

Act Locally, Think Globally: SDGs as Core Content for a 24 Course EAP Program

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Abstract

This study will detail how a Sustainable Development Goals-centered English for Academic Purposes (EAP) curriculum was created and implemented at a Japanese university. In 2019, a school of policy studies at a university in Western Japan decided to revamp its undergraduate and graduate curricula to focus on offering most courses in English. Students wishing to pursue courses in International Affairs, Public Policy, and Media Studies would have to be able to write, speak, and attend lectures delivered in English with minimal Japanese language support. To prepare students, the first two years of their undergraduate studies they must enroll into a rigorous EAP program focused on the themes of the Sustainable Development Goals. The program seeks to achieve lateral as well as vertical integration of the four skills Reading, Writing, Listening, and Speaking. This paper will explain the curriculum development process, as well as discuss the successes and failures after one year of implementation. The focus will be on how an increase in socially relevant content, the SDGs, was perceived by students and teachers and how it affected students' academic development.

Keywords: Sustainable Development Goals (SDGs); Curriculum Development; Materials Development; English for Academic Purposes (EAP); Content and Language Integrated Learning (CLIL).

1. Introduction

As many higher education institutions (HEIs) are revamping their curricula, research, and administrative programs to address the SDGs' 2030 Agenda, some attempts have been made to document the nature of these institutional adjustments (Alcántara-Rubio et al., 2022; Alonso-García et al., 2019; Chiba et al., 2021; Ferrer-Estévez and Chalmeta, 2021; Findler et al., 2019; García-Feijoo et al., 2020; Pacecho et al., 2022; Weiss and Barth, 2019). These endeavors to analyze the academic literature have highlighted some important points in terms of the papers that focus on pedagogy and course content: it seems that many HEIs are introducing courses that deal mostly with SDG 4 (Quality Education for All) and SDG 9 (Industry, Innovation & Infrastructure), but there are few studies that document interdepartmental collaborations for teaching or providing solutions for achieving the SDGs (Fia et al., 2022). It also seems that the majority of articles dealing with the SDGs in university contexts are published mostly by European and Latin American researchers (Alcántara-Rubio et al., 2022). Since universities are the primary training grounds for future professionals who can create more sustainable societies, it is crucial to understand how HEIs all over the world are incorporating the SDGs into their missions and curricula (Calles, 2020; Dlouhá, Mulà, and Henderson, 2019; Gusmão Caiado et al., 2018; Paco, 2019).

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1.1 English Education and the SDGs

Since English is the lingua franca of the 21st century, English educators should help “learners to engage with the wider society in exploring, developing and manifesting sustainability values, enabling them to act as agents for change” (Bowden, 2010, p. 21). Balčiūnaitienė and Teresevičienė (2018) go further to suggest that “embedding sustainable development content and innovative methods of teaching into foreign language (English) classes, pedagogues are encouraged to update their teaching strategies with innovative approach to SD” (p. 54).

Content and Language Integrated Learning (CLIL) is one of the best methods for achieving the integration of SDGs into language courses, since it can help students to improve their understanding of both the subject matter as well as achieve linguistic goals (Cummins, 2014; Fodor and Lugossy, 2015; Gay, 2018). CLIL is a pedagogical method in which a foreign language is used as a tool to teach a non-language subject in which both the language and the subject play an equal and symbiotic role (Marsh, 2006). CLIL instruction has been supported by the European Council and has been recognized as one of the best methods to promote bi- or multilingualism (Commission of the European Communities, 2003). Dalton-Puffer et al. (2022) argue that utilizing CLIL as an educational tool in curriculum design is not only in line with the U.N.’s sustainable development goal of Quality Education, but that it could also promote “more collaborative and multi-disciplinary approaches to education.” Woźniak (2022) documents how CLIL was successfully employed to create an English as a Second Language program for undergraduates in health sciences. The findings of this study showcase how content instructors can collaborate with English educators to create courses that promote not only second language acquisition, but also cultural competency and awareness of sustainability studies. Fakhretdinova et al. (2022) also successfully used CLIL to integrate SDGs into language classes for engineering students. Their research illustrates that the use of CLIL had a positive outcome for these university students learning a second language, as well as for their development of soft skills, such as “critical thinking, problem solving, leadership, creativity, commitment to equity and justice, [and] awareness of environmental ethics.” An action-based research project at Universitat Internacional de Catalunya used CLIL as a framework for introducing English for Sustainable Development in a teacher-training program with the goal of instilling sustainable values and competencies in future teachers of primary school students (Knight, 2021). The results were encouraging, showing that CLIL can help to promote self-directed learning and life-long learning for program participants. Tanaka (2019) has shown that designing and implementing a CLIL course aimed at teaching Japanese university students 21st Century Skills and Global Competence served as an excellent approach to teaching both content and English as a part of a larger goal of preparing students to meet the challenges they might encounter in their futures.

1.2 The Current Program

The program discussed in this paper is a series of rigorous two-year EAP courses embedded within a four-year undergraduate program at a school of Policy Studies offering

majors in International Affairs, Public Administration, Media Studies, and Education. The specialized courses for third- and fourth-year students are offered in English or English-Japanese hybrid classes. The EAP program aims to achieve lateral integration as well as vertical integration of content (Tat et al., 2022). The Associate Lecturers of English (ALEs) serve not only as coordinators for each skill area, wherein they manage teams of adjunct professors charged to teach the courses they oversee, but also as materials developers and content creators. In other words, textbooks from publishers are not used, but all the materials for these courses are created in-house by the ALEs. The materials development process takes place in work groups which seek to ensure that each course within the same level recycles and builds upon the skills introduced in other courses, using evidence-based pedagogy (Gay, 2018). For example, the Reading course introduces vocabulary and reading skills that students can employ to do research and select articles to paraphrase for their assignments in the Writing or Speaking classes. Vertical integration is achieved in a similar manner, through perpetual collaboration between ALEs working in the same skill areas for different levels. A writing course, for example, can be viewed as a two year-long course, where each semester builds progressively upon the skills introduced in the previous semester's classes.

In response to the Japanese Ministry of Education, Culture, Sports, Science & Technology's (MEXT) mandate that calls for the "strengthening of initiatives for global human resource development, such as foreign language education, communication with international students, international student exchange programs, and internationalization of universities," the school had decided to revamp its entire curriculum to offer most of its courses in an English Medium of Instruction (EMI) or English-Japanese hybrid classes by 2025 (MEXT, 2013). At the present time, most of the specialized courses are being offered in Japanese, with only a handful of courses in English. An internal audit has revealed that the few Japanese-English hybrid courses currently on offer have a small selection of reading materials in English, but the lecture and assessments are delivered entirely in Japanese.

2. Proposed Curriculum Structure

As the university is seeking to increase the number of specialized EMI courses by seeking to increase the number of English-speaking academic staff or by requiring instructors to change the language in which their courses are delivered, the ALEs have conducted a thorough needs-analysis to determine which areas of the EAP program should be altered for the upcoming curriculum overhaul. After more than two years of preparation, it was decided that only the second year of the EAP program will be changed through the introduction of a lecture, a seminar, and an academic writing course focused on the themes of the Sustainable Development Goals (SDGs). These new courses will be horizontally integrated, so that the students will have the opportunity to:

- 1) Gain knowledge about the SDGs through a lecture that introduces these concepts using graded speech and readings customized for an English as a Foreign Language audience. To prepare the students for future lectures delivered fully in English,

reading, note-taking, and critical thinking skills are emphasized. To facilitate student engagement in discussions on the SDGs, the lecture also aims at broadening and deepening the aural lexical knowledge through reading and listening to ALE created texts and vocabulary activities.

2) Deepen their knowledge of the content provided in the lecture by conducting research on SDGs and sharing their newfound ideas through presentations, poster sessions, and graded discussions in the seminar course.

3) Utilize the facts gleaned from the lecture and their research in the seminar course to write an academic essay in the Problem-Cause-Solution genre for an SDG of their choice.

The three courses were created in ALE work groups with the support of professionals with working knowledge and hands-on experience with the SDGs in various fields, professionals who contributed by providing advice and resources for materials development, as well as mini-video lectures.

Table 1. Lateral Integration of the New Courses.

	Lecture	Speaking	Writing
Semester 1			
1	History of SDGs & (10) Reducing Inequalities	Overview - Discussing Power Dynamics	Overview - Article introduction
2	(1) No Poverty & (2) Zero Hunger - Background	Note Taking on Articles	Note Taking
3	JICA Economic Growth & Poverty Reduction	Discussion Skills Review	Summarizing
4	Microloans and Sustainable Development	Poster Presentations	Outlining Articles
5	Norman Borlaug & the Green Revolution	Poster Presentations	(3) Article Summaries
6	(3) Good health & wellbeing & (6) Clean water & sanitation – Background	Referencing sources	Media Literacy & Summary Paraphrasing
7	Sanitation and public health	Public Health Quiz	Good/Bad Article Assessment
8	Epidemiology	Graded Discussion	Internet Research
9	Jigme Singye Wangchuck & Gross National Happiness	Internet Research	Internet Research Notes
10	(4) Good Education & (16) Peace, Justice, & Good Institutions - Background	Summarizing Internet Research	Process Writing and White Paper Structure
11	International Criminal Court	Media Literacy for Internet Research	Introduction & Problem
12	Young African Leaders Initiative	Thinking about Implications	Cause & Solution

13	Malala Yousafzai & the Malala Fund	Graded Discussion	Implications & Conclusions
14	Reflection & (5) Gender Equality	Reflection	End of Semester Kahoot on Structure
Semester 2			
15	(17) Partnerships for the Goals	Overview - Synthesizing Ideas	White Paper Structure Review
16	(8) Decent work & economic growth, (9) Industry, innovation, & infrastructure, & (11) Sustainable Cities & Communities - Background	Sustainable Cities Quiz	Introduction (Choose Topics)
17	SME Companies Support System for Sustainable Goals	Internet Research	Internet Research Support
18	Deepening Decentralization Programme	Internet Research Sustainable Cities Discussion	Problem
19	BAKOM (Balikesir Disaster Coordination Centre)	Graded Discussion	Internet Research Notes (Introduction & Problem)
20	(7) Affordable & clean energy & (12) Responsible consumption & production	Literature Review	Cause
21	Basque Plan of Action against Food Waste	Climate Change Quiz	Causal Chain
22	Clean Cooking	Synthesis Review & Implications	Internet Research Notes (Cause)
23	Energy Kit for All (EKFA) Kits	Internet Research Climate Change Discussion	Solution
24	(13) Climate action, (14) Life below water, & (15) Life on land – Background	Graded Discussion	Drafting - Cutting
25	The Lost Forest in the City	Group Work	Implications & Conclusion
26	Friend of the Sea	PowerPoint Workshopping	Solutions, Implications, & Conclusion Draft
27	Casitas Azules (Little Blue Houses)	Group Pecha Kucha Presentation	Workshopping
28	The Future of SDGs - Think Globally, Act Locally	Reflection	Final Draft (1 cause)

3. First Year Implementation

The first year of implementation coincided with a return to regular, face-to-face classes after two years of online courses since the start of the Covid-19 pandemic. This situation provided the unique opportunity to switch from the usual paper-based materials and methods of assessment to an entirely digital format. The institutional learning management system (LMS) was selected to serve as the materials repository for both

students and instructors, as well as the means of conducting assessments for all courses. The switch was considered beneficial and in line with the scope of the SDGs, as it reduced the use of printed materials (Tat et al., 2022).

After one year of implementation, both instructors and students were surveyed on their perceptions about the three courses. ALEs held end of semester meetings with all the adjunct instructors teaching sections of their course and opinions were gathered through discussion and feedback sessions. Students' perceptions were recorded through course evaluations with both closed and open-ended questions. The main points of this feedback are shown in Tables 1 and 2.

3.1 Instructors' Perceptions

In most Japanese universities the attendance for undergraduate EAP courses is strictly monitored and this is the case for this program as well. However, in the case of the lecture, this was unfeasible, since the entire second-year student body attended the weekly session simultaneously. Another issue was the assessment for such a large group: since the lecture was delivered by a single instructor, the workload for marking was staggering. Fortunately, this problem was mitigated by using the LMS, which allowed for online testing and instant automated corrections and scoring. There is some controversy around the use of automated writing evaluation, suggesting that automated feedback offers less support for the development of students' critical thinking and writing skills (Wang and Han, 2022), while other studies found that automated writing evaluation can have an overall positive effect on student writing (Zhai and Ma, 2023). For this program, however, automated writing analysis was not used (written assessments were graded by teachers who provided feedback). Furthermore, the types of assessments that were automated were focused on comprehension, while critical thinking-related assessments were done through task-based assessment.

Since the majority of ALEs and adjunct instructors in this program are specialized in Teaching English as a Second Language (TESOL) or education/pedagogy, they faced the additional challenge of having to educate themselves on the SDGs and to keep up with content in this field in order to support the new learning goals. For example, all instructors teaching the seminar course had to read and anticipate questions on the SDG that was being expounded on in the lecture, since that topic would be the subject of research and discussion in their course as well. This increased the workload for all instructors, as they not only had to consider how to present the language and speaking skills, but also how to address questions about the new SDG content. This issue was highlighted by the seminar, which was initially framed by its ALE coordinator as more of a content course rather than an EAP course. In this case, the seminar materials were focused on reviewing the knowledge taught in the lecture and eliciting opinions and sparking debates through critical thinking skills. However, there was an absence of the scaffolding that learners of a second language typically need, such as vocabulary building and practice and discussion skills, before they can engage in the higher-level activities typical of a content course.

On the other hand, instructors generally agreed that the horizontal integration between the lecture, seminar, and academic writing was mostly successful, in the sense that it helped to ease student cognitive load and provided them with the knowledge and language necessary to successfully discuss and write about SDGs. In the past, students read, discussed, and wrote about completely different topics in their second-year courses, which made their workload and language acquisition a lot more difficult and time consuming. By creating a unifying theme for the second-year courses, instructors felt that students could both learn content and improve their linguistic abilities more efficiently.

Table 2. Instructor Perceived Challenges & Benefits of the New Courses.

Challenges	Benefits
Attendance & assessment issues for the lecture course	Horizontal integration successful due to staggered schedule
Insufficient scaffolding in seminar course	Student cognitive load eased by lecture for seminar and writing courses
Increased workload for adjunct instructors	Interesting & timely topics
Increased workload for ALEs	Writing course outcomes improved by lecture and seminar courses

3.2 Students' Perceptions

According to the student surveys, one of the main challenges faced was mastering the new vocabulary related to the SDGs. Vocabulary acquisition is crucial for not only understanding the lecture, but also when it comes to productive skills in seminar, where students must use it to engage in discussions, and in writing, where students need it to produce academic essays. One method to facilitate vocabulary acquisition was the creation of reading materials for the lecture. ALEs created graded reading materials that provided students with an overview of the lecture prior to attending the lecture sessions. In these readings, key words were introduced and highlighted through some simple activities. However, because the seminar course dispensed with vocabulary assessments, a method that ALEs had supported for past iterations of that course, perhaps students did not have the benefit of reviewing and reinforcing the lexical content introduced in the lecture.

Most students found the cyclical layout of the seminar course too repetitive. However, from a pedagogical perspective this could actually be beneficial for student learning outcomes: if students become familiar with a pattern of interaction, they can then better focus on the more challenging aspects of that course, such as using the target language accurately and building coherent arguments for their discussions (Kong and Hoare, 2011).

Another challenge for students was the perceived increase in workload compared to their first-year courses in the EAP program. This issue highlights the need to revisit the first-year courses and consider how to adjust them to equip students with the skills they will need for their second year of study.

Table 3. Student Perceived Challenges & Benefits of the New Courses.

Student Perceived Challenges	Student Perceived Benefits
New academic vocabulary difficult	Lecture easy to follow thanks to Power Point slide availability on LMS
Seminar discussions follow repetitive pattern	Freedom to research & write about SDGs of interest
Heavier workload compared to first year of the EAP program	Interesting & timely topics
Not enough support provided in seminar course	Opportunity to voice opinions on SDGs

In terms of positive student perceptions, the LMS was greatly valued as a materials repository: students appreciated being able to access the lecture slides and recordings online after the class sessions were over. This helped them to organize their lecture notes and to confirm their understanding of the language and content that had been presented. They also reported satisfaction at having the flexibility to research and write about their SDG of choice for the academic writing course. In the past students were restricted in their selection of topics for this course, and they were mainly limited to reporting their findings in writing, without many opportunities to share their opinions.

As the university itself is trying to adapt to the challenges set by the SDGs, using this content as the topic for the EAP program has helped the students to better understand the transition that the world and their learning institution is trying to achieve. As such, most students reported that they felt satisfied and intellectually stimulated by learning about the SDGs in their EAP classes. This is important because according to cognitive engagement theory, the number one driver for motivation in language acquisition is student engagement with the lesson content (McLaughlin et al., 2005).

4. Conclusion

Using CLIL to create an EAP program centered on SDGs is not only beneficial for learners, but also for society at large, as students will be the agents of change who will contribute to bringing about more sustainable future environments. For successful program development, interdepartmental collaboration is key: most English language educators do not possess all the knowledge and skills necessary for teaching such diverse content that encompasses knowledge from so many different academic fields. In creating these new courses, different experts were consulted and asked to contribute to the materials development process. As the biggest hurdles for students appeared in the seminar course, it is important to keep in mind that language learners need to focus primarily on building linguistic skills, before being able to achieve higher level tasks involving the course content. Providing reading materials that build lexical knowledge and are accessible is key to helping students prepare for listening to and comprehending a lecture in another language on a brand-new topic, such as the SDGs. Using online tools, like lextutor.ca has allowed the ALEs to create reading materials for which the academic word list is appropriate.

Furthermore, the lateral and vertical integration of all courses within the EAP program is crucial. The former is helping students to improve both their mastery of linguistics and content: students gain a general knowledge about the SDGs through receptive skills in the lecture by reading and listening; they then proceed to expand and build on this through research and by utilizing their productive skills with discussions in seminar and academic essays in their writing courses. Vertical integration is also important, as evidenced by the fact that most students claimed there was a big perceived discrepancy in the workload in their first and second years. This issue will need further investigation to determine how to best achieve a balance and how the first-year courses can be adjusted to better serve as a steppingstone for the SDG content.

4.1 Limitations

While the results of this study are interesting and encouraging, there are some limitations that must also be considered. This study took place at a single HEI over a single year. While the program itself is large, around 350 students, it still represents a single department within a single institution, and this limits its generalizability. Further research is needed in different contexts in order to make the sample more representative. Furthermore, while this program could be assessed in terms of the lifelong learning goal of the SDGs, this would require long-term longitudinal study and analysis of external factors that is outside the scope of the current study. Finally, this study would have benefited from the use of a control group. While this was not possible in this study, future studies could address this through comparison between SDG-CLIL programs, other CLIL programs, and non-CLIL programs. Future research could address this issue to provide better context for the results observed in this study.

4.2 Current Literature

The approach taken to implementing SDGs in a strongly coordinated curriculum echoes the thoughts of Freire in terms of education and critical thinking being the foundation of democratic society (1973). The connection of the SDGs to the promotion of democratic values which are sustainable is reflected in the literature (e.g. Bowden, 2010 and Balčiūnaitienė & Teresevičienė, 2018) and in the students' perceptions in terms of becoming agents of change. This suggests that the initial goals of the program were at least partially met.

In addition, the combination of a CLIL approach and strong coordination with purpose-developed materials and strong lateral integration helped mitigate issues that may have arisen from a lack of background knowledge amongst instructors specializing in language. This scaffolding of SDG information is similar to the use of SDG material in teacher training programs (Knight, 2021), but it can be done within the context of an existing program. Based on the instructor feedback, it appears that this approach worked well, and supported the goals of autonomy, critical thinking development, and sustainable thinking development.

While the program could push for a more multi-disciplinary approach (Woźniak, 2022), the overall outcomes imply that the initial integration of SDGs into the program had a positive influence and could continue to be beneficial to students as the program looks forward towards improving its materials and implementation.

4.3 Pedagogical Implications

While this is a single institution, there may be some important pedagogical lessons moving forward. The first is the importance of interaction and feedback in the development of curricula. This program was developed based on feedback from students, part-time instructors, full-time instructors, and the director. This feedback balanced the interpretation of how to implement research-based pedagogy into the goal of incorporating SDGs in a CLIL approach. This feedback will be essential in developing the program moving forward. For example, the student feedback in terms of sharing their research before writing papers may lead to the development of activities to address this request. This, and other aspects of the feedback can help improve the program in terms of student satisfaction and meeting institutional goals.

In addition, a key theme that emerged in this research was the balance between cognitive engagement and cognitive load. CLIL courses in particular need to seriously consider the cognitive load on students as they are being asked to develop language skills and content knowledge simultaneously. For this course, the use of lateral integration (using the same subject matter in multiple courses simultaneously) helped to mitigate the cognitive load. In less coordinated programs, this could be more difficult to manage, however it ought to be considered by instructors as a key aspect of course development.

Finally, the key finding of this paper was that SDGs within a CLIL context can empower students to improve their learning experience and help them become modern citizens.

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