacher who teaches children from settlements, who interacts with them… teacher because he/she…forces them 2 speak Setswana…when the narrator talks about them taking a long time to cope and improve their learning achievements, it shows that he has experience associating with them".

In this response, we also see the failure of the student to identify teachers' identity and social background. What also comes out is the persistence of social categorization and poor analytical skills.

ST 3: "*Teacher from the majority group is the narrator…force students to speak Setswana, which is a language of majority groups…the narrator shows signs of despising when he/she calls them children from settlement… they are from a minority the 'them' group"*.

The good thing is that ST 3 was able to qualify teachers' identity and also provide justification of why students are forced to speak Setswana. Furthermore, the student was able to appreciate the fact that social categorisation still permeates our daily life experiences but again falls in the trap of "othering".

12.5.4 Unpacking Attitude of the Narrator

The students were asked to reflect on: what does the statement "you will be surprised to hear…" tell you about the attitude of the narrator?

ST 1: *"Basarwa (San) children keep quite because they do not know…Setswana language is enough to converse. They get frustrated because they keep on failing to speak perfect Setswana and their teachers give up on them. The rejection and frustration from their teachers gives them a fear of failure. They drop out of school because they cannot understand anything they are being taught because of the language that is being forced on them"*.

In contrast to what the question sought, the student was primarily concerned with explaining the issue of "surprise". The expectation was for the student to interrogate the attitude of the narrator. Again, we see that the process of "othering" is still problematic and the student fails to address the following questions: is it really necessary for San children to speak "perfect" Setswana and are teachers justified in giving up? What is the rationale behind the "forced" language in the context of nation-building? These questions are left hanging by the student.

ST 2: *"Since the San do not know or hardly speak the Setswana language, they keep quiet as there is no other way for them to communicate as they are seen as inferior in the society. The San are seen as people who are not modernised therefore they have a fear of failure… seen by other children as outcasts…"*.

The focus of the student was more on providing explanatory factors than interrogating the attitude of the narrator. On a positive note, the student was able to identify modernization as one of the theories of ethnicity. The question that begs the answer: is it really necessary to use the

cultural lenses of the ethnic majority to judge the language competencies of ethnic minorities? This is a rhetorical question which calls for the deconstruction of ethnic identities in Botswana.

ST 3*: "The San children keep quiet, get frustrated and develop a fear of failure, have low self-esteem, drop out because they are taught by someone from the major tribes who despise them. They keep quite because they are not familiar with the language they are being taught and this also brings down their…confidence. The reason why the Basarwa children are afraid of failure is that the teacher/narrator is belittling them…they know that if they fail it will prove the narrator right"*.

The student also focused on explanations than appreciating the attitude of the narrator in terms of construction/deconstruction of identities. On the positive side, the student was able to recognise the significance of self-fulfilling prophecy in the context of nation-building project.

12.5.5 Lessons from Social Studies and Nation Building

It is important to acknowledge contestations around concepts and discussions of "identity" and "marginality"; hence, ELC 202 students' perspectives have to be located within this framework. This is also compounded by the fact that SDGs and ESD are not only contested but also elusive concepts.

Similarly, narratives, discourses, and conversations tend to revolve around issues of inclusion and exclusion, domination and resistance thus giving rise to multiple perspectives. There is also a need to consider students' cultures, identities, prior knowledge, practices, and experiences. Young people's identities tend to have a significant impact on their interpretation of the country's history and teachers' instruction has some but not too much influence on their views (Epstein 2016). This is consistent with Hensley (2017) contention that habits are not simply actions repeated by teachers but rather deep and complex set of activities. It is important to make a clear-cut distinction between reflective action and unreflective habits. The results revealed that students' judgements tended to be subjective and largely influenced by use of own ethnic "lenses" to interrogate issues of identity and marginality. In the next sections, we focus our attention on language education at UB.

12.6 ESD and Language Education at the University of Botswana

Instructional approaches employed in language education at the UB are influenced by the communicative approach. The communicative approach is deemed the most effective as it emphasises that the best way to learn a language is by using it to communicate meaning rather than by learning grammar and vocabulary as isolated bits and pieces. Enhanced communication in language instruction requires full engagement of learners and the use of interactive activities such as group or pair work, debate, dramatisation, and role-plays. The crucial aspect in language teaching and learning is to use language as a vehicle for genuine, meaningful communication (Brown and Lee 2015). Rivers (1976: 96) has long explained that "as language teachers we are the most fortunate of teachers—all subjects are ours. Whatever [the students] want to communicate about, whatever they want to read about, is our subject matter". Put differently, language education plays an important role in assisting learners to apply and transfer knowledge from one context to the other. Based on the UNESCO (2014) definition of ESD, effective learning and teaching of ESD requires strong linkages between content and pedagogy approaches. Thus, in the teaching of language education courses, content is drawn from various disciplines.

In order to engage meaningfully in thematic units, students are usually assigned work in small groups in language education. Mafela et al. (2013: 15) assert that "the adoption of group work in classroom settings is part of the broader

need to engage learners effectively, and acknowledgement of the crucial importance of cooperation and collaboration in knowledge and skills acquisition". Over and above, collaboration is one of the twenty-first century skills learners are expected to have acquired in order to function efficiently in the world of work.

12.6.1 ELL 402: Interdisciplinary Approaches to Literacy Education course

The course *ELL 402: Interdisciplinary Approaches to Literacy Education* is core to all Bachelor of Education students taking language courses as either major or minor in their programmes. This is a seminar course that aims at providing both pre-service and in-service teachers with the foundation for using integrated and interdisciplinary approaches in literacy education. The course enables students to evaluate research on the integration of language and literature with reading, speaking, listening, and writing as well as with other disciplines in the secondary school curriculum. One of the outcomes of the course is for the students to be able to plan and design interdisciplinary thematic units. From a literacy perspective, Burns et al. (1992) define thematic units as a way through which effective teaching of language is organised around a central topic, idea, or theme that uses related activities and experiences to conduct a more in-depth study.

The application of thematic approach allows for the incorporation of language concepts into a selected topic area. This pedagogical approach gives students the opportunity to use and apply language to their daily lived experiences. It is also relevant for integrating teaching and assessment (Burns et al. 1992). The secondary school syllabuses for English and Setswana call for the infusion of "current and emerging issues". These issues include HIV and AIDS, human rights, environmental issues, environmental education, population and family education, and awareness of prejudice and bias (Ministry of Education 1998, 2000). It can be seen that the Ministry of Education in Botswana incorporated these issues long before they were pronounced by UNESCO in the SDGs.

Box 12.2: Sample Group Assignment Question for ELL 402

(a) The theme for the unit is: Indigenous plants and trees. In your groups, research on one indigenous tree or plant found in Botswana that is edible or used for medicinal purposes. Describe ways in which it is used for human consumption or otherwise.
(b) Discuss how you could use the information you have gathered to teach any topic of your choice to a Form 3 class of mixed ability. Mention the kind of activities you would engage your learners in and the communication skills you will be focusing on.

Remember that you are teaching English but also educating your learners about ESD issues. You should therefore mention which sustainable development goals the issues you will be discussing will address.

However, effective implementation has proven to be a challenge. It is against this background that the instructor of this course embarked upon incorporating ESD in its teaching to address the interdisciplinary approach to literacy teaching.

What follows is an illustration of how level 400 students enrolled in ELL 402 (Box 12.2 and Table 12.1) responded to an assignment, which required them to research a given theme and come up with activities they could use in an English classroom setting. Students were asked to research the following question in groups of five and prepare a power point presentation to share with the class.

12.6.2 Source: Lessons from Language Education Students

Although many students are not proficient in English and usually passive in class, the level of class participation was very high during this

Table 12.1 A summary of presentation from the assignment

Group	Indigenous plant/tree researched on	Topic, skills, and activities	SDGs addressed according to the students
1	*Morula* (translated as *Marula by non-native speakers)*	*Debate* *Listening and speaking skills* Small group discussions on the benefits and uses of *morula.* The class divided into two groups to debate the motion: Traditional alcohol "*Khadi",* made out of *morula* should be legalised as it has reduced poverty in many households.	SDG 1 End poverty SDG 12 Responsible production and consumption
2	*Motsintsila* (*Berchemia discolour)*	*Poetry*: Speaking and writing skills The whole class watches a video showing women harvesting and processing *motsintsila* followed by discussion of the video. Activity: compose poems individually on *motsintsila*	SDG 4 Quality education SDG 5 Gender equality SDG 12 Responsible production and consumption
3	*Sengaparile (grapple plant)*	*Report writing* *Reading and writing skills* Reading of an extract on *sengaparile* followed by an explanation of new words, e.g. inflammation, tuber, supplement, arthritis, cartilage. Activity: Write a report to the Minister of Health; tell him about *sengaparile* and what you wish his Ministry could do so that the nation benefits from this plant.	SDG 1: End poverty SDG 3: Good health and well-being SDG 12 Responsible production and consumption
4	*Mogwana (Grewia monticola)*	*Parts of speech* *Listening and speaking* Presentation by a guest about *mogwana* fruit; its benefits and how it is used. An extract on *mogwana* is read and discussed in small groups. Students then identify nouns, adjectives, and adverbs and explain their function in the text.	SDG 4 Quality education

Source: Molosiwa, A. A. (2017). ELL 402 Summary of students' presentations. University of Botswana

particular lecture on the presentation of indigenous plants. The content of the research work was authentic and captured the interests of the students. This resonates with sustainable learning practices. During the debates, students were able to reflect on the information presented and shared their views freely. The government was criticised for not creating employment opportunities by making use of the natural resources that are readily available in the country. They questioned why the government does not support the cultivation of indigenous trees such as *motsintsila* and *sengaparile* for commercial purposes at a large scale and have them processed in Botswana for medicinal purposes. Currently, *sengaparile* is exported raw and processed outside the country, brought back and sold to Botswana at a price.

Paul and Elder (2008: 88) state that "critical thinking is that mode of thinking—about any subject, content, or problem—in which the thinker improves the quality of his or her thinking by skilfully analysing, assessing, and reconstructing it". In the analysis of themes and issues, students were able to realise that one issue could address more than one SDG. For instance, they pointed out that the planting of indigenous plants for medicinal purposes would not only create employment (SDG 1: End poverty) but also avail medicines that the country is badly in need of (SDG 3: Good health and well-being). One of the students who presented on the *motsintsila* fruit came from the area where this plant grows and is harvested for making baskets. This student reported that it is mostly women who do the

harvesting of the plant, and all the weaving-related work. This statement provoked a heated argument. For example, some students felt it was the duty of women to make baskets because they cannot undertake tasks like hunting but others argued that this was not in line with SDG 5 that advocates for equal treatment between men and women. The arguments and views expressed by the students were very impressive. I could not agree more with Moore (2005) who recommends that "educators should provide collaborative working spaces for learners where they could exchange ideas, feelings and experiences". Since incorporating sustainable development issues in my courses, I have had lively lessons.

12.7 Conclusion

Even though higher education institutions have been identified as potential leaders in the implementation of education for sustainable development, literature shows that the incorporation of ESD in their disciplines is not yet fully operational. It has been found that discipline-focused organisational structures of the universities, lack of knowledge by academics to incorporate ESD, and the perceived irrelevance of sustainability issues to some disciplines act as a barrier to their implementation. The twenty-first century era requires higher education institutions to prepare reflective and responsive students to meet current and future diverse needs.

Drawing from a course in social studies, the chapter has demonstrated that narratives could be used to measure or evaluate students' understanding of social issues and the extent to which they reflect on them. The example from the language education course is used to illustrate how incorporation of sustainable development issues in the English curriculum could provoke students to collaborate, be reflective and think critically when analysing issues. Whereas the focus of the English lesson was for the students to demonstrate how they could teach certain topics (Debate, Poetry, Report writing, and Parts of speech) to a junior secondary school classroom, they also acquired knowledge about indigenous plants and their use. Ultimately they learnt about the need to protect and conserve them, which is one of the purposes of education for sustainable development. This chapter has demonstrated that it is possible for higher education instructors to transform their pedagogical and assessment practices to embrace ESD principles. Instructors' readiness and commitment to develop strategies and processes of incorporating ESD content into their disciplines is crucial in producing graduates who understand and embrace this approach. The chapter has also demonstrated that, contrary to the conventional thinking that ESD belongs to certain disciplines, it can be incorporated in any discipline.

References

Armstrong, M. C. (2011, March). Implementing education for sustainable development: The potential use of time-honoured pedagogical practice from the progressive era of education. *Journal of Sustainability Education, 2*. Retrieved from http://www.jsedimensions.org/wordpress/wpcontent/uploads/2011/03/Armstrong2011.pdf

Blessinger, P., Sengupta, E., & Makhanya, M. (2018, September). *Higher education's key role in sustainable development*. University World News. The Global Window on Higher Education. Retrieved from https://www.universityworldnews.com/

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal, 9*, 27–40. https://doi.org/10.3316/QRJ0902027.

Brown, H. D. & Lee, H. (2015). Teaching by Principles: an interactive approach to language and pedagogy. Pearson Education: New York.

Bruner, J. (1996). The Culture of Education. Harvard University Press: Cambridge, Massachusetts.

Burns, P. C., Roe, B. D., & Ross, E. P. (1992). *Teaching reading in today's elementary schools*. New Jersey: Houghton Mifflin Company.

Dawe, G., Jucker, R., & Martin, S. (2005). *Sustainable development in higher education: Current practice and future developments. A report for the Higher Education Academy*. [Online]. Retrieved from www.heacademy.ac.uk/misc/sustdevinHEfinalreport.pdf

Epstein, T. (2016). The relationship between narrative construction identity in History Education: Implications for teaching and learning. *Educar em Revista, 60*, 121–131.

Fidller, M., & Marienau, C. (2008). Developing habits of reflection for meaningful learning. *New Directions for Adult and Continuing Education, 118*, 75–86.

Fook, J. (1999). Reflective practice and critical reflection. In *Handbook for Practice Learning in Social Work*

and Social Care (pp. 440–454). Retrieved from http://www.jkp.comhandbook-for-practice-learning-in-social-work-and-social-social-care-third-edition.html

Gomzina, I. (2012). *Multilayered cultural identity and the perception of the self*. Master's thesis, University of Jyvaskyla.

Government of Botswana. (2016). Vision 2036: Achieving Prosperity for all. Lentswe la Lesedi: Gaborone, Botswana.

Gudmundsdottir, S. (2001). Narrative research on school practice. In V. Richardson (Ed.), *Fourth handbook for research on teaching* (pp. 226–240). New York: MacMillan.

Hammerness, K., Darling-Hammond, L., & Shulman, L. S. (2002). Toward expert thinking: How curriculum case writing prompts the development of theory-based professional knowledge in student teachers. *Teacher Education, 13*(2), 220–243.

Heikkinen, H. L. T. (2002). Whatever is narrative research? In R. Huttunen, H. L. T. Heikkinen, & L. Syrjälä (Eds.), *Narrative research: Voices from teachers and philosophers* (pp. 13–25). Jyväskylä: SoPhi.

Hensley, N. (2017). *Approaches for education for sustainable development (ESD) in Kesennuma, Japan. A qualitative case study of continuous challenges faced by educators pursuing sustainability in their teaching*. Master's Degree Studies in International and Comparative Education No. 45, Stockholm University

Johnson, C. (2005). Narratives of identity: Denying empathy in comparative discourses on race, class, and sexuality. *Theory and Society, 34*, 37–36.

Kang, L., & Xu, L. (2018). Creating Sustainable Universities: Organizational pathways of transformation. *European Journal of Sustainable Development, 7*(4), 339–348.

Kevany, K. D. (2007). Building the requisite capacity for stewardship and sustainable development. *International Journal of Sustainability in Higher Education, 8*(2), 107–122.

Longhurst, J. (2014). *Education for sustainable development: Guidance for UK higher education providers*. Gloucester: The Quality Assurance Agency for Higher Education.

Mafela, L., Molosiwa, A. A. & Mmolai, S. (2013). Innovating Group work in Higher Education: Using the University of Botswana Languages & Social Sciences Education courses as case studies. *Lonaka Journal of Learning & Teaching*, 13–26.

Mafela, L. (2014). Education and perceptions of the "other": Colonial education of Batswana and formal education of…in Botswana. *Alternative: An International Journal of Indigenous Peoples, 10*(1), 45–57.

Ministry of Education (1998). Senior Secondary Programme Curriculum Blueprint. Department of Curriculum Development & Evaluation: Gaborone: Botswana.

Ministry of Education (2000). Senior Secondary Setswana Syllabus. Department of Curriculum Development & Evaluation: Gaborone, Botswana.

Ministry of Education & Skills Development (2009). BGCSE Curriculum Evaluation Report. Gaborone: Botswana.

Moen, T. (2006). Reflections on the narrative research approach. *International Journal of Qualitative Methods, 5*(4), 56–69.

Moore, J. (2005). Barriers and pathways to creating sustainability education programs: Policy, rhetoric and reality. *Environmental Education Research, 11*(5), 537–555.

O'Leary, Z. (2014). *The essential guide to doing your research* (2nd ed.). Thousand Oaks: Sage Publications.

Paul, R. & Elder, L. (2008). The miniature guide to critical thinking concepts and tools. Dillon Beach, CA: Foundation for Critical Thinking Press.

Republic of Botswana. (1993). Report of the National Commission on Education. Gaborone: Government Printer.

Republic of Botswana. (1994). *Government White Paper No. 2 of 1994. The Revised National Policy on Education*. Gaborone: Government Printer.

Rivers, W. (1976). *Speaking in many tongues: Essays in foreign language teaching* (2nd ed.). Rowley: Newbury House.

Rogers, R. (2001). Reflection in higher education: A concept analysis. *Innovative Higher Education, 26*, 37–57.

Shapiro, S. L., Carlson, L. E., Astin, J. A., & Freedman, B. (2006). Mechanisms of mindfulness. *Journal of Clinical Psychiatry, 62*, 373–386.

Tanyas, B. (2016). Experiences of otherness and practices of othering: Young Turkish migrants in the UK. *Young, 24*(2), 157–173.

UNESCO. (2005). *Contributing to a more sustainable future: Quality education, life skills and education for sustainable development*. Paris: United Nations Educational, Scientific, Cultural Organization. Retrieved from http://unesdoc.unesco.org/images/0014/001410/141019e.pdf .

UNESCO. (2014). Retrieved from http://www.unesco.org/new/en/unesco-world-conference-on-esd-2014/resources/what-is-esd/

University of Botswana. (2001). Environmental Policy. Gaborone: University of Botswana.

University of Botswana. (2010). Environmental and Sustainability Charter (draft). Gaborone: University of Botswana.