

Life Skills Instruction as a Delicate Balance: Equipping Students to Navigate Life Challenges in Upper Secondary English and Social Studies Classes

Sunanda Mohanty, **Dr. Prasanta Kumar ParidaSiddhiswarupa Swain**

*PhD Research Scholar with KIIT School of Rural Management, KIIT DU, Patia, Bhubaneswar.

Mail:sunanda.mohanty@kiss.ac.in

**Associate Professor with KIIT School of Rural Management, KIIT DU, Patia, Bhubaneswar.

Mail:prasanta.parida@ksrm.ac.in

*** PhD Research Scholar with KIIT School of Rural Management, KIIT DU, Patia, Bhubaneswar.

Mail:swarupasiddhi@gmail.com

ABSTRACT

Teenagers face mental health issues in a post Covid19 environment marked by conflict and heightened digitalization, requiring strong and resilient youth. In spite of international guidelines, instances of life skills education (LSE) in educational settings are limited. This research included classroom observations of naturally occurring teaching in 18 Indian upper secondary classrooms and examined how LSE was applied in English and social science classes to aid students in addressing personal, societal, and future challenges. The research indicated that LSE is more prominent in English than in social sciences and appears more frequently in general education compared to vocational studies, providing valuable insights for the integration of LSE into teaching practices and policies.

Keywords: Life skills education, English, Social science, Upper secondary school, Classroom observations

1.Introduction

Numerous young individuals encounter mental health issues stemming from heightened societal expectations, digital advancements, and global difficulties like conflicts and environmental emergencies, alongside concerns about belonging, excelling, and readiness for their future. School serves as the main environment where students experience their teenage years, playing a vital role in imparting important knowledge and skills for the future. Educational institutions are responsible for fostering mental health and life skills education (LSE) that can lead to a rewarding life (Ekornes & Øye, 2021; Spratt, 2016; Thurston & Green, 2021). Consequently, it is essential to examine how these elements are incorporated into educational strategies, curricula, and schooling. This article seeks to illuminate LSE within the Indian framework after a curricular change that established LSE as a key focus.

LSE-related teaching methods focus on enabling youth to take control of their lives by effectively managing both success and failure while confronting personal and practical obstacles (Indian Directorate for Education and Training [NDET], 2017; World Health Organization [WHO], 2020). As per WHO (2020), LSE encompasses cognitive, emotional, and social abilities that are vital for improving both mental and physical well-being. The WHO (1993, 2020) described LSE as the “capabilities for constructive and adaptive behavior, allowing individuals to address the challenges and requirements of daily life” (p. 3).

They suggested a structure that identified five key domains of LSE: (a) decision-making and problem-solving, (b) creative and critical thinking, (c) effective communication and interpersonal skills, (d) self-awareness and empathy, and (e) managing emotions and stress (WHO, 1993; 2020). The WHO framework emphasizes that LSE can vary depending on different contexts and cultures (United Nations International Children's Emergency Fund, 2016; WHO, 2020). Studies indicate the necessity to tackle possible new issues that the definition overlooks (Evertsen & Brevik, 2024; Hvalby et al., 2024). Consequently, and taking into account initiatives impacting educators and learners in numerous countries, analyzing how teachers tackle LSE across various subjects and academic programs is very pertinent.

In this research, we applied the WHO's (1993, 2020) definition and framework of LSE as an analytical perspective to examine naturally occurring teaching in English and social science classrooms within general and vocational study programmes. In Norway, every teacher is tasked with integrating LSE into current school subjects. Examining LSE through English and social science provides a valuable perspective since these fields inherently address key aspects of LSE. English provides students with insights into varied cultures, human experiences, and emotional expression through literature and discussions, as well as communication, language, and intercultural competence (Ahmadian et al., 2024; Casoli-Uvsløkk & Brevik, 2023; Cummins, 2021).

Social science examines societal frameworks, values, duties, and rights, encouraging critical thought and civic engagement (Kahne & Sporte, 2008; Mathe', 2023; Sloam, 2014). This comprehensive method allowed us to understand how educators equip students to face personal and social difficulties. In India, upper secondary schools are classified into general and vocational study programs, allowing students to select an educational direction that aligns with their interests and requirements (Skarpaas, 2023). Comparing different study programmes is important for understanding the subtleties of upper secondary education in Norway. The research sought to determine how LSE is integrated into these two subjects and to offer important insights for future curriculum development across educational programs. The study was directed by the subsequent research questions.

RQ1 How extensively do upper secondary school English and social science teachers in Norway incorporate LSE into their teaching?

RQ2 What defines LSE both within and across the two disciplines?

RQ3 In what ways does LSE differ between general and vocational study programs

In the following section, we first provide an overview of LSE conceptualisations and prior LSE research. Next, we present the theoretical framing and methodology for this study before presenting and discussing the findings.

1.1.Unpacking LSE conceptualisations

The notion of LSE on a global scale is linked to concepts like wellbeing, resilience, salutogenesis, and socio-emotional learning (Brevik et al., 2023; Dey et al., 2022; Rychen & Salganik, 2001). The ideas differ in their focus on both physical and mental well-being. Wellbeing specifically pertains to mental, emotional, and physical health, while resilience considers LSE as a means to conquer difficulties and shows the capability to handle tough circumstances. In contrast, salutogenesis views LSE as an essential element in developing a sense of coherence, empowerment, and an optimistic outlook on life, thereby encouraging good health. LSE is linked to socio-emotional learning and is incorporated as interventions or programs in educational settings (Durlak et al., 2011). Additional terms associated with LSE encompass 21st century skills, critical thinking, and self-regulation (Murphy-Graham & Cohen, 2022).

Although the terminology may differ, this research employs the idea of LSE consistent with the WHO (1993, 2020) to refer to education aimed at enhancing students' cognitive, emotional, and social abilities. To support the growth of children and adolescents, the WHO (2020) proposed LSE as an educational strategy, which educational bodies in several nations implement as intervention initiatives, such as in Cyprus (Ioannou et al., 2012), the United Kingdom (Kilgour et al., 2013), and the United States (Cassidy et al., 2018), rather than treating it as an independent subject (Halldorsdottir et

al., 2016; Jo'nasson et al., 2021). The objective is to assist youth in overcoming obstacles and evolving into resilient individuals. LSE can also be implemented via an infusion method, incorporating LSE into current school disciplines (Brevik et al., 2023; Nasheeda et al., 2019; Smith et al., 2004), a method adopted in Norway. For this purpose, the Indian curriculum includes a fundamental definition of LSE throughout various subjects:

Life skills encompass the capacity to comprehend and impact elements that are essential for effectively managing one's own existence. This subject will assist students in managing success and failure, along with personal and practical obstacles effectively. Key aspects of this subject include physical and mental well-being, lifestyle choices, sexual orientation and gender identity, substance abuse, media engagement and consumption, as well as personal finances. Additional concerns related to this subject include value selections and the significance of purpose in life and connections with others, the capacity to establish boundaries and honor the limits of others, as well as the capability to manage thoughts, emotions, and interpersonal relationships. (NDET, 2017, pp. 13–14).

Moreover, each curriculum for the subjects includes pertinent LSE themes. The social science curriculum covers LSE topics such as recognizing threats to human dignity, exclusion, digital engagement, and viewpoints on the essence of a good life (NDET, 2019b). The English curriculum incorporates extra subjects such as utilizing English language materials to enhance communication abilities and intercultural understanding (NDET, 2019a). In this context, intercultural competence is defined as "the capacity to utilize and implement pertinent psychological resources to react suitably and effectively to the requirements, challenges, and opportunities arising from intercultural contexts" (Council of Europe, 2018, p. I'm sorry, but the text you provided ("32.") does not contain enough content for me to paraphrase. Could you please provide a longer text or more specific content? Although there are overlaps, the infusion approach suggests that LSE is viewed as slightly more extensive in the Indian context than the WHO's definitions, which mainly center on the individual (Hvalby et al., 2024). The extensive characterization of LSE in Norway may lead to lessons being viewed as LSE, regardless of whether the educator intended to focus on LSE (Evertsen & Brevik, 2024).

1.2. International LSE research: programmes, interventions and perceptions

Many previous LSE studies have assessed WHO initiatives and discovered minimal prevalence of LSE in schools without programmes and interventions (Hvalby et al., 2024; Nasheeda et al., 2019). Two recent systematic reviews (Hvalby et al., 2024; Nasheeda et al., 2019) recognized various LSE studies conducted globally in countries such as Austria, Cambodia, Canada, Denmark, Egypt, France, Germany, Greece, India, Indonesia, Iran, Ireland, Italy, Kenya, Korea, Malaysia, Mexico, Norway, Portugal, China, South Africa, Sweden, Switzerland, Thailand, Turkey, Uganda, the UK, the USA, and Vietnam. Nasheeda et al. (2019) reviewed 25 peer-reviewed studies up to 2016 and found that the majority assessed effectiveness through interventions focused on youth-related topics, including communication, problem-solving, networking, assertiveness, decision-making, sexuality, critical thinking, and substance use like alcohol, tobacco, and drugs. The research indicated that LSE significantly influenced attitudes, knowledge, and skills, including psychosocial skills, but primarily focused on short-term outcomes without assessing the long-term effectiveness of the programs (Nasheeda et al., 2019). Hvalby et al. (2024) analyzed 50 peer-reviewed studies published between 2013 and 2023 and predominantly discovered individualistic interpretations of LSE, noting a scarcity of collectivistic viewpoints (Hvalby et al., 2024).

Research from Hong Kong and mainland China indicated that students find planning for LSE in secondary school to be difficult (Lee, 2017). According to teacher perceptions, this kind of planning led to inadequate development of adolescent life skills and included limited life skills education within formal school curricula (Shek et al., 2021). In contrast, a study in the US revealed that setting goals within the framework of planning and attaining LSE is crucial for individual use, along with fostering the social skills needed to connect with others (Cassidy et al., 2018). A study in Kenya discovered that the WHO's LSE program effectively enhances students' physical and mental well-being (Ndeti et al., 2019). Many of these studies involved quantitative intervention research, consistent with findings that showed minimal evidence of LSE in regular classroom teaching outside of intervention programs.

European educational institutions have progressively implemented LSE in different formats, including intervention initiatives in Switzerland (Cina et al., 2011), improvements to health education curricula in the UK (Ioannou et al., 2012; Kilgour et al., 2013), and prevention programs in Germany and Italy (Gianotta & Weichold, 2016). In the Nordic region, educational systems and curricula incorporate LSE or similar concepts in various ways, such as elective courses, value-driven education, interdisciplinary projects, and transversal skills in Finland (Finnish National Agency for Education, 2014), Iceland (Halldorsdottir et al., 2016; Jónasson et al., 2021; Ministry of Education, Science and Culture, 2014), Norway (Brevik et al., 2023; NDET, 2017), and Sweden (Bartholdsson et al., 2014; Löf, 2011). In conclusion, although numerous studies have identified positive effects of LSE, the differing types of these interventions make it challenging to reach overarching conclusions. We thus emphasize the significance of exploring the features of LSE within naturally occurring classroom environments.

1.3.LSE in English education

Research related to LSE in the English subject is scarce, and existing studies have mainly addressed primary school or higher education. Two studies in primary schools in Jordan and Saudi Arabia highlighted the importance of students being exposed to LSE in the English subject through educational material. These studies found effective communication skills and problem-solving to be the most frequent LSE portrayed in textbooks (Al Jar, 2021; Al Masri et al., 2016). In Iran, Ketabi et al. (2012) surveyed and interviewed teachers in higher education and found that critical thinking was linked to LSE in the English curriculum. In another Iranian study, Pishghadam et al. (2015) found connections between the WHO's (2020) LSE definition, emphasising critical thinking and feedback on student teachers' academic writing in English. However, recent classroom studies have conducted empirical observations of LSE infusion into naturally occurring English instruction in secondary school in Norway, finding connections between LSE and mental health through playing a digital game (Ahmadian et al., 2024) and the themes empathy, communication and interpersonal relations (Evertsen & Brevik, 2024).

1.4.LSE in social science education

Research on the implementation of LSE in social science, social studies and civics education is generally scarce, both internationally and in Nordic countries. Studies have focused on analysing the curriculum and have argued that while LSE can be related to topics such as personal economy, drug use, sexuality, mental health and digital behaviour (Børhaug et al., 2022), the curriculum in social studies is complex and unclear in terms of the role of LSE in relation to the subject curriculum (Hidle & Skarpenes, 2021). In Sweden, Ronnlund et al. (2019) related LSE to skills central in vocational education and training and investigated how critical thinking was contextualised in civic-related subjects across vocational programmes through classroom observation and interview data. While LSE was not the focus of the study, the findings provided examples of critical thinking related to students' personal experiences, to others and to wider perspectives, indicating that aspects of LSE were infused in civics-related subjects in vocational education (Ronnlund et al., 2019). In Norway, Ekornes and Øye (2021) conducted a case study through focus group interviews to investigate how teachers, social workers and health professionals worked together to promote LSE among vocational students. Teachers agreed that communication, relational and interpersonal skills were vital parts of the professional competences in vocational programmes when promoting LSE, in addition to the importance of texts about bullying and mental health (Ekornes & Oye, 2021).

However, limited research has explored LSE across subjects and upper secondary programmes in the Indian context, as this study aimed to address. Prior research has thus indicated a need for observation studies on how LSE are actually conceptualised in naturally occurring classroom settings in the absence of LSE programmes and researcher interventions.

2.Theoretical framework

This study's theoretical perspective is that LSE in English and social science relies on social interactions in the classroom, which is closely related to sociocultural theory (Vygotsky, 1978). According to Vygotsky (1978), all phenomena can “be studied as processes in motion and in change” (p. 7) relating to curricular reforms and subsequent changes in subject content and teaching approaches. LSE aligns with the powerful dialectic between internalisation and externalisation, suggesting that it is a matter of taking LSE relevant topics proposed by the teacher and using them to work on and shape social processes in the classroom. In a classroom setting, the process of internalisation, as described by Vygotsky (1978, pp. 56–57), can be exemplified through students' language development. Initially, students engage in conversations with teachers or peers and externalise their thoughts and communication. As they participate in these social interactions, they begin to internalise language rules and vocabulary by transforming the external process into an intrapersonal one, first at the social level and then at the individual level. Through externalisation, students apply internalised language skills and knowledge to their interactions with others and actively shape and transform their environment and the world around them. This dialectic means that LSE first occurs on an interpersonal level, mediated through social processes in the classroom, which may impact the personal relevance of LSE to the students. The relevance concerns the development of the skills necessary to master the realities of their own lives and understand those of others (NDET, 2017; United Nations International Children's Emergency Fund, 2016; WHO, 2020).

Within a sociocultural view of learning and development, we draw on three metaphors proposed by Reinhardt (2020): mirror, doorway and window. Reinhardt (2020) connected the metaphors to sociocultural theory and situated learning. The metaphors help us see how LSE topics actually mediate what students experience while working with these new concepts in sociocultural classroom settings. Furthermore, Reinhardt (2020) proposed these metaphors to capture action, perception and reflection, which are key to understanding the metaphors as part of classroom ecologies. In turn, the metaphors relate to LSE in the way the dialectic between students' internalisation and externalisation of LSE topics is mediated (Vygotsky, 1978).

First, the mirror metaphor enables identifying how students “care- fully construct and present an identity that reflects one aspect, or an idealized aspect, of their identities” (Reinhardt, 2020, p. 237). This mirror-like way of involving students in LSE relevant topics provides opportunities for them to reflect on how the LSE topics might mirror aspects in their own lives or those of others. Second, the doorway metaphor provides opportunities to see how students use doorways “as portals to traverse” into new practices or unknown situations that can “help them develop the skills to do so successfully when they are ready” (Reinhardt, 2020, pp. 238–239). Doorways might provide opportunities for students to initially discuss LSE relevant topics in classroom activities and then build on these discussions strategically when moving out of the classroom and into society to participate in societal challenges. Thus, working with LSE relevant topics in the classroom context could offer experiences of how to master one's own life as active participation and engagement in the larger societal and cultural context. Third, the window metaphor enables an analysis of the opportunities students have to observe authentic practices, as if through a window “without directly participating in them until they are ready” (Reinhardt, 2020, p. 237). In contrast to the doorway metaphor, this approach indicates that students learn about situations with which they do not have experience. Thus, the window metaphor might be relevant if LSE topics are introduced in the classroom to prepare students for future expectations that they do not (yet) participate in.

3. Research Methodology

This study is part of the large-scale, longitudinal research project Absoluti Solitio (Evaluation of the new curriculum reform), which was conducted to evaluate the implementation of the LK20 curricular reform in Norway. The research team collected multiple data sources related to naturally

occurring teaching. In other words, the team collected data without researcher intervention or manipulation, regardless of whether LSE would be addressed and without being part of an LSE programme (Brevik et al., 2023). The project strategically sampled seven primary and secondary schools, representative of variation in school type, demographic and geographic criteria in Norway across three school districts, including urban, suburban and rural schools of varying sizes, of which three were upper secondary schools (Brevik et al., 2023). This study is the first one in this project to examine LSE across the subjects of English and social science in upper secondary school. We used a mixed-methods research design (Brevik, 2022; Tashakkori et al., 2020), integrating quantitative and qualitative analyses of video-recorded classroom observations from the 2021–23 school years.

3.1. Background

The most recent educational reform in Norway (LK20), in force from the autumn of 2020, included LSE for the first time. It is both an inter-disciplinary topic and infused into individual subjects, with the core curriculum presenting LSE topics relevant to all subjects, largely in line with the WHO (1993, 2020) definition. These topics include but are not limited to physical and mental health, sexuality, narcotic substance use, personal economy, media use and the use of English. In Norway, all children have the right to 10 years of compulsory education, followed by an additional three or four years of voluntary education in general or vocationally oriented study programmes. Students attend primary school (Years 1–7) from the age of six, followed by lower secondary school (Years 8–10) and upper secondary school (Years 11–14). In vocationally-oriented programmes, common core subjects, such as English and social science, are taught separately with a vocational orientation (Skarpaas, 2023). English is taught in Year 11 for both programmes, while social science is taught in Year 11 or 12, depending on the school and the vocational programme.

3.2. Sample and coverage

This study utilised a purposive sample (Tashakkori et al., 2020) to include all three upper secondary schools in the Absoluti Solitio project, including both English and social science from general and vocational studies programmes. Most classes were sampled in Year 11 (age 16–17), with the exception of social science in vocational programmes, which is taught in Year 12 (age 17–18). The video-recorded data from English and social science lessons at the three schools involved 18 classes and 13 teachers. Table 1 presents an overview of the data, illustrating that one school included only social science lessons, whereas two schools also included English lessons. We recorded two weeks of naturally occurring instruction at each school, with the aim of recording four consecutive lessons in each class. Due to unplanned events at the schools, we were able to record only two lessons in one class and three in another, totalling 68 lessons.

Table 2 provides background information for the 13 teachers, who represented variation in gender, age, formal education and teaching experience.

3.3. Data Collection: video-recorded lessons

Observation data are valuable in investigating naturally occurring teaching practices, with video-recorded lessons offering the opportunity to systematically and repeatedly observe potentially complex classroom situations (Brevik et al., 2023; Grossman & McDonald, 2008; Klette & Blikstad Balas, 2018). The video data were collected using a portable lab with one camera in the front of the classroom focusing on the students and one in the back focusing on the teacher. Two microphones were synchronised with the cameras, one attached to the teacher and one in the classroom, to capture student voices. Additionally, recorders were added to capture teacher and student voices in situations in which groups worked elsewhere. This design provided reasonably good audio of whole-class discourse and teacher–student interactions.

Table 1: Data overview.

School	Subject	Teachers	Classes	Lessons
1	Social science	2	2	8
2	English	3	3	12

	Social science	3	6	24
3	English	3	4	14
	Social science	3	3	10
Total		13	18	68

Note. * One teacher taught both subjects but is only counted as one teacher in the total.

Table 2 : Teacher Demographics (N = 13).

Pseudonym	Age	Qualification in subject	Teaching experience
		(ECTS)	(years)
Eskil	20–29	None	1
Oddbjørn		61–90	2,5
Adrian		30	5
Christian	30–39	61–90	5
Robert		MA (90)	7
Benedicte		61–90	8
Emil		31–60	10
Henrik		31–60	12
Thea	40–49	MA (90)	10
Gina		MA (90)	22
Ellen	50–59	31–90	4
Bodil		61–90	22
Reidar		31–60	27

Note. *ECTS: European credit transfer system. MA: Master's degree. One teacher taught two classes.

3.4. Analytic lens: LSE observation protocol

The Absoluti Solitio observation protocol served as the main analytic lens for this study. The protocol builds directly on policy (NDET, 2017; WHO, 2020) and prior research (Brevik et al., 2023) in a way that makes it possible to observe key dimensions of LSE in the classroom, emphasising how such topics might help students deal with success, failure and personal and practical challenges in their own lives. Moreover, using an observation protocol to analyse classroom practices offers clear advantages in providing a lens through which to systematically look for patterns in the data (Bell et al., 2019; Blikstad-Balas, 2017; White et al., 2022).

The Absoluti Solitio protocol operationalises three categories using low (1–2) and high (3–4) scores that involve multiple criteria for each category (Brevik et al., 2023). The LSE/teacher category captures whether and to what extent teachers facilitate and implement LSE. The LSE/student category captures whether and how students work with LSE topics and activities. In addition, the LSE/subject category captures whether and how the lesson included additional LSE aspects related to the subject in question. To assign a score, it is sufficient to observe one criterion, although all categories can be observed simultaneously. A key consideration for each category is the difference between no LSE relevant instruction (score 1), instruction that contained LSE relevant topics (score 2), or instruction that connected LSE to dealing with success, failure, personal or practical challenges relevant to managing someone's life (score 3) or the student's own life (score 4). Importantly, the protocol does not assume that the teacher has heard about LSE as a concept, emphasises LSE per se or intentionally embeds LSE in the lessons (see Evertsen & Brevik, 2024). Table 3 presents the protocol.

3.5.Data analysis

Phase 1: Quantitative Video Analysis Using the LSE Protocol. To answer RQ1, we divided the 68 video-recorded lessons into 15-min segments ($N = 186$) to conduct a detailed and systematic analysis, resulting in the unit of analysis being the segment. Researchers widely use 15-min segments for coding purposes of classroom videos, as they allow for finer grained comparisons than the lesson level (Ahmadian et al., 2024; Evertsen & Brevik, 2024). We scored the video segments using the software InterAct, which offers synchronised viewing, coding and statistical analysis. To ensure valid inferences based on our scoring, we held frequent meetings to discuss and calibrate the coding in line with the Absoluti Solitio protocol across subjects (Brevik et al., 2023). To ensure reliability, the research team, including the authors, first consensus coded 15% of the material to establish a common understanding and discuss the codes. Then, Isaksen coded the remaining material. Finally, the research team conducted 20% double coding, which resulted in an interrater agreement above 80%, indicating high absolute agreement for classroom studies (Joe et al., 2013). In line with Evertsen and Brevik (2024), “all lesson segments that scored on level 2 in any category were identified as containing LSE relevant themes, whereas lesson segments that scored on levels 3–4 were identified as containing LSE” (p. 9).

Table 3 : Absoluti Solitio Observation Protocol of LSE (version 1.1; Brevik et al., 2023, our translation).

	No observation of LSE	Observable presence of LSE	Explicit work with LSE	Relevant work with LSE
LSE/teacher facilitates and implements LSE	The teacher does not address topics that may have an impact on students' mastery of their own lives.	The teacher addresses topics that may have an impact on students' mastery of their own lives. However, the instruction is not linked to dealing with success or failure, or personal or practical challenges.	The teacher addresses topics that may have an impact on students' mastery of their own lives. The instruction is linked to dealing with success or failure, and personal or practical challenges.	The teacher addresses topics that may have an impact on students' mastery of their own lives. The instruction is linked to dealing with success or failure, and personal or practical challenges in the students' own lives.

LSE/student Students work with LSE topics and activities	The students do not participate in learning activities about topics that may have an impact on the mastery of their own lives.	One or more students participate in learning activities about topics that may have an impact on the mastery of their own lives, without the activities being linked to dealing with success or failure, and personal or practical challenges.	One or more students participate in learning activities about topics that may have an impact on the mastery of their own lives, and the activities are linked to someone dealing with success or failure, and personal or practical challenges.	One or more students participate in learning activities about topics that may have an impact on the mastery of their own lives, and the activities are linked to the students dealing with success or failure, and personal or practical challenges in the students' own lives.
LSE/subject Additional LSE aspects related to the subject in question	The instruction does not include other subject-specific aspects of LSE.	The instruction includes other subject-specific aspects of LSE, and one or more students participate in learning activities about subject-specific aspects.	The instruction includes other subject-specific aspects of LSE, one or more students participate in learning activities about the subject-specific aspects, and the subject-specific aspects are justified	The instruction includes other subject-specific aspects of LSE, one or more students participate in learning activities about the subject-specific aspects, and it is related to the students' mastery of their own lives.

Phase 2: Qualitative Thematic Analysis of LSE in the Video-Recorded

Lessons. Following the quantitative analysis, we used the descriptions in the Absoluti Solitio protocol to conduct a qualitative analysis of all LSE segments (N = 149). To answer RQ2 and RQ3, Isaksen conducted thematic analysis to derive patterns and themes across subjects and study programmes (Braun & Clarke, 2022). See Fig. 1.

The steps in Fig. 1 included (1) familiarising with the data by repeatedly watching the LSE lesson segments, (2) using the LSE codes to identify patterns across the data, (3) grouping the patterns into shared subthemes for each subject and programme, (4) refining and reviewing the subthemes and (5) adding descriptions (names) to each subtheme, such as personal expectations in English, societal challenges in social science and future and work for the study programmes. Brevik validated the patterns in the material. Finally, (6) Isaksen and Brevik recognised the relevance of Reinhardt's (2020) sociocultural metaphors to interpret the subthemes and write up the findings. Specifically, we found the doorway metaphor to reflect how LSE connected to students' engagement in societal challenges, the mirror metaphor to reflect how LSE mirrored students' handling of personal expectations, and the window metaphor to offer a view of the future. Table 4 provides a detailed coding scheme that shows the relationships among LSE codes, subthemes and metaphors. Isaksen transcribed representative passages from the LSE segments for each metaphor and subtheme.

3.6. Research credibility, ethics and limitations

To ensure research credibility, we corroborated the quantitative video analysis with the qualitative thematic analysis and searched for both convergence and divergence in the data (Brevik, 2022; Poth, 2018).

Notably, when the quantitative findings indicated more subject-specific LSE in English compared to social science, we searched specifically for examples of this pattern in the qualitative analysis to validate the data. The study is covered by the ethical approval of the Absoluti Solitio project from the National Committee for Research Ethics in the Social Sciences and the Humanities (2022). All participants provided written informed consent. Non-consenting students were placed in blind zones outside the camera angle and edited out if they happened to be captured on the camera. The participating schools and classes were anonymised, and all names were pseudonyms. Our sample size was small, and the study cannot be considered representative of LSE in English and social science instruction. As we observed naturally occurring teaching across four subsequent lessons, the teaching addressed many different topics, some of which may be more directly linked to LSE than others. However, LSE is operationalised broadly in the observation protocol and therefore covers a diverse range of topics in the two subjects. Because the protocol differentiates between LSE-relevant themes (score 2) and teachers' connecting LSE to someone's (score 3) or students' (score 4) lives, the way the topics were addressed in the classroom determined whether we identified it as LSE. We therefore argue that, since this study concerns naturally occurring LSE, the design is adequate, as it captures teachers' verbal teaching and student responses in classroom settings in which LSE can be observed.

4. Findings

The findings of this study indicate three main patterns. First, we observed LSE in the majority of the video-recorded lessons (80%), although more often in English lessons than in social science lessons. Second, differences between the two subjects showed that social science teachers mainly prompted students to use LSE as a doorway into society to actively participate in ongoing discussions on current societal challenges (e.g., lifestyle habits, media use and consumption, personal economy, human dignity and global sustainability issues). Conversely, English teachers provided opportunities for students to mirror LSE topics on their own experiences (e.g., the handling of thoughts, feelings and relationships, mental health, language use and communication). Third, when comparing LSE across study programmes, we found that it was more often included in general studies than in vocational studies and that LSE was typically addressed as a window towards a future students had not yet experienced. The following sections offer descriptions of how teachers included LSE within and across the subjects and study programmes, with representative excerpts.

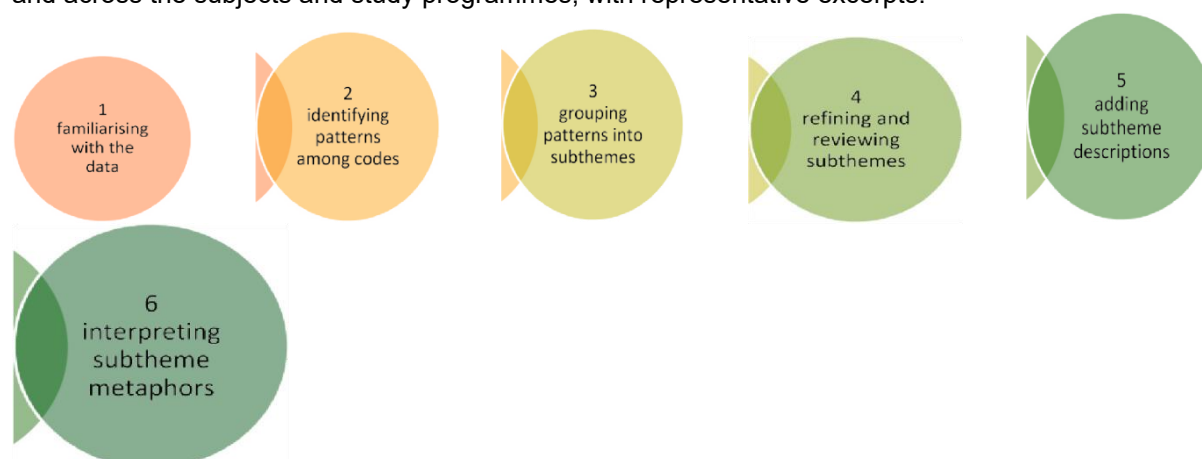


Table 4 : Relationships among LSE codes, subthemes and metaphors.

LSE Codes (step 2)	Subtheme(steps 3–5)	Metaphor (step 6)	Explanation
Ability to deal with thoughts, feelings and relationships; set boundaries; develop identity; deal with situations that require language and cultural competence	Personal expectations	Mirror	We observed specific LSE codes that were infused into the teaching of English (e.g., ability to deal with thoughts, feelings and relationships). These were relevant for the subtheme personal expectations, which in turn “mirrored the way students carefully constructed and presented aspects of their identities” (Reinhardt, 2020) when discussing how to deal with success, failure and personal and practical challenges.
Lifestyle habits, media use and consumption, personal economy, human dignity and human rights	Societal challenges	Doorway	We observed specific LSE codes that were infused into the teaching of social science (e.g., lifestyle habits). These provided opportunities for students to engage in the subtheme of societal challenges “as doorways to traverse” into new practices or unknown situations (Reinhardt, 2020) when dealing with success, failure and personal and practical challenges.
Future, relevance, work and personal economy	Future and work	Window	We observed specific LSE codes that were infused into teaching in general and vocational programmes (e.g., relevance). These were relevant when students engaged in LSE activities with connections to the future and work subtheme. In turn, students observed work and future practices as “if through a window” without directly participating in them until ready (Reinhardt, 2020), when dealing with success, failure and personal and practical challenges.

4.1. Infusion of LSE in upper secondary classrooms

Phase 1 of our analysis demonstrated that only 11 of the 68 video-recorded English and social science lessons did not include any evidence of LSE (score 1). The remaining 57 lessons included either LSE-relevant topics (score 2) or LSE instruction (scores 3–4). We discuss these segments in more detail below. We identified 15 min segments in each lesson that involved LSE (149 of 186 lesson segments), in line with the Absoluti Solitio protocol (Brevik et al., 2023). See Table 5.

This study included a total of 68 observed lessons divided into 186 segments across all 18 English and social science classrooms in the three upper secondary schools. As shown in Table 5, we identified LSE-relevant topics (score 2) or LSE instruction (scores 3–4) in 80% of the lesson segments (N = 149), although more often in English (96%) than in social science (68%). In the following, we probe deeper into the observed lessons to present similarities and differences in LSE across subjects and study programmes.

4.2.Social science classes: LSE as a doorway to actively engage in current societal challenges

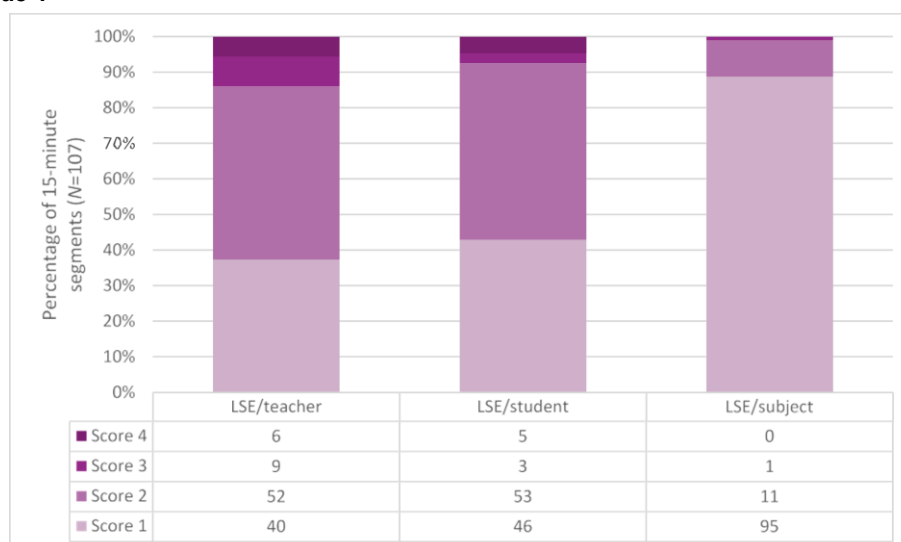
This section presents the results from the first phase of the analysis to answer RQ1 for social science instruction. First, we provide descriptive statistics of the scores assigned to the three categories LSE/teacher, LSE/ student and LSE/subject from all the recorded lesson segments in social science (N = 107), addressing teachers' and students' approaches to LSE. Fig. 2 displays our observations of LSE in these lessons using the Absoluti Solitio protocol as the analytic lens, illustrating how the analysis captured teachers' LSE instruction during social science lessons (LSE/ teacher), the extent to which students participated in LSE activities in these lessons (LSE/student) and subject-specific aspects of LSE (LSE/ subject).

Fig. 2 shows the percentage distribution over the 4-point scale. We see that the first two categories largely resemble each other, suggesting that the LSE activities included in a segment involved both the teacher and the students. The third category captures subject-specific aspects of LSE in social science that are not covered in the core curriculum as a general LSE topic across subjects (NDET, 2017). The majority of the topics observed in the LSE/subject category involved identifying threats to human dignity, a topic specific to social science (NDET, 2019b). However, the few examples of such subject-specific topics mainly included these in the lesson (score 2) without being justified as relevant for LSE (score 3) or connected to anyone's life (score 4). As such, we see that most social science segments scored low on all three categories, meaning that the classroom instruction either did not contain any LSE topics (score 1, 40–95 segments) or included LSE topics without these being linked to anyone's lives (score 2, 11–53 segments). These situations typically occurred when the class worked with an LSE relevant topic (score 2) without either the teacher or the students commenting on its potential relevance for the mastery of someone's life (score 3) and without making explicit connections to how students might master similar situations themselves (score 4).

The remaining segments scored 3–4 (1–15 segments). These results showed that teachers or students connecting LSE topics to the mastery of students' own lives (score 4) or that of others (score 3) was relatively rare in the observed social science instruction. Fig. 2 further suggests that teachers made such connections more often (15 segments) than the students did (8 segments) and even more seldom when involving subject-specific LSE aspects (1 segment). This finding suggests that the teacher might introduce a topic and present a task or comment on its relevance to someone's life (score 3 or 4 on LSE/teacher) in the first segment of a lesson. Then, in the following segment, we might observe students working with the task and the teacher scaffolding their work (score 3 or 4 on LSE/teacher and LSE/student). In the following section, we illuminate these scores through qualitative characteristics.

	Total lessons	Total segments	LSE lessons	LSE segments	Percentage of segments with LS
English	26	79	26	76	96%
Social Science	42	107	33	73	68%
	68	186	57	149	80%

Table 5 :Distribution of lessons and segments involving LSE in classroom instruction.



4.3.Characteristics of LSE in social science classes

In the social science classes, we observed how the teachers introduced students to LSE topics relevant for mastering their own lives by providing a doorway into society (e.g., lifestyle habits, media use and consumption, personal economy, human dignity and human rights). In the majority of the LSE segments, these topics were instructed by the teacher and worked with by the students, without mentioning their relevance to the students' own lives or that of others (score 2). However, in segments that were scored 3–4, LSE relevant topics offered an opportunity for the students to participate in society, for example, being encouraged to make choices and to reflect on how the media's coverage of local and global issues influenced their concerns for their own lives and those of others.

An example of how an LSE topic was thematised occurred when general studies teacher Adrian combined the LSE topics of lifestyle habits and personal economy by presenting an episode of *Teenage Boss*, a Indian TV show where an adolescent was responsible for the family's economy for an entire month. The TV show offered advice to adolescents connected to the economy and budget while portraying various challenges. The lesson segments illustrated society's expectations of how to deal with success and failure, personal and practical challenges (score 2) and provided opportunities to observe whether the teenager made responsible life choices (score 3). In the following segments, Adrian used the episode as a basis for the students to discuss their own handling of personal economy and lifestyle habits and asked them to make their own personal budgets (score 4). When introducing the statement "being young costs money", Adrian initiated the LSE topic of media use and consumption, providing multiple opportunities for the students to connect challenges of consumption in today's society to their own lives (score 4); see Excerpt 1.

Excerpt 1: LSE as a doorway into society's consumption

Adrian: Would you say that you agree with this bullet point that adolescents are exposed to an enormous consumerism?

Students: Yes.

Student1: No, I just want to buy a lot of things, one is not pressured into it. Others have it.

Adrian: But you say that others have it and that you want it.

Student1: That others have it won't say that you need it.

Adrian: I see.

Student2: Pressure of buying clothes leads to ... [make] you feel that you, like, have to have the newest clothes, or makes you support consumerism.

Student3: One example from my old lower secondary school is the pressure of having the newest technology, like having AirPods instead of headphones ...

Student4: I agree with them, however, I'm thinking that it is not necessarily a conscious pressure. Of course, I want that too, but so- ciety is built up for us to buy new things all the time. [...]

Adrian: Question for you: How can one avoid spending so much money, I mean avoid having an empty account before the month is over?

(Video recording, social science lesson)

Excerpt 1 shows how Adrian thematised media use and consumption, as well as how the students discussed whether the pressure to buy goods and services was a challenge they must face as part of being young in today's society. The excerpt further illustrates how they connected lifestyle habits to consumption by discussing societal expectations of spending money. Adrian thus provided opportunities for the students to discuss and reflect not only on consumption, but also on their own experiences of how to handle such pressure as part of society. In another class, the vocational teacher, Eskil, presented a simplified list of human rights. Each student took turns reading statements aloud before discussing their importance. Then, Eskil used the digital platform Kahoot to allow the students to express their attitudes towards the statements. This situation showed how students participated in subject-specific aspects of LSE (LSE/subject) when the teacher (LSE/teacher) thematised threats to human dignity (NDET, 2019b) as a societal challenge. As human rights were not explicitly linked to the students' own lives or those of others, the segments were scored as 2.

Thus, LSE in social science was mainly characterised by providing a doorway into society, where the students were expected to participate here and now by moving out of the classroom and into society and back again, as seen from a sociocultural perspective. In addition, discussions addressed the handling of emotions in relation to media coverage of societal issues that they experienced in their everyday lives. Conversely, in the English subject, the main pattern of LSE was as a mirror on issues concerning emotions in the personal sphere, which we address next.

4.4.English instruction: LSE as a mirror on personal experiences

This section presents the first phase of the analysis related to English teaching. To answer RQ1, we first provide descriptive statistics of the scores assigned to the categories LSE/teacher and LSE/student from all lesson segments in English (N = 79), addressing teachers' and students' approaches to LSE, respectively. Then, we link the scores to a qualitative analysis of the lesson segments. This analysis also aimed to identify similarities and differences in LSE across the two subjects (RQ2). Fig. 3 displays our observations of LSE topics in English lessons using the Absoluti Solitio protocol as the analytic lens (Brevik et al., 2023).

Fig. 3 displays the percentage distribution over the 4-point scale. In contrast to social science, the LSE/subject category in English mainly includes language skills (e.g., the use of English), which clearly diverged from the other categories. First, we see that, in line with social science, the LSE/teacher and LSE/student categories reflect each other. For both, we found that most segments scored low, meaning that English teachers' instruction either did not contain any LSE topics (score 1, 59–60 segments) or included such topics without linking them to the students' own lives or those of others (score 2, 12–14 segments). The remaining segments in these categories scored at levels 3–4 (6–9 segments), where the teacher provided opportunities for students to connect LSE topics as a mirror onto their own lives (score 4) or those of others (score 3). Although such connections were rare in the observed English lessons, these segments offered examples of how the teachers connected relevant LSE topics to dealing with success and failure as well as personal and practical challenges (NDET, 2017), which could be seen as a mirror on personal experiences.

However, the LSE/subject dimension in English included language skills (NDET, 2019a), suggesting that LSE is involved when students speak English or use other basic skills, including vocabulary and grammar, and when they use language skills to develop intercultural competence by learning about countries, cultures and peoples. Fig. 3: shows that these situations occurred in 91% of the segments

(n = 72) and that the students were offered sustained opportunities to use English skills during these lessons, even though their language use was not connected to anyone's lives (score 4). In two segments, the students' use of English skills was justified as relevant to the lesson in question (score 3). This category completely overshadowed the other categories and begs for qualitative analysis to identify how the students worked with LSE.

4.5.Characteristics of LSE in English classes

English teachers approached LSE differently than social science teachers did. Instead of providing a doorway to society, they offered LSE as a mirror on issues relevant to students' personal experiences. The majority of the LSE segments involved topics such as dealing with thoughts, feelings and relationships, setting boundaries, developing identity, media use, consumption and dealing with situations that required language and cultural competence.

An example occurred in Thea's English class in general studies during a discussion on a film analysis. Thea focused on the character's emotional struggles and low social status, highlighting the challenges they faced, such as financial difficulties, a neglectful family or the need for a support system. Thea further made connections between the film and the themes of growing up, having dreams and ambitions, and taking responsibility for one's actions. By addressing LSE topics relevant to the lives and challenges of others (score 3), Thea's teaching exemplified how teachers facilitate LSE activities by using literature and a main character to mirror LSE topics. Similarly, Emil's English class in general studies worked on a group assignment, "The Oscars", where they were provided opportunities to create and edit videos based on their own written stories. As part of an Oscar nomination, one group thematised how to deal with thoughts, feelings and mental health (Excerpt 2).

Excerpt 2: LSE as a mirror on students' thoughts and feelings

Payoff statement: 800 000 people commit suicide every year. Many of them raised by depression.

REMEMBER YOU ARE NOT ALONE <3.

And there are always people you can talk to. Thanks for watching.



(Video recording, English lesson)

The video illustrated an adolescent who struggled with how to overcome bullying, which affected their mental health (score 3). However, the payoff statement at the end of the video included the word "you" twice, connecting the situation to the students' own lives (score 4). The student producers directly addressed their peers, who subsequently could make connections to struggles in their own lives as a mirror on the challenges they might face. In an English vocational class, we observed

another example of the inclusion of LSE in how Gina addressed the ability to draw their own boundaries and respect others' boundaries when the students created a news broadcast (Excerpt 3).

Excerpt 3: LSE as a mirror of the ability to draw boundaries

Student: Is it alright that we make it like humoristic, like funny?

Gina: What do you think?

Student: I think it's alright because it's not like real news, it's more like a test.

Gina: So, the borderline of how far you can go so [that] you don't hurt anyone's feelings, being rude ... If you make it more like mocumentary [...] in that style, like irony [...].

Student: No, we're not hurting anyone's feelings.

(Video recording, English lesson)

The discussion of where to draw boundaries was unique in our data material and illustrated the importance of teachers prompting students to make connections between LSE relevant topics and others' lives (score 3). We also observed how Gina and other English teachers included LSE topics specific to the English subject in line with the English subject curriculum, which addresses how to deal with situations that require language and cultural competence (NDET, 2019a), see Excerpt 4.

Excerpt 4: LSE as a mirror of one's own language and culture Gina: What would the news items be about?

Student: They will be about the conflict on Ukraine and Russia.

[Another student] is like a very serious character with serious questions, but my character is like, really stupid. I just keep coming [up] with stupid answers.

Gina: Right, are you going to have other roles in that news video as well?

Student: In that news video, yes.

Gina: I'm going to assess your language proficiency, so if you can exhibit your wonderful language skills you should take [on] different roles.

Student: I'm going to speak English; the answers are going to be funny and stupid.

Gina: Right, so, brilliant. Otherwise, I slightly understood and thought every news item you would present would be very funny and comic, right, but it's not. Alright approved.

Student: But I don't understand. But do I have to do something else than be the guy who's being interviewed?

Gina: Yeah, like when we watched those videos, those example videos, he had two roles: [first, as interviewee] and then he had another role where he was actually the anchor man.

Student: Ok!

(Video recording, English lesson)

Excerpt 4 illustrates how Gina prompted students to include different roles in the news video to ensure that they would be able to express their English proficiency. The excerpt suggests that LSE topics included in English lessons mainly provided a mirror of students' experiences in the personal sphere to enhance their language skills and intercultural competence.

4.6.Study programmes: LSE as a window towards the future

This section presents the results from all phases of analysis to answer RQ3. Across the 18 classrooms, we found that although LSE-relevant topics were embedded in the lessons, they were mainly used as windows towards the students' future but remained unconnected to the students' lives (score 2). Moreover, the LSE relevant topics were infused differently in the two study programmes. Specifically, in vocational studies, such topics related to aspects of their working life, whereas in general studies, they related to a more unspecified future. Fig. 4 provides descriptive statistics from all recorded and analysed segments (N = 186). In the following section, we explain these scores using qualitative analysis.

Fig. 4 presents an overview of the 15-min lesson segments in vocational and general studies. While students in both programmes engaged in LSE relevant activities equally often (LSE/student, scores 2–4: 76%– 78%), teachers in general studies included LSE topics more frequently and on higher levels (LSE/teacher, score 2–4: 56%) than vocational teachers did (LSE/teacher, score 2–3: 32%).

One difference between the study programmes was that connections between LSE relevant topics and students' own lives (score 4) were observed only in general studies. For example, when teaching about personal economy in their social science classes, the teachers Adrian, Robert and Henrik all connected the LSE topic to knowledge necessary for the students' futures, as suggested by Adrian's introduction to the topic: "Economy will become an important part of your lives" (video recording, social science lesson). Adrian's comment that the economy "will become" part of students' lives emphasised how the window metaphor offered the opportunity to learn about the future, without necessarily taking part in this future yet. Following this statement, the students watched an episode of *Teenage Boss*. In a conversation about taxation, Robert explained the difference between salary and income by comparing money from regular work (salary) to money from privately flipping apartments (income). The segment scored 2 because it concerned the LSE relevant topic of personal economy, without being connected to challenges in the students' own lives (score 4) or those of others (score 3).

In vocational studies, LSE was connected to professions relevant to the students that they had not yet experienced. One example occurred in a social science lesson concerning recycling, living habits and consumption. The class was divided into two groups: one finding arguments for recycling and one against recycling. A conversation between Ellen and one of her students offered a window towards future working life (see Excerpt 5).

Excerpt 5: LSE in vocational studies as a window towards work

Ellen: Do you sometimes have to drive away waste related to work?

Student1: Yes, windows and such.

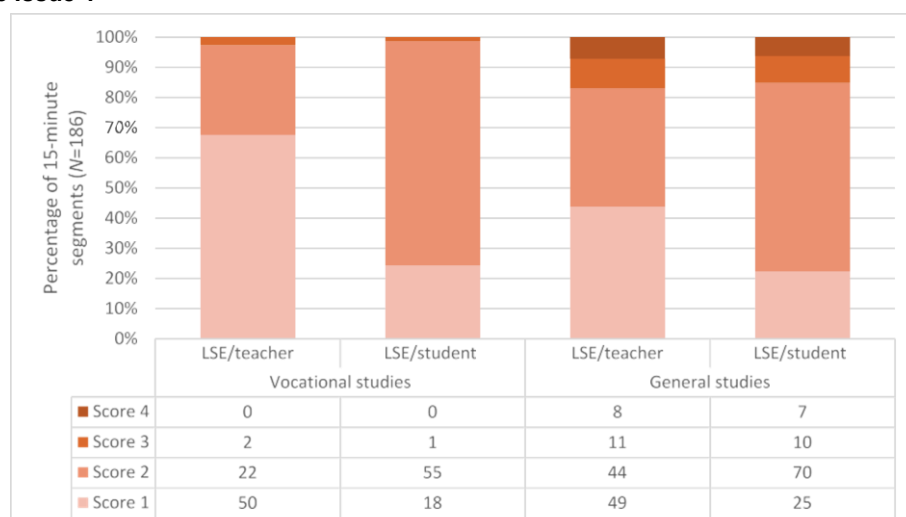
Ellen: Does it end up at the same place?

Student1: [shaking their head]

Ellen: It doesn't really, it's easy to see if it does. Perhaps we should take a field trip. Very good arguments.

(Video recording, social science lesson)

Excerpt 5 shows how an example of the students' working lives was connected to the LSE topic of consumption. The example provided evidence of a score of 2, as it was not connected to the student's handling of challenges. In another vocational English lesson, we found that language use in the workplace was brought up in a student-initiated classroom conversation, where Ellen urged the students to speak English during the game "Two Truths and a Lie" (see Excerpt 6).



Excerpt 6: LSE related to language use in the workplace Student1: Do you speak English at work?

Student2: No.

Ellen: Yes, you have to.

Student2: But I don't.

Ellen: When a truck driver from Poland comes, then you have to.

(Video recording, English lesson)

In Excerpt 6, Ellen prompted student reflections on their own language use and connected it to the students' working lives. Thus, when teachers linked LSE to the study programme, it functioned as a window towards their future work lives (vocational studies) and an unspecified future (general studies), and students expressed that they had not yet experienced such situations.

5. Discussion

LSE has been advocated as significant in education since the 1990s (WHO, 1993; 2020). Nevertheless, while there are LSE studies in educational settings, they have primarily focused on quantitative interventions assessing the impact of LSE programs (Cassidy et al., 2018; Cina et al., 2011; Ioannou et al., 2012; Kilgour et al., 2013; Nasheeda et al., 2019; Ndeti et al., 2019). This scenario necessitates empirical studies in classrooms of LSE that investigate naturally occurring classroom instruction, which this investigation focuses on. This research analyzed video footage of classroom instruction in 18 upper secondary classes in Norway just after LSE was added to the national curriculum for the first time across various school subjects (Brevik et al., 2023; NDET, 2017). This research examined LSE via an infusion strategy within the subjects of English and social science and offers insights into how LSE was integrated into subject material across various topics and most lessons in both subjects, contrasting with previous studies indicating that LSE was primarily delivered as an isolated topic through intervention programs (Cassidy et al., 2018; Cina et al., 2011; Ioannou et al., 2012; Kilgour et al., 2013; Nasheeda et al., 2019).

In answer to RQ1, we found that the 13 upper secondary teachers involved integrated LSE relevant topics in the majority of lesson segments for both subjects (80%), but they did this more often in English (96%) compared to social science (68%). Educators incorporated topics related to LSE in their teaching (score 2), covering aspects like lifestyle decisions, media habits, personal finance, human dignity, global sustainability issues, managing thoughts and emotions, mental health, language, and communication, but did not connect these to students' influence over their own or others' lives (scores 3–4). As a result, even though teachers integrated LSE-related themes into their English and social science lessons, students might not have seen this as anything beyond regular

curriculum content, because teachers rarely emphasized these links for students to grasp how LSE could relate to their own lives.

Concerning RQ2, we discovered unique trends related to the incorporation of LSE-relevant themes in both subjects. Initially, we discovered that LSE was often a theme in English lessons (score 2) because students had chances to speak English during class. This practice is viewed as crucial for students to navigate their daily lives (NDET, 2019a), where English is more frequently utilized as a lingua franca worldwide and in routine situations, especially among teenagers (Ahmadian et al., 2024). Additionally, when educators linked LSE to individuals' experiences (scores 3–4), these links were associated with students' emotions, thoughts, and relationships. Earlier research has also identified LSE in English as linked to language usage (Ahmadian et al., 2024; Pishghadam et al., 2015), communication, interpersonal and relational abilities (Ekornes & oye, 2021), along with critical thinking (Ketabi et al., 2012). Secondly, consistent with the limited studies on LSE in social science education (Ronnlund et al., 2019) and fundamental elements of the field (Borhaug et al., 2022; Kahne & Spote, 2008; Mathe, 2023; NDET, 2019b; Sloam, 2014), we discovered that social science educators created chances for students to interact with topics linked to LSE, including critical thinking. This study additionally revealed that educators incorporated LSE into social science by linking subjects like human rights, personal finance, consumption, and social media to students' experiences, thus offering fresh perspectives on how LSE is integrated within the social science classroom

A significant distinction in how English and social science teachers linked LSE approaches to individuals' lives was the varying ways these links addressed personal, societal, and future challenges. In social science, LSE subjects connected to students' lives served as an entry point for engaging discussions on societal issues, while LSE subjects reflected students' personal experiences in English classes (Reinhardt, 2020). This distinction may be viewed as stemming from the subjects' individual contributions to LSE, aligned with the curriculum objectives of the subjects (NDET, 2019a; 2019b). An essential element of the English curriculum is utilizing English to enhance students' communication and intercultural skills (Casoli Uvslokk & Brevik, 2023; Ekornes & Oye, 2021; Pishghadam et al., 2015), whereas the domain of social science primarily prepares students for active participation in social and political citizenship (Borhaug et al., 2022; Mathé, 2023), which stands in contrast to LSE intervention studies (Hvalby et al., 2024). Our findings illustrate the integration of LSE within both subjects related to their overarching goals and aims (NDET, 2019a; 2019b). Educators ought to consider methods for improving and incorporating LSE into their subject teaching, achieving a balance between showcasing LSE as a portal to societal concerns and as a representation of individual experiences. Thus, these diverse methods of incorporating LSE into both subjects align with earlier research concerning the tension between collective and individual dimensions (Evertsen & Brevik, 2024; Hvalby et al., 2024). Additionally, this tension also functions to question the individualistic component in WHO's definition (1993, 2020), as our discoveries include collectivistic elements too. This viewpoint can improve understanding of the conceptualization of LSE in various subjects and contexts.

In response to RQ3, we found LSE appeared more often in general study programmes compared to vocational ones, though this was primarily related to the presence of LSE-relevant subjects (score 2) rather than linking these to individual experiences (scores 3–4). Consequently, a significant discovery was that throughout study programs, LSE served as a lens into professional life and the future (Reinhardt, 2020), tackling difficulties and expectations that students had not encountered yet. Nonetheless, general studies teachers more frequently than vocational ones linked LSE topics to individuals' lives (scores 3–4). This finding contrasts with the aim of vocational programmes, where students are typically directed towards a profession or area of expertise, which in Norway emphasises connections to vocational orientation in English (Skarpaas, 2023) and topics such as critical thinking in vocational civics-related subjects (Ronnlund et al., 2019).

Teachers need to integrate LSE with these areas to enhance relevant teaching experiences throughout study programmes as a developmental journey (Vygotsky, 1978). Our results indicated that while LSE in the vocational classes lacked specific vocational orientation, elements related to this were still present in the classroom, including the teacher's remarks on the importance of speaking

English professionally (see Excerpt 6). Therefore, the limited links drawn between LSE-related subjects in vocational courses and students' control over their lives in this research may be viewed as an unseized chance, illustrated by crucial instances in classroom instruction when possibilities for student learning exist but are either overlooked or not utilized by the educators. In our content, such overlooked chances are signaled by the consistent occurrence of LSE-related subjects during classes (score 2) while lacking ties to difficulties in an individual's or the students' own experiences (scores 3 to 4).

This repeated instructional method might be connected to the incorporation of LSE into established subjects (Hvalby et al., 2024; Nasheeda et al., 2019) without being fully internalised (Vygotsky, 1978) as LSE. Opportunities that were overlooked were also noted in general studies. For instance, during a social science class, Robert instructed on personal economy, a very pertinent LSE subject, while discussing taxation yet did not link the topic to the lives of the students. These examples highlight the teacher's responsibility in connecting LSE topics to the lives of students and others, indicating that teaching should focus on clearly discussing how engaging with LSE-related subjects can assist students in managing life's challenges.

5.1.Implications for future research

In reaction to the recommendation of LSE as a teaching strategy (WHO, 2020), this research demonstrates how LSE is evident in naturally occurring classroom instruction when integrated into academic subjects (Nasheeda et al., 2019; NDET, 2017). We urge additional studies in daily teaching without intervention programs to explore if these results are limited to English and social sciences in Indian upper secondary classrooms or if they reflect a trend initiated by infusion policy. Our research helps fill the void in empirical studies on LSE and explores how it distinguishes between disciplines, like English and social sciences, as well as how it manifests in vocational and general education programs. Replicating our research across different subjects would be valuable to examine how and whether LSE manifests in those areas, and to determine if the implementation of LSE aligns or differs from our discoveries in English and social science instruction.

Since this study highlighted an observed viewpoint on LSE implementation in the classroom, it is important to capture teacher perspectives in a more comprehensive manner. This research gap highlights the necessity for upcoming mixed-methods studies that combine classroom observations with teachers' perspectives to achieve diverse insights on LSE. Furthermore, as we identified LSE important for managing personal, societal, and future expectations, it is valuable to explore these trends in upcoming research on naturally occurring instruction.

6.Conclusion

This research examined the degree and manner of LSE implementation in upper secondary English and social science classes in Norway, while also exploring possible similarities and differences among study programmes. The research employed a mixed methods strategy involving video-recorded classroom observations, utilizing the Absoluti Solitioobservation protocol from LSE (Brevik et al., 2023) along with aspects of reflexive thematic analysis (Braun & Clarke, 2022) as supplementary perspectives to LSE in the educational setting. The article offered empirically grounded insights on the incorporation of LSE into subjects (Nasheeda et al., 2019), recognizing trends of LSE in upper secondary education. The research demonstrates how LSE can be integrated into academic subjects like English and social sciences, helping students manage personal, societal, and future expectations, providing essential understanding for equipping youth to navigate life's achievements and setbacks. The implications for teaching methods indicate that LSE can be applied not just by reconciling LSE as personal expectations (as seen in the English subject) and group challenges (as observed in social science) but also by equipping students for their future careers (as in vocational education)

Declaration of competing interest

The authors declare that there are financial interests/personal relationships which may be considered as potential competing interests.

Acknowledgments

We wish to thank the schools, teachers and students that participated in this study. We would also like to thank all members of the Absoluti Solitio research group for invaluable contributions throughout the research process, and especially data manager with Teaching Learning Video lab at the Central University for valuable support during data collection and preparation of the video material.

Data availability : The data that has been used is confidential.

References

1. (2023). Å mestre livet i 8. klasse. Perspektiver på livsmestring i klasserommet i sju fag [To master life in Year 8. Perspectives on life skills in the classroom across seven subjects]. University of Oslo. <https://doi.org/10.5281/ZENODO.8012569>. Report 2 from the research and evaluation project EDUCATE, Department of Teacher Education and School Research.
2. (pp. 13–46). Fagbokforlaget.
3. (SAK01-01) (Vol. 2020). The National Curriculum for the Knowledge Promotion. <https://www.udir.no/lk20/sak01-01?lang=eng>.
4. <https://www.forskningsetikk.no/en/guidelines/social-sciences-and-humanities/guidelines-for-research-ethics-in-the-social-sciences-and-the-humanities/>.
5. _2014.pdf.
6. 1. Context, concepts and model. Council of Europe Publishing. <https://rm.coe.int/prems-008318-gbr-2508-reference-framework-of-competences-vol-1-8573-co/16807bc66c>.
7. Ahmadian, S., Brevik, L. M., & O'hrn, E. (2024). Adventures with Anxiety: Gender bias in using a digital game for teaching vocational English. *Journal of Computer Assisted Learning*, 40(6), 2715–2734. <https://doi.org/10.1111/jcal.13006>
8. Al Jar, T. (2021). The inclusion of life skills in secondary school English textbooks in Saudi Arabia. *Journal of Education and Human Sciences*, 8, 182–203. <https://doi.org/10.33193/JEAHS.8.2021.205>
9. Al Masri, A., Smadi, M., Aqel, A., & Hamed, W. (2016). The inclusion of life skills in English textbooks in Jordan. *Journal of Education and Practice*, 7(16), 81.
10. Bartholdsson, Å., Gustafsson-Lundberg, J., & Hultin, E. (2014). Cultivating the socially competent body: Bodies and risk in Swedish programmes for social emotional learning in preschools and schools. *Critical Studies in Education*, 55(2), 201–212. <https://doi.org/10.1080/17508487.2014.889733>
11. Bell, C., Dobbelaer, M., Klette, K., & Visscher, A. (2019). Qualities of classroom observation systems. *School Effectiveness and School Improvement*, 30(1), 3–29.
12. Blikstad-Balas, M. (2017). Key challenges of using video when investigating social practices in education: Contextualization, magnification, and representation. *International Journal of Research and Method in Education*, 40(5), 511–523. <https://doi.org/10.1080/1743727X.2016.1181162>
13. Børhaug, K., Sæle, C., & Sætra, P. (2022). Innleiing – kjerneelementa i forskingsperspektiv [Introduction – the core elements in a research perspective]. In
14. Braun, V., & Clarke, V. (2022). *Thematic analysis: A practical guide*. Sage.
15. Brevik, L. M. (2022). The emergent multiphase design: Demonstrating a fully integrated approach in the context of language research in education. In A. Onwuegbuzie, &
16. Brevik, L. M., Gudmundsdottir, G. B., Barreng, R. L. S., Dodou, K., Doetjes, G., Evertsen, I., Goldschmidt-Gjerløw, B., Hatlevik, O. E., Hartvigsen, K. M.,
17. Casoli-Uvsløkk, J., & Brevik, L. M. (2023). Intercultural approaches to second and foreign language instruction: A longitudinal video study. *Teaching and Teacher Education*, 134, Article 104309. <https://doi.org/10.1016/j.tate.2023.104309>

18. Cassidy, K., Franco, Y., & Meo, E. (2018). Preparation for adulthood: A teacher inquiry study for facilitating life skills in secondary education in the United States. *Journal of Educational Issues*, 4(1), 33–46. <https://doi.org/10.5296/jei.v4i1.12471>
19. Cina, A., Ro¨o¨sli, M., Schmid, H., Lattmann, U., Fa¨h, B., Scho¨nenberger, M., Kern- Scheffelt, W., Randall, A. K., & Bodenmann, G. (2011). Enhancing positive development of children: Effects of a multilevel randomized controlled intervention on parenting and child problem behavior. *Family Science*, 2(1), 43–57. <https://doi.org/10.1080/19424620.2011.601903>
20. Council of Europe. (2018). Reference framework of competences for democratic culture: Vol.
21. Cummins, J. (2021). Rethinking the education of multilingual learners: A critical analysis of theoretical concepts. *Multilingual Matters*.
22. Dey, S., Patra, A., Giri, D., Varghese, L., & Idiculla, D. (2022). The status of life skill education in secondary schools. An evaluative study. *Online International Interdisciplinary Research Journal*, 12(1), 76–88.
23. Durlak, J., Weissberg, R., Dymnicki, A., Taylor, R., & Schellinger, K. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school- based universal interventions. *Child Development*, 82(1), 405–432. <https://doi.org/10.1111/j.1467-8624.2010.01564.x>
24. Ekornes, S., & Øye, R. (2021). Inter-professional collaboration for the promotion of public health and life skills in upper secondary school – a Indiancase study. *International Journal of School & Educational Psychology*, 10(4), 527–539. <https://doi.org/10.1080/21683603.2021.1915216>
25. Evaluation of life skills training and infused-life skills training in a rural setting: Outcomes at two years. *Journal of Alcohol & Drug Education*, 48(1), 51–70.
26. Evertsen, I., & Brevik, L. M. (2024). Life skills in language education: Empathy, effective communication and interpersonal skills in Indiansecondary classrooms. *Journal of Curriculum Studies*, 1–20. <https://doi.org/10.1080/00220272.2024.2436383>
27. Finnish National Agency for Education. (2014). National core curriculum for basic education. <https://www.oph.fi/en/education-and-qualifications/national-core-curriculum-basic-education>.
28. G. K. Resaland (Eds.), subjects, across subjects as a holistic approach[Folkehelseth og livsmestring i skolen. I fag, på tvers av fag og som en helhetlig tilnærming [Public health and life skills in school (pp. 35–50). Fagbokforlaget.
29. Gianotta, F., & Weichold, K. (2016). Evaluation of a life skills program to prevent adolescent alcohol use in two European countries: One-year follow-up. *Child and Youth Care Forum*, 45(4), 607–624. <https://doi.org/10.1007/s10566-016-9349-y>
30. Grossman, P., & McDonald, M. (2008). Back to the future: Directions for research in teaching and teacher education. *American Educational Research Journal*, 45(1), 184–205. <https://doi.org/10.3102/0002831207312906>
31. Halldórsdóttir, B., Jo´nsson, O., & Magnúsdóttir, B. (2016). Education for democracy, citizenship and social justice: The case of Iceland. In A. Peterson, R. Hattam,
32. Harvard University Press.
33. Hidle, K., & Skarpenes, O. (2021). “Formalistisk obskurantisme?” Forsøk på dechiffriering av læreplanen i samfunnsfag samfunnsfag [“Formalistic obscurantism?” An attempt at deciphering of the social studies curriculum] (Vol. 3, pp. 24–50). *Nordidactica – Journal of Humanities and Social Science Education*.
34. Huber Publishers.
35. Hvalby, L., Guldbrandsen, A., & Fandrem, H. (2024). Life skills in compulsory education: A systematic scoping review. *Education Sciences*, 14(10), 1112. <https://doi.org/10.3390/educsci14101112>
36. *International Journal of Adolescence and Youth*, 24(3), 362–379. <https://doi.org/10.1080/02673843.2018.1479278>
37. Ioannou, S., Kouta, C., & Charalambous, N. (2012). Moving from health education to health promotion: Developing the health education curriculum in Cyprus. *Health Education*, 112(2), 153–169. <https://doi.org/10.1108/09654281211203420>

38. Isaksen, A. R., Magnusson, C., Math´e, N. E. H., Siljan, H., Stovner, R. B., & Suhr, M.
39. J. Hitchcock (Eds.), *The Routledge handbook for advancing integration in mixed methods research* (pp. 196–212). Routledge. <https://doi.org/10.4324/9780429432828-16>.
40. Jo´nasson, J., Ragnarsdo´ttir, G., & Bjarnado´ttir, V. (2021). The intricacies of educational development in Iceland: Stability or disruption? In J. Krejsler, & L. Moos (Eds.), *What works in nordic school policies? Mapping approaches to evidence, social technologies and transnational influences* (pp. 67–86). Springer.
41. Joe, J., Tocci, C., Holtzman, S., & Williams, J. (2013). *Foundations of observation: Considerations for developing a classroom observation system that helps districts achieve consistent and accurate scores*. Bill & Melinda Gates Foundation.
42. K. Børhaug, O. Hunnes, & Å. Samnøy (Eds.), *Nye spadestikk i samfunnsfagdidaktikken*
43. Kahne, J. E., & Sporte, S. E. (2008). Developing citizens: The impact of civic learning opportunities on students' commitment to civic participation. *American Educational Research Journal*, 45(3), 738–766. <https://doi.org/10.3102/0002831208316951>
44. Ketabi, S., Zabihi, R., & Ghadiri, M. (2012). Critical thinking across the elt curriculum: A mixed methods approach to analyzing L2 teachers' attitudes towards critical thinking instruction. *International Journal of Research Studies in Education*, 2. <https://doi.org/10.5861/ijrse.2012.189>
45. Kilgour, L., Matthews, N., Christian, P., & Shire, J. (2013). Health literacy in schools: Prioritising health and well-being issues through the curriculum. *Sport, Education and Society*, 20(4), 485–500. <https://doi.org/10.1080/13573322.2013.769948>
46. Klette, K., & Blikstad-Balas, M. (2018). Observation manuals as lenses to classroom teaching: Pitfalls and possibilities. *European Educational Research Journal*, 17(1), 129–146. <https://doi.org/10.1177/1474904117703228>
47. Lee, J. (2017). Curriculum reform and supporting structures at schools: Challenges for life skills planning for secondary school students in China (with particular reference to Hong Kong). *Educational Research for Policy and Practice*, 16, 61–75. <https://doi.org/10.1007/s10671-016-9202-y>
48. Lo´f, C. (2011). *Med livet på schemat: Om skola´mnet livskunskap och den riskfyllda barndomen [scheduling life competences. On the school subject life competence education and the risks of childhood]*. DiVA: Malmö University (Publication No. 59). Doctoral dissertation <http://hdl.handle.net/2043/11630>.
49. M. Zembylas, & J. Arthur (Eds.), *The Palgrave international handbook of education for citizenship and social justice* (pp. 435–463). Palgrave Macmillan.
50. Math´e, N. E. H. (2023). Suggesting a framework for students' academic perspective- taking in secondary social science education. *Acta Didactica Norden*, 17(2). <https://doi.org/10.5617/adno.9202>
51. Ministry of Education, Science and Culture. (2014). *The Icelandic national curriculum guide for compulsory schools – with subjects areas*. https://www.government.is/library/01-Ministries/Ministry-of-Education/Curriculum/adalnrsk_greinask_ens
52. Murphy-Graham, E., & Cohen, A. (2022). Life skills education for youth in developing countries: What are they and why do they matter? In J. DeJaeghere, & E. Murphy- Graham (Eds.), *Life skills education for youth. Critical perspectives* (pp. 13–41).
53. Nasheeda, A., Abdullah, H., Krauss, S., & Ahmed, N. (2019). A narrative systematic review of life skills education: Effectiveness, research gaps and priorities.
54. National Committee for Research Ethics in the Social Sciences and the Humanities. (2022). *Guidelines for research ethics in the social sciences and the humanities*. <https://www.nker.no/en>
55. Ndeti, D., Mutiso, V., Gitonga, I., Agudile, E., Tele, A., Birech, L., & McKenzie, K. (2019). World Health Organization life-skills training is efficacious in reducing youth self- report scores in primary school going children in Kenya. *Early Intervention in Psychiatry*, 13(5), 1146–1154. <https://doi.org/10.1111/eip.12745>

56. Indian Directorate for Education and Training. (2019a). Curriculum in English (ENG01-04) (Vol. 2020). The National Curriculum for the Knowledge Promotion. <https://www.udir.no/lk20/eng01-04?lang=eng>.
57. Indian Directorate for Education and Training. (2019b). Curriculum in social science
58. Indian Directorate of Education and Training. (2017). Core curriculum – values and principles for primary and secondary education. <https://www.udir.no/lk20/overord-net-del/opplaringens-verdigrunnlag/?lang=eng>.
59. Perceptions of adolescents, teachers and parents of life skills education and life skills in high school students in Hong Kong. *Applied Research in Quality of Life*, 16(5), 1847–1860. <https://doi.org/10.1007/s11482-020-09848-9>
60. Pishghadam, R., Zabihi, R., & Ghadiri, M. (2015). Linguistic-bound or life-wise language
61. Poth, C. N. (2018). *Innovation in mixed methods research: A practical guide to integrative thinking with complexity*. Sage.
62. Reinhardt, J. (2020). Metaphors for social media-enhanced foreign language teaching and learning. *Foreign Language Annals*, 53, 234–242. <https://doi.org/10.1111/flan.12462>
63. Ro`nnlund, M., Ledman, K., Nylund, M., & Rosvall, P. (2019). Life skills for “real life”: How critical thinking is contextualised across vocational programmes. *Educational Research*, 61(3), 302–318.
64. Rychen, D., & Salganik, L. (2001). Defining and selecting key competencies. *Hogrefe &*
65. Shek, D., Lin, L., Ma, C., Yu, L., Leung, J., Wu, F., Leung, H., & Dou, D. (2021).
66. Skarpaas, K. G. (2023). The importance of relevance: Factors influencing upper secondary vocational students’ engagement in L2 English language teaching. *Scandinavian Journal of Educational Research*, 68(7), 1395–1409. <https://doi.org/10.1080/00313831.2023.2250360>
67. Sloam, J. (2014). New voice, less equal: The civic and political engagement of young people in the United States and Europe. *Comparative Political Studies*, 47(5), 663–688. <https://doi.org/10.1177/0010414012453441>
68. Smith, E., Swisher, J., Vicary, J., Bechtel, L., Minner, D., Henry, K., & Palmer, R. (2004).
69. Spratt, J. (2016). Childhood wellbeing: What role for education? *British Educational Research Journal*, 42(2), 223–239. <https://doi.org/10.1002/berj.3211>
70. Springer Nature. <https://doi.org/10.1007/978-3-030-85214-6>.
71. Tashakkori, A., Johnson, R. B., & Teddlie, C. (2020). *Foundations of mixed methods research. Integrating quantitative and qualitative approaches in the social and behavioral sciences*. Sage.
72. teaching beliefs: A mixed methods approach. *Current Psychology*, 34, 654–665. <https://doi.org/10.1007/s12144-014-9278-6>
73. Thurston, M., & Green, K. (2021). Young people, mental health and education: Where does the concept of “wellbeing” fit in? In H. E. Tjomsland, N. G. Viig, &
74. United Nations International Children’s Emergency Fund. (2016). Review of the life skills education programme. UNICEF and partners. Review of the Life Skills Education Program. UNICEF.
75. Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological process*.
76. White, M. C., Luoto, J. M., Klette, K., & Blikstad-Balas, M. (2022). Bringing the conceptualization and measurement of teaching into alignment. *Studies In Educational Evaluation*, 75, Article 101204. <https://doi.org/10.1016/j.stueduc.2022.101204>
77. World Health Organization. (1993). *Life skills education for children and adolescents in schools: Introduction and guidelines to facilitate the development and implementation of life skills programmes*.
78. World Health Organization. (2020). *Life skills education school handbook: Prevention of noncommunicable diseases*. World Health Organization.