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A CONTENT ANALYSIS OF AN ADVANCED LEVEL EFL COURSEBOOK CONCERNING ENVIRONMENTAL EDUCATION

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Abstract: Environmental education plays an increasingly important role in schools, while available EFL course materials place varying amounts of emphasis on this field of instruction. The present research was conducted to evaluate an EFL coursebook in terms of its suitability for environmental education in Hungarian secondary schools. The coursebook chosen for this quantitative analysis was *English File*, selected for the widespread use of the series. Both the third edition advanced level student's book and the workbook were investigated. One of the main aims of the study was to examine the range and frequency of environmental issues included in these volumes. The other aim was to investigate the portrayal of some behaviours with significant environmental impact in the coursebook in order to explore what behavioural models they provide for students. The topics of mobility and eating out were selected for analysis, due to their salience in the coursebook and their heavy environmental impact. Content analytical methods were used for the study. Environmental content accounted for less than 1% of the analysed material and was limited in scope. In terms of mobility and eating out, the environmentally most harmful behaviours were found to be heavily overrepresented. The findings suggest that the coursebook does not meet the aims of environmental education set by UNESCO and by the Hungarian Educational Authority. The findings are expected to inform future course material designers, as well as encourage teachers to evaluate teaching materials critically in terms of environmental education.

Keywords: environmental education, ecolinguistics, EFL coursebook, content analysis, textbook analysis

1 Introduction

In view of the heightening climate crisis the world is facing, environmental education (EE) should be one of the most important areas of instruction in today's schools. Education plays a decisive role not only in imparting information, but also in forming the attitudes and values of young people, as well as moulding their behavioural patterns. It is imperative that students are educated to be able to make environmentally conscious choices and develop appropriate long-term habits. It is the responsibility of teachers, curriculum designers and coursebook authors alike that the new generations grow up to be environmentally responsible and committed citizens and decision-makers of the future (UNESCO MGIEP, 2017).

In accordance with United Nations recommendations and international agreements, the Hungarian educational system takes a holistic, interdisciplinary approach to EE (Hungarian National Council for Sustainable Development, 2013; Hungarian Ministry of Human Resources, 2020). This means that rather than being confined to science lessons, EE is diffused across the curriculum. In other words, it needs to form a part of the syllabus of every subject, including EFL. In fact, EFL instruction seems to be especially well suited to incorporating environmental content, as there is a greater degree of flexibility in assembling course materials than in the case of most other subjects (Mercer et al., 2023). The non-language specific content of instruction, often referred to as "open content space", can be easily utilised for learning about the environment, as advocated by UNESCO MGIEP (2017). Moreover, due to the status of English as a lingua franca, it is vital that students learn about the environment in English, so that they are equipped with the linguistic means to be able to participate actively in environmentally related discussions on a global level. Also, through English they will have access to a wider range of information than through their mother tongue only, helping them make environmentally conscious decisions.

EFL teachers often struggle with a lack of theoretical or methodological basis to teach EE (Hauschild et al., 2012; Mercer et al., 2023; Taylor et al., 2019). They may rely on EFL coursebooks for appropriate content and guidance. However, even EFL coursebook authors may be misinformed or not sufficiently versed in environmental matters, or they may neglect the EE dimension when assembling coursebook content. This is all the more worrying as coursebooks potentially have a decisive influence on students (Curdt-Christiansen, 2021; Timothy & Obiekezie, 2019; UNESCO MGIEP, 2017). On the one hand, they can influence students' cognitive and affective development with the range of environment-related topics they contain - and with the ones that they do not. On the other hand, they also have a covert effect on students' attitudes, perceptions and even behaviour through modelling, by presenting certain lifestyles, behaviours and choices that students might try to emulate. For instance, even though the harmful environmental effects of aviation and motor vehicle use have been widely documented (e.g. Leduc et al., 2010; Rupric et al., 2023), coursebooks may present an image of the world where flying and driving are portrayed excessively, while more environmentally friendly alternatives – such as the use of public transport and active mobility (e.g., cycling or walking) – are rarely mentioned. In a similar vein, while it has been amply proven that eating out on a regular basis takes a heavy toll on the environment (e.g. Hoolohan et al., 2013), coursebooks may portray a world where this practice features prominently, possibly influencing students in a way that is contrary to the aims of EE.

The theoretical framework of the present study is provided by educational ecolinguistics. The discipline of ecolinguistics has been defined as the "study of the impact of language on the life-sustaining relationships among humans, other organisms and the physical environment", with a normative orientation towards

preserving such relationships (Alexander & Stibbe, 2014, p.104). It aims to reveal ecological ideologies underlying language data, which shapes people's concern for the environment (Mou & Wu, 2023). It is also used to expose language use propagating ecologically harmful ideologies (Zahoor & Janjua, 2020). Steffensen (2024) describes educational ecolinguistics as a field of ecolinguistics, linking this critical subdiscipline of linguistics to environmental education. In the present paper, the term 'ecology' is used in the classic sense introduced by Haeckel in 1866, meaning the science of the relations of any organism to the environment, including both the organic and inorganic conditions of existence (Egerton, 2013).

Although it is a relatively new field of research, several studies have been published on EFL coursebook contents regarding environmental education (see later in section 2.4). These studies typically investigated the environment-related topics incorporated in coursebooks; however, to my knowledge, no studies seem to have focused on the covert environmental agenda of coursebooks: the appropriacy for EE of coursebook content that is not explicitly related to environmental issues. The present study forms part of an attempt to fill this research gap.

The main aim of the present quantitative study is to explore the contents of an EFL coursebook in terms of their suitability for the purposes of EE. The issues addressed here include both the overt and the covert environmental content of the coursebook. The overt environmental content refers to the frequency and range of environment-related topics the coursebook contains. The covert environmental content refers to the models of behaviour the coursebook presents which may be deleterious to the environment. In particular, behavioural patterns related to transport and food are addressed as these have a disproportionately large environmental effect at the level of the individual (Ivanova et al., 2016; Kling & Hough, 2010).

2 Review of the literature

2.1 Call for environmental education

Although EE was given very limited attention until the past decade, the term 'environmental education' has been in use since the late 1960s. One commonly employed definition, adopted by UNESCO in its landmark Tbilisi Declaration, is the following:

Environmental education is a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action (United Nations Environment Programme, 1978).

The definition emphasises, besides the cognitive dimension, the role EE should play in shaping student motivations and attitudes as well as their readiness to take action. It should be noted that some of the attention EE has been receiving lately is obscured for reasons of nomenclature: the term 'education for sustainable development' (ESD), introduced in UN Agenda 21 in 1992 and employed by UN and UNESCO documents, is a term largely building on EE but having a broader focus, encompassing social, political and quality of life factors besides targeting environmental concerns (Ramírez Suárez et al., 2023). In recent decades the two terms have often been used as synonyms (see e.g. Taylor et al., 2019). Hungarian official educational documents prefer to use the former term, or sometimes both juxtaposed, without a clear distinction.

At the World Conference on Education for Sustainable Development (2021), UNESCO demanded in the strongest terms urgent action to address the dramatic environmental challenges of the world. They advocate ESD as the means to provide everyone with the knowledge, skills, values and attitudes to become agents for sustainable development and be able to take responsible action as citizens. UNESCO also urges signatories to ensure that ESD is a fundamental element of their education systems at all levels from kindergarten to tertiary and adult education. They promote a whole-institution approach, with environmental and climate action as a curriculum component in all core subjects (UNESCO, 2021). UNESCO's Education 2030 Agenda spells this out in the following way: "environmental learning should be integrated across the curriculum [...] all teachers should be versed in Education for Sustainable Development, including in relation to environmental education, climate change and biodiversity" (UNESCO, 2021). In fact, these concerns are not new. UNESCO, along with a number of educational researchers, have been urging for an interdisciplinary, cross-curricular approach in the teaching of environmental education for decades (e.g. UNESCO, 1975).

Similar goals were voiced recently on a European level by the Dublin Declaration on Global Education (GENE, 2022). Drawn up by a partnership of national and international organisations across Europe, it advocates for more emphasis on Global Education, including planetary sustainability and climate justice.

2.2 Requirements of environmental education in the Hungarian secondary EFL context

At present, environmental education is not taught as a compulsory school subject in most Hungarian educational institutions. Instead, it is theoretically distributed across the curriculum: EFL teachers, like any other teachers, are expected to convey information on and develop students' awareness of environmental issues (Hungarian Educational Authority, 2019, 2020). In the

following section, the requirements and guidelines regarding EE in Hungarian state schools are presented.

One of the basic documents with respect to EE is the National Sustainability Strategic Framework (Hungarian National Council for Sustainable Development, 2013). It is based on the EU directives 'Strategy for Sustainable Development' of 2001 and 2006, and is valid between 2012 and 2024. It lays down the basic principles and determines the courses of action to be followed in Hungary regarding sustainability. The document states that "in public education, it is necessary to strengthen the acquisition of knowledge related to sustainability [...] This may be included in the National Core Curriculum: the knowledge would be passed on to students in various subjects during primary and secondary education" (p.62).

The Strategic Plan on Public Education for 2021-2030, prepared for the European Union, issued by the Hungarian Ministry of Human Resources (2020), claims that "special attention is to be paid to environmental education, sustainability and protection of the environment. ... there must be content suitable for developing students' environmental awareness both in the curricular and extra-curricular activities." (p.30). It also claims that ESD and EE together are among the seven developmental pathways deemed the most important for students' coordinated intellectual-mental-physical development.

The Guide to Frame Curricula was issued to regulate foreign language teaching in secondary schools (Hungarian Educational Authority, 2020), based on the guidelines laid out by the National Core Curriculum modified in 2020. It recommends that in grades 9 and 10, 10% of all EFL lessons be devoted to "environment and nature", including environmental protection. This figure drops to 6% in grades 11 and 12. However, such issues feature prominently among the requested topics for the school-leaving English examination. There is a wide range of topics recommended in the Guide to Frame Curricula which are relevant for EE, including pollution, climate change, extinction of plant and animal species, alternative energy sources, waste management and nature conservation.

Foreign language teachers, like all other teachers in Hungarian state-run schools, are expected to be competent in environmental education as well as to be able to authentically represent the values of sustainability, as specified by The Hungarian Educational Authority (2019). This forms the basis of one of the nine key pedagogical competences in which every teacher is required to be proficient. The Strategic Plan on Public Education for 2021-2030, prepared for the European Union, cites the need to emphasise EE and the protection of the environment as the "aim of the decision to include sustainability education in the teacher competences in the teacher certification procedures" (Hungarian Ministry of Human Resources, 2020).

One manifestation of EE in state schools is ‘Sustainability week’, a series of events that schools are encouraged to organise annually. However, it is largely left to the discretion of schools and individual teachers whether, to what extent and in what way they join in (Z. Maruzsa, personal communication, November 4, 2024).

2.3 Previous research on environmental education in Hungary

In Hungary, research on EE has not been extensive and has rarely involved the study of EFL contexts. In the following, an overview is given of the studies focusing on EE in Hungarian education. Most of these studies were not specific to EFL, however.

Some of the research into EE in Hungary was conducted in the early 2000s by Havas et al. (2004), in a large-scale study of 52 Hungarian schools. The researchers point out the low levels of EE nationwide, especially in non-science classes, and remark that even where lexical knowledge is imparted, it is frequently not transformed into responsible behaviour patterns. Other authors addressed the role of teacher-training with respect to EE. In Hungary the majority of EFL teachers do not receive any explicit professional training in the field of environmental education, either as part of their university studies, or in the form of in-service training. In early studies on EE, both Radácsi (2004) and Orbán (2007) urged a reform of pre-service teacher training, stating that although the pedagogy of environmental education should be present in all school subjects, teachers are unprepared for this role. Subsequently, Farkas-Ökrös and Ütő-Visi (2016) investigated EE in the light of the National Core Curriculum of 2012. They maintain that even though the National Core Curriculum of 2012 had a strong focus on EE, practical implementation was often unsatisfactory. Recent findings have echoed these earlier concerns. Based on an extensive analysis of Education for Environmental Citizenship, conducted in 28 European countries (Hadjichambis et al., 2019), Kovách et al. (2021) point out the highly unfavourable status of EE in Hungary, compared to many other European countries. Using a comparative analysis of case studies, the authors claim that EE is almost invisible in Hungarian education.

As regards foreign language education and course materials, Farkas-Ökrös’s (2016) study offers some insight relevant for EE. She conducted a study of foreign language teachers with backgrounds ranging from primary to adult education, with a rather small sample size. Nearly half the teachers she surveyed claimed to have some level of difficulty teaching environmental issues in the foreign language. Although it is difficult to make claims based on such a small sample size, the most often named reason for such difficulties was the shortage of supplementary teaching material.

A more optimistic outlook on EE is apparent in Divéki's recent study (2024) on secondary school EFL teachers' views and practices on global issues. In her questionnaire study, the almost 200 participating teachers claimed to be very likely to include aspects of climate change in their classes, while the topic of water pollution and water scarcity also appeared to be occurring frequently.

2.4 Previous research into EFL coursebook content in terms of environmental education

In the following, studies concerned with environmental content in EFL coursebooks are described. First, an overview of studies is given from various countries, followed by a discussion of research conducted in Hungary. All of these studies focused on explicit, overt environmental content.

2.4.1 International studies

In an extensive review of international ELT coursebooks, Jacobs and Goatly (2000) examined 17 randomly selected volumes, published between 1990 and 2000. They found that a mere 2% of all the activities contained in the coursebooks were related to environmental issues. Moreover, activities promoting active involvement in environmental issues were very rare.

The situation seems to have improved since then, but it shows considerable variation. Xiong (2014) explored the contents of 28 EFL coursebooks used in China, and found that only 4% of all units were concerned with the environment. Al-Jamal and Al-Omari (2014) investigated 10th-grade EFL coursebooks used in Jordan. They lament the scarcity of global ecological themes in the coursebooks, although no exact figures are given. On the other hand, Mliless and Larouz (2018), analysing seven state-mandated EFL coursebooks used in Moroccan secondary schools, found that one of each ten chapters in them was devoted to EE. In an extensive review of the literature, Taylor et al. (2019) found that one of the most commonly cited barriers to EE in secondary education was the insufficiency of resources. In a recent study with an international scope by Mercer et al. (2023), 75% of EFL teachers stated they did not use any coursebooks when addressing environmental issues in their teaching practice. The authors concluded that the coursebooks offered limited support and opportunities for exploiting environmental issues.

Although the inclusion of environmentally related topics in coursebooks appears to be on the rise, many researchers are concerned with the quality of this content and its efficacy with relation to EE. Jacobs and Goatly (2000) pointed out that in the coursebooks they evaluated, activities promoting active involvement in environmental issues were extremely rare. Xiong (2014) voiced

similar concerns, claiming that the coursebooks he analysed tended to treat students as observers rather than encouraging action, a phenomenon Stibbe (2004) termed "shallow environmentalism".

Using critical discourse analysis, Stibbe (2004) examined 26 textbooks in Japan. The textbooks were explicitly focused on the environment and were written by native speakers of English but mostly designed for Japanese EFL students. He claims the textbooks fail to enhance environmentally conscious attitudes and values in students. He argues that teachers and students alike should develop a critical awareness of textbooks, going so far as to say that the English language should become less of "a medium for the propagation of ecologically destructive values" (p.257). Yonata et al. (2022) come to a similar conclusion, urging language teachers to question coursebook content and use it critically.

Curdt-Christiansen (2021) shows how children's environmental knowledge and attitude development are limited by the contents of the coursebooks and the topics included in them. Similarly, Timothy and Obiekezie (2019) underline the responsibility of coursebook authors and publishers, urging deliberate action to incorporate environmentally important issues in English coursebooks. This is in line with the UNESCO MGIEP guidelines (2017), which make it clear that more is required of English language coursebooks in creating a sustainable future, and underline the critical role coursebook authors and publishers play in education.

2.4.2 Hungarian studies

In the Hungarian educational landscape, Rácz (2019, 2022) conducted studies on EE in EFL coursebooks. Her research was groundbreaking, since – as she points out – previous studies on foreign language coursebooks in Hungarian contexts had been scarce, and specifically, there had been hardly any research conducted into EFL coursebooks (Rácz, 2022). Using content analysis, Rácz examined a range of B1 and B2 level EFL coursebooks, mostly published for an international market, with years of publication ranging between 2007 and 2020. In her study published in 2019, Rácz found that the number of exercises containing environmental issues was on average 3% of all the exercises in the coursebooks. Moreover, one of the five coursebooks examined did not feature any exercises with references to environmental issues.

In her further coursebook analyses, Rácz examined a total of 207 reading passages in 12 student's books (2019). She deemed only ten of the passages, that is, below 5%, suitable for EE. Moreover, of the 12 books examined, 5 did not contain any reading passages that would be suitable for transmitting knowledge or raising awareness about the environment. Interestingly, the B2 level coursebooks investigated contained fewer passages suitable for EE than the B1

books, contrary to the author's expectations, who notes that with the increase of foreign language proficiency, it could be reasonably expected that one of the most pressing issues of the 21st century, the degradation of the environment, should be increasingly in the forefront of foreign language education.

2.5 Research niche and research questions

As shown above, apart from Rácz's studies (2019, 2022), which are only available in Hungarian, there has been a scarcity of research done on EE in Hungarian education, especially with respect to EFL, despite the importance attached to EE both internationally and by Hungarian educational authorities. Moreover, no other studies have examined the role of EFL coursebooks in EE in the Hungarian educational context. The present study aims to fill part of this research gap. While there are similarities with Rácz's publications (2019, 2022), which allow for interesting comparisons, the present study investigates a different coursebook, written for students at a different level of proficiency, as well as addressing different research questions. In addition, the present study follows a sentence-level analysis, resulting in a much more detailed approach. Furthermore, it also addresses environmentally harmful behavioural models in EFL coursebook content, research into which has been scarce on a global scale.

This quantitative study focuses on the advanced level volume of the third edition of *English File* (Latham-Koenig et al., 2015). The coursebook was selected as it is part of the most frequently used coursebook series in Hungarian secondary school contexts. Employing content analysis, the study aims at investigating environmental issues included in the coursebook as well as the portrayal of specific environmentally high-stake behaviours. Two topics of great environmental concern are investigated, chosen for their strong environmental impact and for their salience in the coursebook: mobility and eating out. The research seeks answers to the following questions:

(1) What is the frequency and thematic range of environmental issues presented in the selected EFL coursebook?

(2) What are the relative frequencies of different forms of mobility depicted in the selected EFL coursebook? How do these frequencies compare to real-life choices?

(3) What are the relative frequencies of eating out vs. eating in depicted in the selected EFL coursebook? How do these frequencies compare to real-life choices?

3 Methodology

3.1 Research design

The study employs a quantitative approach to textbook analysis, building on Krippendorff's (2004) treatment of content analysis and Weninger's (2018) and Vitta's (2021) work on textbook analysis. Two novel checklists were developed and piloted for the purposes of data collection. Coding followed a priori, closed categories. The following section describes the checklists, the coding and piloting process, as well as the rationale behind these decisions in more detail.

3.2 Coursebook

For the purposes of the study, one of the internationally marketed coursebooks was selected that were officially approved in Hungary for use in state schools at the time the study was conducted (Hungarian Educational Authority, 2023). While EFL teachers in state schools in Hungary are free to choose the coursebooks they use for teaching, state-approved books are available to students free of charge, therefore, the overwhelming majority of teachers use these in the Hungarian public secondary educational domain. While it is difficult to determine which coursebook is used most widely in Hungarian secondary schools, as sales statistics on coursebooks are not publicly available, personal communication by the Technical Director of the book supply company KELLO Könyvtárellátó Nonprofit Kft. [KELLO Library Supplier Non-Profit Ltd] indicates that *English File* (Latham-Koenig et al., 2015) was the series sold in the greatest number to secondary schools in 2023. Öveges and Csizér's study (2018), although not very recent, also indicates the widespread use of the same series.

The *English File* series, published by Oxford University Press, is intended for an international young adult market and is marketed worldwide. While the fourth edition, published in 2021, has recently appeared on the list of state-approved coursebooks, the third edition, published in 2014-2015, was still more broadly used and better known by teachers at the time of the study. Therefore it was selected for analysis.

The advanced level coursebook, corresponding to the C1 level on the CEFR scale, was chosen for investigation. A high level of English was selected so that the language level used would not be an obstacle to in-depth discussion of such complex, often abstract topics as environmental issues. The entire textual contents of both the student's book and the workbook were analysed, including the transcripts of the listening materials. Analysis did not extend to images but was restricted to texts. In this study, the student's book and the workbook of the same level of a series are collectively referred to as one coursebook.

3.3 Instruments

3.3.1 Compiling a checklist of topics related to environmental issues for textbook analysis

As pointed out by Mercer et al. (2023), there is a lack of environmental frameworks for choosing or evaluating coursebook content for environmental education. For want of a readily applicable framework, a new research instrument was developed for the purposes of the study. The research instrument consists of a list of topics based on UNESCO's Sustainability Development Goals (United Nations, n.d.). Based on the lists of targets specified for the 17 Sustainability Development Goals, the ones deemed relevant for environmental education were selected. After combining several items and eliminating overlaps, a checklist of topics was created, which was subsequently used to judge whether the coursebook contained environmental issues.

As a first step of validating the checklist, intra-rater reliability checking was employed. The entire workbook was recoded approximately one month after the initial coding process. Minor instances of differing values were found; the total number of corrections needed was below 5%. As part of the validation procedure, expert judgement was sought from a biology teacher, who is also an expert in environmental education. The expert was requested to comment on the checklist in the form of a think-aloud protocol, and the research instrument was modified based on her suggestions. The checklist is presented in Table 1.

climate change, global warming
renewable energy, saving energy
use of natural resources
air quality
water pollution
water shortage, water use efficiency
waste production and management
food waste
environmental effects of meat production and consumption
natural disasters
ecosystems
natural habitats
deforestation
desertification
land and soil degradation
biodiversity
extinction of species, endangered species
poaching and trafficking of protected species
invasive species
overfishing and destructive fishing practices

Table 1. Checklist of topics related to environmental issues, intended for textbook analysis

The total number of sentences in the student's book was estimated to be approximately 9,430, based on the average sentence counts of five randomly chosen pages using an online random number generator. With the same method, the workbook was estimated to contain approximately 3,500 sentences in total. That is, the analysis was based on 12,930 sentences altogether. The frequency of the occurrence of environmental issues was calculated by comparing the number of occurrences to these baseline values.

3.3.2 Establishing categories for the analysis of the portrayal of environmentally high-stake behaviours in the coursebook

To assess how well the behavioural models in the coursebook are adapted to environmental education, another means of data collection needed to be designed. The Footprint Calculator developed for the World Wildlife Fund (WWF-UK, 2021) served as a basis for this research instrument. The Footprint Calculator is a widely used tool firmly backed by theoretical calculations as well as empirical research, which is used to assess an individual's impact on the environment. Rather than focusing on knowledge or attitudes about the environment, it measures the effect of one's lifestyle and everyday behaviours. The calculator uses estimates of the amount of greenhouse gases – primarily carbon dioxide, methane and nitrous oxides – produced as a consequence of one's daily activities, and converts these into a figure of tonnes of carbon dioxide equivalent per year. In this manner, the environmental impact of individual behavioural patterns can be numerically assessed and used for purposes of comparison.

According to the WWF, the main factors determining one's environmental impact can be divided into four major categories: 'Food', 'Travel' 'Home' and 'Items'. The category of 'Food' includes the extent of one's meat consumption, eating out, food waste and whether one buys locally produced food. The category 'Travel' covers personal and public transport use for leisure and work, the types of transport one uses and the duration of time one spends travelling, as well as the number and distance of flights taken in the past year. 'Home' encompasses the type of energy used in the home, one's habits of energy use, energy-saving measures employed as well as the type and size of housing one lives in. The category of 'Items' refers to purchases of a wide range of consumable items, as well as waste recycling.

First the frequency of references to the four major categories ('Food', 'Home', 'Travel' and 'Items') in the coursebook was investigated. All the reading passages in the third edition of the *English File* student's book, altogether 26 texts, were used to identify references to these four categories. When comparing the number of occurrences for the four categories, it was found that words fitting the category of 'Home' and 'Items' were relatively rare, the former occurring in 23%, the latter in 27% of all the 26 reading passages examined. Therefore, they were

excluded from subsequent analysis. However, there were many references to 'food' and 'travel': words related to each occurring in 58% of the passages. These two categories were deemed to be the most suitable for detailed investigation.

Within the topic of 'Travel', different means of mobility were separated for analysis. The categories were established through an iterative process, by employing the constant comparative method (Glaser, 1965). The final comprehensive categories were air travel, private motor vehicles (including cars, taxis and motorcycles), active mobility (walking and cycling) and public transport (potentially including urban and non-urban forms of transport, i.e., buses, trains, underground and light rail services, coaches and trams).

Within the topic of 'Food', the most salient categories were eating out versus in. The final category of 'Eating out' encompassed references to having meals in restaurants, self-service restaurants, hotels and canteens, as well as using food delivery services. 'Eating in' included all references to eating at home or preparing meals for oneself or one's family, and taking packed, home-prepared meals to school, work or outings.

Intra-rater reliability was checked by recoding the full workbook three weeks after the first round of coding. The process was repeated for both the 'Travel' and the 'Food' categories. The number of differences between the initial coding and the repeated procedure was below 5% in both categories.

3.4 Data collection and analysis

Following Krippendorff's (2004) categorization, sampling units, coding units and context units were distinguished. The sampling units, defined as "distinguished for selective inclusion in an analysis" (p.98), were the entire student's book and the entire workbook analysed. The coding units, defined as "units that are distinguished for separate description, transcription, recording or coding" (p.99), are recommended to be as small as possible, to ensure inter-rater agreement and to increase the reliability of the coding process. Therefore, in the present study a sentence-level analysis was conducted.

The third type of unit, the context unit, helps to identify the meaning of a coding unit in a given context. The context unit is not counted, it typically surrounds the coding unit, and may overlap with other context units. The same context unit may serve to clarify the meanings of several coding units. A larger context unit is expected to enhance the validity of the content analysis (Krippendorff, 2004, pp.101-102.) In the present study, the coursebook exercises were employed as context units, following the structure provided by the authors.

Data were gathered according to categories defined a priori. Tallies were kept of sentences fitting each category. All data collection was done manually,

not by computerized means. This was due to the exploratory nature of the study, and to the high number of possible search words in each category, which could have led to the omission of some of the data. For instance, references to air travel included the words flight, airport, runway, check-in, Gatwick, baggage reclaim, and a high number of other words, where the full list would have been impossible to predict in advance.

Owing to the nature of the data collected, statistical analysis of the results was not feasible. Nevertheless, the frequency data do allow comparisons to be drawn and interpretations to be made. The data from the student's book and from the workbook were pooled together, as the two books were published as part of the same coursebook package, complementing each other. The data are presented in a numerical and visual form to indicate tendencies that need to be explored in future, large-scale studies.

4 Results and discussion

4.1 Environmental issues in coursebook content

Throughout both the student's book and the workbook, none of the environmental issues in the checklist were selected as the focus of any of the twenty chapters. Moreover, on no occasion were any of them the central theme in any of the reading or listening passages or even of any of the exercises. A few sporadic, sentence-level references were made to eleven of the twenty environmental issues specified in Table 1. A few issues occurred repeatedly, such as natural habitats, species extinction and endangered species, the environmental effects of meat production and consumption, or waste production. However, nearly half of the topics, especially those with an ecological focus, were not included at all in either of the two volumes (see Appendices A and B).

Altogether 53 sentences were identified referring to environmental issues in the student's book, which contains an estimated 9430 sentences. This amounted to a mere 0.56%. In the workbook, 17 such sentences were identified out of an estimated 3500 sentences, equating to an even lower 0.49%. The combined data for the student's book and the workbook constituted 0.54% of the total number of sentences. The impact of meat consumption and natural habitats were the only environmental issues given further context beyond sentence level. All the other occurrences were cursory mentions of the topics, with no further elaboration. Moreover, some of the environmentally related content was found to be simplistic to the point of being misleading. For instance, the sentence "What was the last animal to become extinct?" (p.51), does not align with the estimated rate of extinction of between 200 and 2000 animal species each year (World Wildlife Fund, n.d.).

It should also be noted that the category of environmental issues with the highest frequency of occurrences was that of natural habitats, such as visiting

animals in their natural habitats in Borneo, Malaysia, Kenya or Madagascar (student's book, p.138). However, these descriptions, instead of drawing attention to issues of environmental concern, promote environmentally harmful practices, such as long-distance flights and the disturbance of the animals in the wild, as well as the frequent destruction of their natural habitats for the sake of global tourism.

4.2 Covert environmental agenda in the coursebook

4.2.1 Mobility

Mobility, referring both to short-distance daily transport and to long-distance travel, was a highly salient topic throughout both volumes. Long-distance travel, several times to exotic locations, featured repeatedly among the focal topics of the reading and listening passages. Examples include promoting tourism to Australia (workbook, p.9), travelling to Uganda (student's book, p.62) or around the world (workbook, p.55), and even taking 60 to 70 flights per year (student's book, p.83), the uncritical portrayal of which is highly objectionable with regard to EE. References to daily transport also occurred with a high frequency, yet the number of references to the different means of mobility showed large differences.

The sentence-level analysis of the two volumes yielded the results presented in Table 2 with respect to means of transport. In the student's book and the workbook, altogether 496 sentences were identified where any forms of mobility were unambiguously referred to. The category of private motor vehicles featured primarily cars (in 172 sentences), with a small number of references to taxis, motorcycles, etc. The category of public transport was restricted almost exclusively to trains, buses and the underground (in 33, 29 and 14 sentences, respectively). The category of active mobility comprised walking and cycling with 33 and 21 sentences.

	N of sentence-level references in student's book	% in student's book	N of sentence-level references in workbook	% in workbook	Combined frequencies	% of combined data
Private motor vehicles	135	37	68	51	203	41
Aeroplanes	130	36	31	23	161	32
Public transport	64	18	14	11	78	16
Active mobility (walking and cycling)	34	9	20	15	54	11
Total	363	100	133	100	496	100

Table 2. Number of sentences with references to different types of mobility in the *English File* advanced student's book and workbook

Table 2 illustrates the data collated into the four large categories of mobility. It can be seen that the category of private motor vehicles was the most salient. In the workbook, it represented more than half of all instances of mobility. Private motor vehicles, such as cars, are featured in the workbook almost five times as often as public transport. The combined data of the student's book and the workbook yielded more moderate differences, but the pattern of the data was similar: private motor vehicles occurred almost four times as often as all forms of active mobility together, and 2.5 times as frequently as all forms of public transport combined. The second most frequently occurring category was that of aeroplanes, which accounted for approximately one third of all instances of mobility. Figure 1 illustrates the above points.

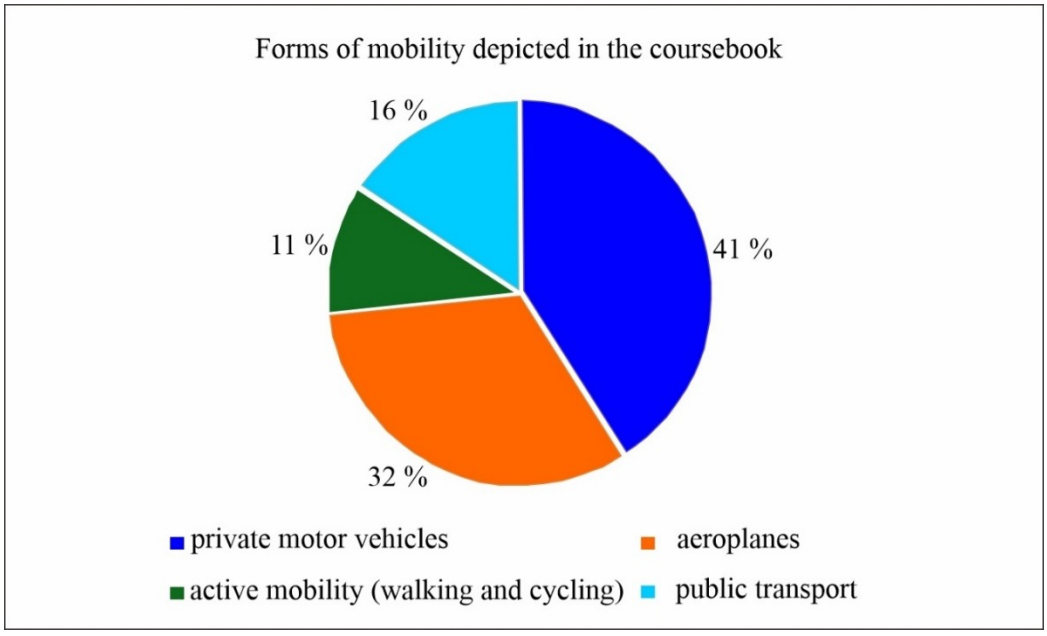

Figure 1. Contrasting forms of mobility, based on the number of sentences with references to mobility in the *English File* advanced student's book and workbook

All in all, the results show a highly prominent portrayal of environmentally harmful travel options such as cars and aeroplanes, while environmentally friendlier forms of mobility, such as public transport, cycling and walking, rarely figure in the world depicted by the coursebook. This suggests that the book falls short of encouraging environmentally conscious attitudes and behaviours in terms of travel choices.

In the light of the above, the question arises how far the conspicuous differences in the use of cars, aeroplanes and other forms of mobility portrayed in the coursebook can be attributed to real-life conditions in the daily use of transport options. In a recently published, large-scale study, Prieto-Curiel and Ospina (2024) compared various travel modes in nearly 800 cities across 61 countries. It should be noted that the study only included data on land transport within cities. The study compared the number of weekday trips for three transport modes: cars (including taxis, motorcycles, SUVs, pickup trucks and mobility

apps), public transport within cities (including buses, metros and trams) and active mobility (including walking and cycling). The world average ratio for the three modalities was 51% cars, 26% urban public transport and 22% active mobility. In Europe, the use of cars was lower than the world average figure, averaging 45%, while both the percentages of public transport and of active mobility were higher, at 27% at 28%, respectively. European data are shown in the present study due to the large differences in transport use over the world. Since the coursebook analysed was written and published in the UK, European figures may be indicative of the daily realities of the coursebook authors as well as for a large part of the target audience. Hungarian data, though less recent, point to very similar figures to the European average shown above, with 46% of people using cars as their main mode of transport (Hungarian Central Statistical Office, 2013). The data reported by Prieto-Curiel and Ospina (2024) are represented in Figure 2, alongside the data gleaned from the two volumes of the coursebook. As compared to Table 2, the data for the coursebook were modified to parallel the categories used by Prieto-Curiel and Ospina (2024): in order to represent urban land transport, the data for aeroplane and railway use were omitted. Figure 2 demonstrates that public transport use is severely underrepresented in the coursebook, with percentages of little over one-half of real-life values. This is accompanied by a large overrepresentation of cars and a moderate underrepresentation of active mobility.

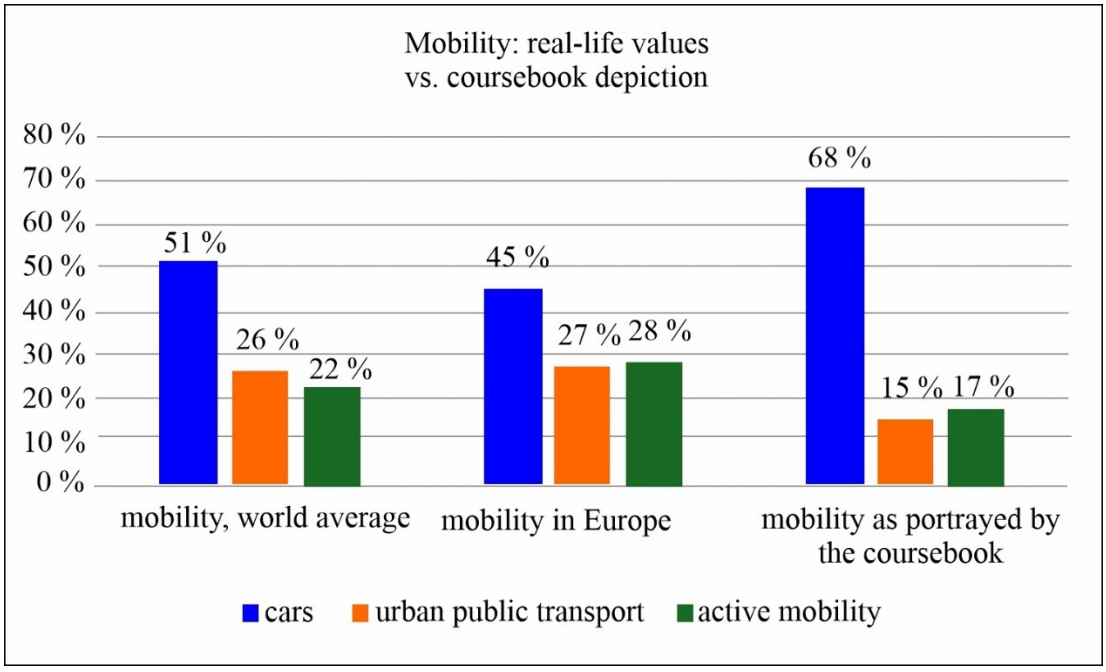

Figure 2. Real-life figures for different modes of mobility compared to occurrences in the *English File* third edition advanced student's book and workbook

The comparison of frequency of flying shown in the coursebook versus real-life statistics is even more striking. Currently, the global average frequency of flying is one instance per every two years per passenger, based on data provided by the Statista Research Department (2024). For UK citizens, the average is

approximately one journey by air annually, based on statistics issued by the Department for Transport (2019). In contrast, in the same year each UK citizen took almost 1000 trips by other means of transport. Regarding the coursebook representation of flying, it can be seen that references to flying occur with very high frequencies, more than twice as often as references to all types of public transport use combined (on 161 vs. 78 occasions, see Table 2).

Overall, the portrayal of travel options in the coursebook seems to be highly distorted as compared to real-life uses of various transport modes. Environmentally deleterious modes such as car and air travel are severely overrepresented, while environmentally beneficial modes such as public transport and active mobility are rarely mentioned. The image of the world projected by the coursebook is particularly alarming when we consider the values and behavioural patterns regarding transport options that it would be the role of EE to inculcate in students.

4.2.2 Eating in and out

Besides travelling, food is another major segment where individual choices and behaviour can have a great impact on the environment. As a consequence, environmental education plays a crucial role in educating students to make conscious decisions in this field. Eating out, food choices and food waste all contribute to one's environmental footprint. Eating out may have a detrimental effect on the environment in various ways, partly through a greater amount of discarded leftovers, but also due to increased energy use for building maintenance, transport, packaging, etc. A study by Kling and Hough (2010), for instance, suggests that the environmental impact of eating out may even be four times as high as preparing and eating meals at home. In another study, based on an analysis of dietary choices of 60.000 Japanese households, restaurant meals were found to be the greatest drivers of differences between low- and high-CO2 emission diets (Kanemoto et al., 2019). For this reason, the topic of eating out was also chosen for investigation.

In the student's book, altogether 112 sentences were identified in the "eating out" category. The majority of these items, 98 sentences, referred to restaurant or hotel meals. In contrast, only 46 sentences belonged to the category of "eating in". In the workbook, there were 41 sentences depicting eating out, and 48 depicting eating in. The combined data for the two volumes of the coursebook resulted in 153 sentences featuring eating out and 94 sentences indicating eating in. A clear majority, 62% of all sentences identified, depicted eating out, the environmentally more harmful option. The findings above are presented in Table 3.

	N of sentence-level references in student's book	% in student's book	N of sentence-level references in workbook	% in workbook	Combined frequencies	% of combined data
Restaurant meals	98	62	31	35	129	52
Food delivery	8	5	2	2	10	4
Meals in canteens and cafeterias	4	3	1	1	5	2
Eating out - unspecified	2	1	7	8	9	4
Eating out - total	112	71	41	v	153	62
Eating and preparing meals at home	43	27	42	47	85	34
Taking packed, home-prepared meals	3	2	6	7	9	4
Eating in - total	46	29	48	54	94	38

The image conveyed through the two volumes of the coursebook shows a world where people eat in restaurants on a regular basis, rather than preparing meals at home or consuming home-made meals. This is in fact not the case either in the UK, the place of publication of the coursebook, or in Hungary. In a British poll, conducted in 2023, only 9 per cent of respondents stated they bought food in restaurants once a week, while 52 per cent claimed never to buy food in restaurants (Statista Research Department, 2023). A similar poll was conducted in Hungary in 2019. While not directly comparable to the British findings, the results were similar: only 41 per cent of the respondents claimed to visit any kind of restaurant at least once in half a year, whereas only 13 per cent eat in restaurants on at least one occasion per month (Infostart, 2019).

Overall, restaurant visits in real life, both in the UK and in Hungary, seldomly occur compared to preparing and eating home-made meals. This is in sharp contrast with the image projected by the coursebook. The central problem with this image is not that it is a distorted image of reality for most citizens, but that it may have a negative impact on the environmental awareness of students.

The findings of the study concerning the aspect of eating out are similar to those related to transport use. Both present behavioural choices that have severely damaging impacts on the environment – such as flying, driving and eating out –as if they occurred far more often than they do in reality. Thus, they project an image of the world to scores of students that runs counter to the aims of EE.

5 Conclusion

The present study was aimed at assessing the suitability of an EFL coursebook for EE. The coursebook was expected to have adopted an environmentally conscious approach, in accordance with the requirements of UNESCO guidelines and the directives of Hungarian educational authorities. Besides the overt handling of environmental issues, covert messages about environmentally relevant behaviours, through the portrayal of choices with significant environmental impact, were also evaluated.

First, the frequency and thematic range of topics overtly related to environmental issues were investigated. Such topics were found to appear only rarely in the coursebook: in less than 1% of all sentences. On the few occasions that they do, they are nearly exclusively limited to casual, sentence-level mentions, without any context beyond the boundaries of the sentence. Furthermore, the selection of topics of environmental concern included in the coursebook was found to be rather narrow. Even more striking, however, was the dimension of covert messages conveyed through the depiction of environmentally high-stakes choices. The relative frequencies of different forms of mobility and of eating out were examined, as well as being compared to average real-life behavioural patterns. When environmentally friendly and harmful options were compared, the latter were represented with higher frequencies in all cases. Moreover, the depictions of harmful options were more frequent than real-life occurrences in all cases examined. Overall, based on the findings it appears that the coursebook does not meet the goals of EE.

One of the limitations of the study is its focus on one single coursebook, which allows for limited external validity. Since the range of coursebooks used in Hungarian schools is fairly wide, the research should be extended to include various coursebooks intended for the same market. Also, in the present study only two aspects of behaviour, mobility and eating out, were examined in detail, while there are many other aspects relevant to EE that may be worth investigating. A further limitation concerns the comparison of coursebook content with real-life statistics, since the former has to meet several requirements, such as language examinations, and is not meant to be an accurate representation of real life.

If future, large-scale investigations bear out the findings of the present study, the implications should definitely be acted on. They may be relevant for EFL coursebook publishers as well as for educational decision-makers, by drawing attention to discrepancies between coursebook content and international as well as Hungarian guidelines concerning EE in EFL. It is also hoped that the findings will encourage teachers to critically evaluate any teaching materials they use with respect to EE, and make more informed choices, as well as mitigating the shortcomings of course materials by supplementing them with ones promoting environmental awareness.

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