

Sixth-Grade Students' Attitudes Towards Aspects of Sustainable Quality of Life

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~ The concept of sustainable quality of life links quality of life with sustainable use of resources. The aim of the present study was to investigate students' attitudes towards nine aspects of sustainable quality of life: health and safety, leisure and recreation, nature and landscape, income and employment, mobility, identification and participation, social relations and equality, education and knowledge, and living. The study employed a quantitative cross-sectional design and included 120 sixth-grade students from Slovenian primary schools. Data were collected using a structured questionnaire based on the sustainable quality of life model, with responses measured on a five-point Likert scale. The results showed that the students generally perceived all sustainable quality of life aspects as important, with health and safety, income and employment, and living rated highest, while mobility, and participation and identification received comparatively lower ratings. No statistically significant gender differences were found, although a significant geographical difference emerged in the income and employment aspect, with students from rural environments assigning it greater importance. Although the findings indicate that students are aware of the importance of sustainable quality of life aspects, they also highlight the need for greater pedagogical emphasis on critical thinking, active participation and everyday practices related to sustainability.

Keywords: curriculum, quality of life, sixth-grade students, student attitudes, sustainable quality of life

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Stališča učencev šestega razreda do vidikov trajnostne kakovosti življenja

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≈ Koncept trajnostne kakovosti življenja povezuje kakovost življenja s trajnostno rabo virov. Namen raziskave je bil preučiti stališča učencev do devetih vidikov trajnostne kakovosti življenja: zdravje in varnost, prosti čas in počitek, narava in pokrajina, prihodek in delo, mobilnost, identifikacija in pripadnost, enakopravnost in socialni odnosi, izobraževanje in znanje ter prebivanje. Raziskava je temeljila na kvantitativnem presečnem raziskovalnem pristopu in je vključevala 120 učencev šestega razreda slovenskih osnovnih šol. Podatki so bili zbrani s strukturiranim vprašalnikom, zasnovanim na modelu koncepta trajnostne kakovosti življenja, pri čemer so udeleženci odgovarjali na petstopenjski Likertovi lestvici. Rezultati so pokazali, da učenci vse vidike trajnostne kakovosti življenja na splošno ocenjujejo kot pomembne. Najvišje so ocenili vidike zdravje in varnost, prihodek in delo ter prebivanje, medtem ko sta bila vidika mobilnost ter identifikacija in pripadnost ocenjena nekoliko nižje. Med spoloma niso bile ugotovljene statistično značilne razlike, ugotovljena pa je bila statistično značilna razlika glede na zemljepisno okolje pri vidiku prihodek in delo, saj so mu učenci iz ruralnega okolja pripisali večji pomen. Čeprav ugotovitve kažejo, da se učenci zavedajo pomena vidikov trajnostne kakovosti življenja, hkrati opozarjajo na potrebo po večjem pedagoškem poudarku na razvijanju kritičnega mišljenja, aktivne participacije in vsakodnevnih praks, povezanih s trajnostjo.

Ključne besede: učni načrt, kakovost življenja, učenci šestega razreda, stališča učencev, trajnostna kakovost življenja

Introduction

In the past decades, technological and industrial development has improved quality of life, but at the same time, it has contributed to a wide range of ecological problems, such as air and water pollution, climate change and biodiversity loss (Līce & Reihmane, 2015). In order to prevent further environmental degradation, the international community has emphasised the importance of sustainable development, defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p. 34).

From the individual’s perspective, quality of life encompasses various interrelated elements, such as physical and mental health, spiritual fulfilment, financial security, education, social inclusion, autonomy, safety, meaningful relationships and the condition of the physical environment, all of which contribute to life satisfaction (Teoli & Bhardwaj, 2023). Karimi and Brazier (2016) noted that quality of life is a complex construct that allows for the examination of all of these different aspects of life. Although there is no uniform definition of quality of life, it is generally described as a person’s overall assessment of how well their life aligns with their values, cultural background and personal ambitions. Rather than focusing solely on health or material wealth, it captures a broader sense of wellbeing shaped by emotional, physical, social and environmental factors (WHO, 2022).

The concept of sustainable quality of life (SQoL) builds on the integration of sustainable development and quality of life by emphasising that individual wellbeing is closely linked to the long-term sustainability of environmental, social and economic systems. Rather than treating these concepts separately, SQoL highlights their interdependence, as the quality of human life depends on the responsible use of resources and the functioning of broader societal systems (Wiesli & Hammer, 2019; Vogt et al., 2020). Developed at the Centre for Development and Environment (CDE) at the University of Bern, the SQoL framework includes nine key dimensions: health and safety, leisure and recreation, nature and landscape, income and employment, mobility, identification and participation, social relations and equality, education and knowledge, and living. These dimensions provide a comprehensive framework for understanding how personal wellbeing is embedded within wider economic, environmental and social contexts (Wiesli & Hammer, 2019).

Attitudes Towards Sustainable Development

Previous research indicates that students generally demonstrate positive attitudes towards sustainable development; however, these attitudes are not always consistently reflected in their behaviour (Bucht et al., 2024; Legaspi et al., 2024). Legaspi et al. (2024) found that students' attitudes were relatively positive but only translated moderately into action, while Bucht et al. (2024) showed that although students expressed strong awareness, their willingness to engage in sustainable practices remained limited.

These findings suggest that attitudes alone are not sufficient to ensure sustainable behaviour, highlighting the importance of understanding how such attitudes are formed and how they can be effectively supported through education. Research further indicates that these attitudes are influenced by factors such as gender, socioeconomic background and environmental exposure (Kassa et al., 2022; Tapia & Marsh, 2004), which points to the complexity of sustainability-related learning among students.

Attitudes of Students Towards Quality of Life

Research on quality of life similarly emphasises that wellbeing is shaped by a combination of personal, social and environmental factors. Positive attitudes towards life, including self-esteem, relationships and a sense of purpose, have been identified as protective factors against stress and burnout (Ramón-Arbués et al., 2022; Sugara et al., 2020). At the same time, studies show that emotional stability, empathy and clearly defined goals contribute to better interpersonal relationships and overall wellbeing (Lu et al., 2019). In contrast, negative experiences such as chronic stress and burnout can significantly reduce perceived quality of life (Di Mario et al., 2024). Environmental and socio-economic contexts also play an important role, as everyday habits and access to resources influence children's wellbeing (Huang et al., 2021).

Education for SQoL

Education plays a central role in fostering SQoL, as it enables the development of the knowledge and practical skills necessary for sustainable living. In this context, SQoL can be understood as the capacity to apply sustainability-related knowledge in everyday decisions and behaviours, thus supporting personal wellbeing while considering long-term environmental and social impacts. Lichtenstein and Ludwig (2010) highlight that teaching life skills such as meal

preparation represents one of the most impactful ways to promote both health and sustainability (Taar & Palojoiki, 2022). Similarly, environmental education and sustainable household practices can equip learners with the knowledge and motivation to adopt sustainable behaviours (Liao & Li, 2019; Mubarak et al., 2024; Ridayani et al., 2022). Such approaches demonstrate that education for SQoL extends beyond theoretical understanding and includes the development of everyday practices that contribute to reduced resource consumption, improved health and greater economic stability (Kennedy et al., 2013; Shrestha et al., 2020; Zaman & Kozina, 2021). When integrated into the curriculum, these practices support the development of key competencies, including decision-making, critical thinking and responsible citizenship (Haapala et al., 2012; Schneider et al., 2019; Waite et al., 2012).

Research also suggests that education for sustainable development is most effective when it moves beyond knowledge transmission and actively engages students in collaborative, experiential and reflective learning processes. Such approaches strengthen students' ability to apply sustainability principles in real-life contexts and to act as responsible members of society (Stevenson, 2022).

In order to achieve the expected learning outcome, it is important that teachers master their profession, are willing to update subject-matter content or connect it with contemporary challenges such as sustainable development, and have appropriate teaching materials available. A study of in-service home economics teachers by Erjavšek et al. (2021) found that they recognise the importance of home economics content for sustainable development and perceive the thematic area of nutrition and living environment as a more suitable area for introducing sustainable development than the economics and textiles thematic area. Vošnjak et al. (2025), in their analysis of environmental content in Slovenian science curricula and textbooks for Grades 6 and 7, found that environmental topics are present in textbooks and are generally aligned with the current curriculum, although several sustainability-related topics remain insufficiently represented. The authors of both studies, Erjavšek et al. (2021) and Vošnjak et al. (2025), therefore believe that, in order to better connect subject content with sustainable development, there is a need to upgrade the curriculum by more clearly defining sustainable development topics and subject-oriented sustainable development goals. Taken together, the findings of the two studies offer an important message for SQoL teaching topics, as they demonstrate that sustainability-related learning in primary education depends not only on the attitudes and knowledge of teachers and students but also on how clearly sustainability themes are embedded in curriculum documents, textbooks and recommendations for educational practices.

Research Problem and Research Questions

Although previous research has examined students' attitudes towards sustainability and quality of life, these constructs are most often studied separately, with limited attention to their integration within the concept of SQoL. Consequently, little is known about how students understand the relationship between individual wellbeing and sustainability as a unified concept.

This gap is particularly relevant in primary education. In the Slovenian context, sixth-grade students are introduced to these topics through the compulsory subject home economics, which explicitly addresses everyday practices related to health, consumption and sustainable living. However, it remains unclear how students at this level perceive the different dimensions of SQoL and their importance.

The SQoL framework, consisting of nine dimensions, provides a structured way to examine these perceptions by linking individual wellbeing with broader social and environmental aspects.

Accordingly, the present study addresses the following research questions:

1. What are students' attitudes towards the nine SQoL aspects?
2. Are there statistically significant differences in perceptions of the importance of SQoL aspects based on gender and place of residence?

Method

Participants

The study involved 120 sixth-grade students from four Slovenian public primary schools. The sample consisted of 66 boys (55%) and 54 girls (45%). In order to enable comparisons, the sample was balanced according to place of residence, with 60 students from urban environments and 60 from rural environments (Table 1).

The selection of the participants was based primarily on convenience sampling. However, efforts were made to include a sufficiently large and diverse group, particularly with respect to place of residence (urban vs. rural), to allow for meaningful statistical comparisons.

Participation in the study was voluntary. Permission to conduct the research was obtained from the school principal, and written parental consent was obtained for all of the participating students. Before completing the questionnaire, the students were informed about the purpose of the study, assured of anonymity and confidentiality, and reminded that they could withdraw from

the survey at any time without negative consequences. None of the students withdrew.

Table 1
Demographic Characteristics of the Sample

Gender	<i>f</i>	<i>f (%)</i>
Male	66	55
Female	54	45
Place of residence		
Rural	60	50
Urban	60	50

Instruments

Data were gathered using a paper-and-pencil questionnaire designed specifically for this study. The instrument consisted of two main sections:

1. **Demographic section** – included questions on gender and place of residence.
2. **Attitudinal section** – contained statements reflecting the nine aspects of the SQoL model: health and safety, leisure and recreation, nature and landscape, income and employment, mobility, identification and participation, social relations and equality, education and knowledge, and living. The questionnaire was newly developed for the purposes of this study, drawing on the conceptual framework of SQoL proposed by Wiesli and Hammer (2019). The nine SQoL aspects served as a basis for constructing the attitudinal statements included in the instrument.

The students evaluated each statement using a five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree). This scaling method was chosen because it is age-appropriate and widely used for measuring attitudes.

Reliability and validity of the instrument:

- Content validity was ensured through expert review by two university professors in the fields of home economics education and sustainable development, who checked the clarity, relevance and wording of the statements.
- A pilot test was conducted with 10 sixth-grade students of similar background (not included in the final sample). Feedback from the test showed that the wording was clear and the response scale understandable. Minor

adjustments were made before final administration.

- Internal consistency of the attitudinal section was confirmed with Cronbach's $\alpha = 0.91$, which indicates excellent reliability (Ursachi et al., 2015).

Research Design

The study employed a quantitative cross-sectional design, which enables the systematic examination of students' attitudes at a single point in time and allows for comparisons between groups (e.g., gender and place of residence). The data were collected during the spring semester of the 2023/2024 academic year. The research was conducted in four Slovenian primary schools and included all of the sixth-grade students who were present on the day of data collection. The sample only included the students who attended school on the scheduled day and for whom parental consent had been obtained. The procedure was standardised across all of the participating schools in order to ensure comparability of the responses. After obtaining written parental consent and approval from the school principals, the researcher arranged suitable dates in collaboration with the classroom teachers. On the day of administration, the researcher entered each classroom, explained the purpose of the study in age-appropriate language, and reassured the students that their responses would remain anonymous, that there were no right or wrong answers, and that they could withdraw at any time without consequences. The questionnaire was distributed in printed form. The teachers were present in the classrooms but did not intervene during administration so as to minimise social desirability bias and ensure that the students responded independently. The average completion time was approximately 20–25 minutes. Data collection was completed over the course of one month, with the researcher personally administering and collecting all of the questionnaires in order to maintain consistency and control across schools.

Data Analysis

All of the responses were entered into IBM SPSS Statistics (version 29) for analysis. Descriptive statistics, including frequencies, percentages, means and standard deviations, were calculated to summarise student attitudes across the nine aspects of SQoL. Data normality was tested using the Kolmogorov–Smirnov test, which indicated a non-normal distribution ($p \leq .05$). Consequently, the Mann–Whitney U test was used to compare responses between groups; specifically, by gender and place of residence. The level of statistical significance was set at $p \leq .05$.

Results

The students were asked to evaluate statements related to the nine SQoL aspects. The results revealed that among all of the statements, the students rated *living in peace* as the most important ($M = 4.75$; $SD = 0.52$), while *having the opportunity to rent bicycles in your hometown* was rated as the least important ($M = 3.53$; $SD = 1.145$).

The sixth-grade students ranked health and safety, income and employment, and living as the three most important SQoL aspects and mobility as the least important aspect. Comparative analysis of the importance of individual statements within each aspect revealed that, within the health and safety aspect, the students assigned the highest importance to *living in a country without wars and conflicts* ($M = 4.75$; $SD = 0.523$), followed by *living according to health recommendations* ($M = 4.41$; $SD = 0.615$). The income and employment aspect was also rated highly, although slightly lower than the health and safety aspect. Regarding the income and employment aspect, *the possibility of free choice of profession* ($M = 4.59$; $SD = 0.651$) was rated higher than the importance of ensuring that *all professions are respected and fairly paid* ($M = 4.55$; $SD = 0.744$). The students rated *separating waste* higher ($M = 4.58$; $SD = 0.588$) than *the careful use of water and electricity* ($M = 4.50$; $SD = 0.635$) in the living aspect.

In the social relations and equality aspect, *respect for elders* received the highest score ($M = 4.64$; $SD = 0.562$), followed by *equal access to clean water and food* ($M = 4.58$; $SD = 0.644$) and *the equal division of labour in the household* ($M = 4.21$; $SD = 0.849$). Analyses of the importance of individual topics within the leisure and recreation aspect showed that the students rated *practising leisure activities that do not harm nature* slightly higher ($M = 4.48$; $SD = 0.721$) than *social contacts and education in leisure time* ($M = 4.33$; $SD = 0.822$). Within the nature and landscape aspect, *the preservation of biodiversity for a sustainable future* was rated higher ($M = 4.38$; $SD = 0.789$) than *having green spaces close to home* ($M = 4.23$; $SD = 0.921$). The students' opinions on the statements related to the education and knowledge aspect showed that *the importance of learning critical thinking and taking responsibility for actions in relation to a sustainable quality of life* was rated lower ($M = 4.14$; $SD = 0.773$) than *receiving concrete ideas for improving your life in class and that these ideas are easily transferable to everyday life* ($M = 4.18$; $SD = 0.879$). Greater importance was assigned to *participation in environmental campaigns* ($M = 4.50$; $SD = 0.70$) than *expressing one's own opinion at school or in the community* ($M = 4.03$; $SD = 0.772$) in the participation and identification aspect.

The mobility aspect received the lowest overall ratings; *walking, cycling*

or using public transport ($M = 3.98$; $SD = 0.917$) was rated as more important than the possibility of renting bicycles ($M = 3.53$; $SD = 1.145$).

Statistically significant differences by gender were found only in the following statements: boys agreed more than girls with “It is important to live in a country without wars and conflicts” (boys $MR = 64.78$, girls $MR = 55.27$); “It is important to preserve the diversity of living beings for a sustainable future” (boys $MR = 66.21$, girls $MR = 53.52$); and “It is important to go on foot, by bike or by public transport instead of by car” (boys $MR = 66.58$, girls $MR = 53.07$) (Table 2).

Table 2

Students' Attitudes Towards the Importance of SQoL Statements According to Gender

SQoL aspect	Statement It is important...	Gender	N	MR	U	p
Health and safety	to live in a country without wars and conflicts.	Male	66	64.78	1499.50	.035
		Female	54	55.27		
	to live in accordance with the recommendations for a healthy lifestyle.	Male	66	61.14	1740.00	.804
		Female	54	59.72		
Income and employment	to have the possibility of freely choosing a profession/employment.	Male	66	62.94	1621.00	.309
		Female	54	57.52		
	that all professions are respected and fairly paid.	Male	66	58.27	1635.00	.348
		Female	54	63.22		
Living	to separate waste.	Male	66	63.36	1593.00	.238
		Female	54	57.00		
	to be careful about water and electricity consumption.	Male	66	59.23	1698.00	.613
		Female	54	62.02		
Social relations and equality	to respect elders.	Male	66	62.37	1658.50	.423
		Female	54	58.21		
	to have equal opportunities in access to clean and potable water and food.	Male	66	59.87	1740.50	.793
		Female	54	61.27		
	to have equal opportunities for learning for all children.	Male	66	59.33	1704.50	.618
		Female	54	61.94		
	to have equal opportunities for access to housing.	Male	66	56.70	1532.50	.112
		Female	54	65.14		
	to be tolerant of those who are different.	Male	66	59.91	1743.00	.812
		Female	54	61.22		
	to have an equal division of labour at home; all family members contribute fairly and equally to household chores.	Male	66	61.80	1696.50	.621
		Female	54	58.92		

SQoL aspect	Statement <i>It is important...</i>	Gender	N	MR	U	p
Leisure and recreation	<i>that leisure activities do not harm nature.</i>	Male	66	61.45	1719.00	.702
		Female	54	59.33		
	<i>to have entertainment, socialising and educational activities in leisure time.</i>	Male	66	61.71	1702.00	.642
		Female	54	59.02		
Nature and landscape	<i>to preserve the diversity of living beings for a sustainable future.</i>	Male	66	66.21	1405.00	.027
		Female	54	53.52		
	<i>to have green spaces and parks close to home where I can spend my time.</i>	Male	66	60.87	1757.50	.888
		Female	54	60.05		
Education and knowledge	<i>to engage in task-based learning that incorporates real-life.</i>	Female	66	61.96	1685.50	.587
		Male	54	58.71		
	<i>to gain concrete ideas for improving your life in class that you can immediately transfer to your everyday life.</i>	Male	66	64.42	1523.00	.142
		Female	54	55.70		
	<i>to develop ideas for improving your everyday behaviour in class.</i>	Male	66	63.92	1556.50	.202
		Female	54	56.32		
	<i>to learn about recycling and energy conservation.</i>	Male	66	62.45	1653.50	.463
		Female	54	58.12		
	<i>to learn to think critically and take responsibility for one's actions in relation to a sustainable quality of life.</i>	Male	66	60.67	1771.00	.949
		Female	54	60.30		
Participation and identification	<i>to educate about the environment and sustainability.</i>	Female	66	65.42	1457.50	.067
		Male	54	54.49		
	<i>to participate in environmental campaigns, such as a clean-up campaign – cleaning the school grounds.</i>	Male	66	63.75	1567.50	.231
		Female	54	56.53		
	<i>to express your opinion at school or in the community.</i>	Male	66	62.36	1659.00	.486
		Female	54	58.22		
Mobility	<i>to go on foot, by bike or by public transport instead of by car.</i>	Male	66	66.58	1381.00	.025
		Female	54	53.07		
	<i>to have the opportunity to rent bicycles in your hometown.</i>	Male	66	59.92	1744.00	.836
		Female	54	61.20		

Note. MR – mean rank, U – Mann-Whitney U value

Comparing the students' responses to the nine SQoL aspects by gender, the analysis showed that there were no statistically significant differences in attitudes between boys and girls ($p > .05$) (Table 3). However, girls assigned slightly higher importance to the health and safety, and leisure and recreation aspects than boys.

Table 3
Students' Attitudes Towards the Importance of the Nine SQoL Aspects According to Gender

SQoL aspect	Gender	N	MR	U	p
Health and safety	Male	66	58.83	1892.00	0.559
	Female	54	62.54		
Income and employment	Male	66	60.71	1768.00	0.940
	Female	54	60.24		
Living	Male	66	61.16	1738.50	0.816
	Female	54	59.69		
Social relations and equality	Male	66	61.12	174.00	0.828
	Female	54	59.74		
Leisure and recreation	Male	66	60.39	1789.50	0.968
	Female	54	60.64		
Nature and landscape	Male	66	61.47	1718.00	0.725
	Female	54	59.31		
Education and knowledge	Male	66	64.47	1520.00	0.161
	Female	54	55.65		
Participation and identification	Male	66	61.39	1723.00	0.754
	Female	54	59.41		
Mobility	Male	66	59.47	1850.00	0.713
	Female	54	61.76		

Note. MR – mean rank, U – Mann-Whitney U value

Analysis of the data according to the students' place of residence (Table 4) revealed that seven out of the nine SQoL aspects were assessed more highly by the students from rural environments, while the living and mobility aspects were rated higher by the students from urban environments. A statistically significant difference was found in the assessment of the importance of income and employment ($U = 1337.500, p = .013$), with the students from rural environments assigning greater importance to this aspect ($MR = 67.33$) than the students from urban environments ($MR = 52.79$).

Table 4

Students' Attitudes Toward the Importance of the Nine SQoL Aspects According to Place of Residence

SQoL aspect	Place of residence	N	MR	U	p
Health and safety	Urban environment	60	55.57	1504.000	0.096
	Rural environment	60	65.43		
Income and employment	Urban environment	60	52.79	1337.500	0.013
	Rural environment	60	67.33		
Living	Urban environment	60	61.38	1747.500	0.774
	Rural environment	60	59.63		
Social relations and equality	Urban environment	60	57.04	1592.500	0.273
	Rural environment	60	63.96		
Leisure and recreation	Urban environment	60	59.17	1720.000	0.662
	Rural environment	60	61.83		
Nature and landscape	Urban environment	60	54.78	1456.500	0.061
	Rural environment	60	66.23		
Education and knowledge	Urban environment	60	55.61	1506.500	0.122
	Rural environment	60	65.39		
Participation and identification	Urban environment	60	55.16	1479.500	0.085
	Rural environment	60	65.84		
Mobility	Urban environment	60	62.08	1705.000	0.613
	Rural environment	60	58.92		

Note. MR – mean rank, U – Mann-Whitney U value

Discussion

The first research question aimed to examine the participating students' attitudes towards the nine SQoL aspects. The results showed that the students rate all aspects of SQoL as important. However, living in peace was rated as the most important aspect, which is partially consistent with Kutsar et al. (2019), who found that for children, the two most important factors for a good life are being cared for and feeling safe. Analyses by individual aspects showed that the most important aspect, health and safety, was followed by income and employment. Regarding income and employment, the results revealed that the students ranked the right to the free choice of profession/employment above the importance of all professions being respected and fairly paid. This is not surprising, as they are in a period when they are just starting to consider their

professional future and are not yet aware of all of the conditions in the labour market. Within the living aspect, waste collection was considered more important than careful consumption of water and electricity. This may be due to the current emphasis on waste separation in the curriculum. Sustainability-oriented education may be a reason why the students ranked the importance of activities that do not harm nature highest in the leisure and recreation aspect, and preserving the diversity of living beings for a sustainable future in the nature and landscape aspect. Within the social relations and equality aspect, the students rated respect for elders as most important and an equal division of labour at home as least important. This may suggest that they are not aware of why it is important for all family members to participate in daily responsibilities, which can also be a challenge for home economics teachers as they attempt to support students' development towards a more sustainable quality of life in their future. The results also revealed that, in the knowledge aspect, the students ranked task-based learning based on real life and gaining concrete, easily transferable ideas for improving life highest. Conversely, the results showed that, in this aspect, the students rated learning critical thinking lower, while in the participation and identification aspect, the importance of expressing opinions in school or in the community was ranked lowest. This suggests that students at this age are more focused on concrete and directly applicable knowledge. These findings also suggest that educators should implement teaching strategies that clarify the connection between theory and practice: they should promote understanding of the role that individuals play in achieving a sustainable quality of life in both private and social contexts, using authentic tasks, project-based learning and experiential learning. Educators should also encourage students in various learning situations to think critically and express their opinions. Among all of the aspects, mobility was ranked last. This may be related to the fact that parents still care for the students. The respondents stated that it is important to travel on foot, by bike or by public transport instead of by car, which indicates that they are aware of more sustainable mobility options. They ranked the opportunity to rent bicycles in their hometown as the second most important factor. This may be because organised transport, whether provided by parents or public transport, is a safer and more convenient option for them.

The second research question examined whether there are statistically significant differences in perceptions of the importance of the nine SQoL aspects based on gender and place of residence. Legaspi et al. (2024) found that attitudes towards sustainable development differ by gender. The results of the present study show that girls assigned slightly greater importance to two aspects compared to boys (health and safety, and leisure and recreation) and assigned

slightly less importance to the other seven aspects, but there were no statistically significant differences in attitudes between boys and girls ($p > .05$). This may be due to similar educational experiences and shared social environments. It may also indicate that potential gender differences in sustainability-related attitudes are not yet strongly developed in early adolescence. The differences observed in the Legaspi et al. (2024) study are related to different age groups and contexts, and focused only on sustainability as a concept, whereas the present study addresses the broader and more integrated concept of SQoL. Further research is needed to clarify gender-related issues in SQoL.

The results also revealed that eight of the nine SQoL aspects were assessed more highly by the sixth-grade students from rural environments (the exception was the mobility aspect), and that a statistically significant difference was observed only in the domain of income and employment ($p < .05$). Mao et al. (2023) reported that students born or frequently living in rural areas showed stronger attachment to place, higher appreciation of the natural environment and greater community involvement, which is consistent with the findings of the present study, in which the students from rural areas scored higher on aspects such as nature and landscape, social relations and equality, and identification and participation. Similarly, research by Mao et al. (2024) has shown that students from rural backgrounds, despite currently studying in an urban environment, express a greater appreciation for tranquillity, natural landscapes and self-sufficiency in local food. The results of the present study, although conducted among younger students, were similar, with the students from rural backgrounds placing slightly more importance on the living, nature and landscape, and health and safety aspects.

The present study revealed that the sixth-grade students from urban environments placed more importance on the mobility aspect than the students from rural environments, which could be a consequence of the fact that they are exposed to different mobility options or more developed transport infrastructure in cities, as noted by Feldmane (2019), who emphasised greater accessibility as a defining advantage of urban environments. Mao et al. (2024) also reported that students from rural areas more frequently expressed concerns about employment opportunities and future financial stability, due to limited labour market diversity in their home regions. In the present study, statistically significant differences were found in the aspect of income and employment, with the students from a rural environment also rating this aspect as more important than the students from an urban environment. Lacruz et al. (2024) emphasise that rural schools should not be understood through an urban deficit model but as educational contexts with specific social, cultural and territorial

characteristics. Their study highlights the importance of connecting schools with the local community and using the natural, material, social and cultural resources of the rural territory in teaching, as well as emphasising the need to design training programmes that consider the local context. In the present study, the higher ratings given by the rural students to several SQoL aspects, particularly income and employment, may reflect the fact that their perceptions of quality of life are shaped by the social and economic characteristics of the environments in which they live. Our results indicate that the findings of Lacruz et al. (2024) should be taken into consideration.

The results of the present study show that sixth-graders are primarily looking for concrete ideas on how to improve their everyday life in terms of education and knowledge, and that these ideas should be easy to apply in everyday life. This supports the view of Solano-Sánchez et al. (2022) that education for sustainable development is most effective when it combines knowledge, attitudes and behaviour. Such an approach encourages young people to internalise sustainability as a way of life. It also supports the view of Ruiz (2024) that experiential and ethically grounded learning promotes readiness for social participation, personal responsibility and empathy. These findings also highlight the importance of connecting theoretical knowledge with practical application, which appears to be a key factor in how students understand and value SQoL.

Conclusions and Implications

The findings of the present study indicate that students generally consider all SQoL aspects important, with health and safety, income and employment, and living rated as the most important. No statistically significant gender differences were found at the level of SQoL aspects, but a significant difference was observed in the income and employment aspect, which was rated higher by students from rural environments. Additionally, aspects such as participation and identification, and mobility were consistently rated lower than the others. From a curricular perspective, the findings highlight the need to more explicitly integrate SQoL dimensions into the home economics curriculum by building on students' preference for concrete, everyday-oriented knowledge, while strengthening less emphasised areas related to the social dimensions of sustainable development. In order to achieve goals related to SQoL, it would be beneficial to introduce educational activities that raise students' awareness of active involvement in the social environment, including contributing ideas, expressing opinions on current issues and developing active citizenship. Educators should address SQoL-related topics using teaching approaches that require

active student participation (e.g., collaborative, experiential and problem-based learning) and design problem-based and authentic tasks to support the transfer of new knowledge to everyday contexts. This approach may contribute to the development of higher-order critical thinking and responsible decision-making in relation to SQoL.

It is also very important that students are aware of the teaching process, i.e., how they will learn certain topics. Research by Mithans et al. (2024) found that problem-based and research-based learning were perceived by both students and teachers as the most frequently used active didactic strategies, while project-based learning was seen as the least frequently used. Additionally, teachers reported using these strategies more often than students perceived, indicating a gap between teachers' and students' views of classroom practice. With regard to SQoL education, this suggests that active learning should not be included only declaratively but should be designed in ways that are clearly recognisable and meaningful to students.

Taken together, these findings indicate that fostering SQoL requires an integrative educational approach that connects knowledge, skills, everyday practices and teaching strategies, enabling students to understand and enact the relationship between individual wellbeing and sustainability.

Although the present study was conducted in Slovenia, the findings are relevant to education systems that address sustainability and quality of life in compulsory schooling. They emphasise the importance of aligning curriculum content with students' everyday experiences while fostering competencies needed for sustainable development and quality of life.

Study Limitations and Future Directions

The relatively small sample, as well as the specific grade and geographic area of the participants, may reduce the generalisability of the findings. Therefore, future research should involve students from more schools in different geographical areas and students from higher grades (7th, 8th and 9th year) of nine-year primary school in greater numbers in order to strengthen the validity of research conclusions. In addition, the present study relied on self-reported data, which may be affected by social desirability bias, as students might provide responses that they perceive as socially acceptable rather than reflecting their actual attitudes. Another limitation is the cross-sectional design, which captures students' attitudes at a single point in time and does not allow for an examination of how these attitudes develop or change over time. Longitudinal studies would provide a deeper insight into the development and stability of

SQoL-related attitudes. Furthermore, the questionnaire was newly developed for this study based on the SQoL framework, which may limit comparability with other studies using standardised instruments for individual aspects (e.g., sustainability). Although content validity and reliability were ensured, future research could further validate the instrument and explore its applicability in different educational contexts. Future research could also focus on exploring the relationship between students' attitudes towards SQoL and the success of transferring knowledge related to SQoL into everyday life choices and practices.

Ethical Statement

The authors declare that the study was approved by the official Research Ethics Commission at the Faculty of Education, University of Ljubljana, Slovenia (21/2025).

Data Availability Statement

The datasets generated and analysed during the current study are not publicly available due to ethical and privacy restrictions. However, they are available from the corresponding author upon reasonable request.

Disclosure Statement

The authors have no conflict of interest to declare.

During the preparation of this manuscript, the authors used ChatGPT (version 5.3) on 16 April 2026 for language review with the prompt: [Please check this text for grammatical inaccuracies and suggest potential edits. Direct revisions to the text are not permitted.] The tool was used solely for language editing and citation verification. For language improvement, the Instatext editor was also used. All outputs were critically reviewed and revised by the authors, who take full responsibility for the content, interpretation and accuracy of this manuscript.

References

- Bucht, C., Bachner, J., & Spengler, S. (2024). Environmental attitude and affective-motivational beliefs towards sustainability of secondary school children in Germany and their associations with gender, age, school type, socio-economic status and time spent in nature. *PLOS ONE*, 19(5), Article e0296327. <https://doi.org/10.1371/journal.pone.0296327>
- Di Mario, S., Elia, U., Salvati, F., Tofani, M., Sacco, F., Maselli, L., & Galeoto, G. (2024). Stress and burnout in healthcare students: An integrative review. *International Journal of Environmental Research and Public Health*, 21(6), Article 12043. <https://doi.org/10.1016/j.teln.2024.04.009>
- Erjavšek, M., Lovšin Kozina F., & Kostanjevec, S. (2021). In-service home economics teachers' attitudes to the integration of sustainable topics in the home economics subject. *Center for Educational Policy Studies Journal*, 11(1), 27–47. <https://doi.org/10.26529/cepsj.614>
- Feldmane, L. (2019). Students' satisfaction with their host city: Case of Jelgava, Latvia. *Engineering for Rural Development*, 18, 1888–1892. <https://doi.org/10.22616/ERDev2019.18.No88>
- Haapala, I., Biggs, S., Cederberg, R., & Kosonen, A. (2012). Home economics teachers' intentions and engagement in teaching sustainable development. *Scandinavian Journal of Educational Research*, 58(1), 41–54. <https://doi.org/10.1080/00313831.2012.696213>
- Huang, X., Hua, L., Zhou, X., Zhang, H., Zhang, M., Wang, S., Qin, S., Chen, J., & Wang, X. (2021). The association between home environment and quality of life in children and adolescents in Hangzhou City, China. *Journal of Child and Family Studies*, 30, 1416–1427. <https://doi.org/10.1007/s10826-021-01951-1>
- Karimi, M., & Brazier, J. (2016). Health, health-related quality of life, and quality of life: What is the difference? *Pharmacoeconomics*, 34(7), 645–649. <https://doi.org/10.1007/s40273-016-0389-9>
- Kassa, K., Arficho, Z., & Mulatu, M. (2022). Relationship between students' attitude towards vocabulary learning and their English vocabulary knowledge. *Theory and Practice in Language Studies*, 12(10), 4757–4764. <https://doi.org/10.17507/tpls.1210.01>
- Kennedy, E., Krahn, H., & Krogman, N. (2013). Downshifting: An exploration of motivations, quality of life, and environmental practices. *Sociological Forum*, 28(4), 764–783. <https://doi.org/10.1111/socf.12057>
- Kutsar, D., Soo, K., Strózik, T., Strózik, D., Grigoraș, B., & Bălătescu, S. (2019). Does the realisation of children's rights determine good life in 8-year-olds' perspectives? A comparison of eight European countries. *Child Indicators Research*, 12(1), 161–183. <https://doi.org/10.1007/s12187-017-9499-y>
- Lacruz, J. L., Buscà Donet, F., & Abós Olivares, P. (2024). Rural teacher competencies: An international comparative study on the territorial dimension of rural schools. *Center for Educational Policy Studies Journal*, 14(4), 145–170. <https://doi.org/10.26529/cepsj.1542>
- Legaspi, J. T., Linggas, E. S., Taping, R. T., & Bacatan, J. R. (2024). Student's attitude towards sustainable development. *Contemporary Research Analysis Journal*, 1(6), 248–257. <https://doi.org/10.55677/CRAJ/12-2024-Vol01I6>
- Liao, C., & Li, H. (2019). Environmental education, knowledge, and high school students' intention

- toward separation of solid waste on campus. *International Journal of Environmental Research and Public Health*, 16(9), Article 1659. <https://doi.org/10.3390/ijerph16091659>
- Lice, I., & Reihmane, S. (2015). Education for sustainable development at home economics. In V. Dišlere (Ed.), *Proceedings of the Rural Environment Education* (pp. 230–236). Latvia University of Agriculture. <https://lufb.ltu.lv/conference/REEP/2015/Latvia-Univ-Agricult-REEP-2015proceedings-230-236.pdf>
- Lu, Y.-Y., Chen, H.-T., Wang, H.-H., Lawrenz, F., & Hong, Z.-R. (2019). Investigating grade and gender differences in students' attitudes toward life and well-being. *Applied Research in Quality of Life*, 16, 105–127. <https://doi.org/10.1007/s11482-019-09746-9>
- Mao, Y., He, L., Danniswari, D., & Furuya, K. (2023). College students' perceptions of and place attachment to rural areas: Case study of Japan and China. *Youth*, 3(2), 737–752. <https://doi.org/10.3390/youth3020048>
- Mao, Y., He, L., Danniswari, D., & Furuya, K. (2024). Perception and relocation intentions of Japanese youth towards rural areas: A case study of visitors in Hanyu-shi, Saitama Prefecture. *Social Sciences*, 13(4), Article 197. <https://doi.org/10.3390/socsci13040197>
- Mithans, M., Zurc, J., & Ivanuš Grmek, M. (2024). Perceptions of didactic strategies among pupils and teachers in primary school. *Center for Educational Policy Studies Journal*, 14(1), 225–246. <https://doi.org/10.26529/cepsj.1491>
- Mubarak, A., Frinaldi, A., Syamsir, S., Syolendra, D., Fitriyanti, W., & Rezeki, A. (2024). Community involvement in the development of Nagari-based sustainable waste management. *IOP Conference Series: Earth and Environmental Science*, 1414(1), Article 012082. <https://doi.org/10.1088/1755-1315/1414/1/012082>
- Ramón-Arbués, E., Echániz-Serrano, E., Martínez-Abadía, B., Antón-Solanas, I., Cobos-Rincón, A., Santolalla-Arnedo, I., Juárez-Vela, R., & Jerue, B. A. (2022). Predictors of the quality of life of university students: A cross-sectional study. *International Journal of Environmental Research and Public Health*, 19(19), Article 12043. <https://doi.org/10.3390/ijerph191912043>
- Ridayani, R., Saputra, N., Siagian, N., Owon, R., & Rawadhy, I. (2022). The correlation of environmental education, environmental knowledge, environmental involvement, and waste management behavior. *IOP Conference Series: Earth and Environmental Science*, 1105(1), Article 012008. <https://doi.org/10.1088/1755-1315/1105/1/012008>
- Ruiz, M. U. (2024). A sustainable tourism pedagogy quadrant for transformative education: A student perspective. *IOP Conference Series: Earth and Environmental Science*, 1366(1), Article 012045. <https://doi.org/10.1088/1755-1315/1366/1/012045>
- Schneider, P., Reinstorf, F., & Vázquez Z, R. F. (2019). Theory-practice integration and sustainability. In W. L. Filho, A. M. Azul, L. Brandli, P. Gökcin Özuyar, & T. Wall (Eds.), *Quality Education. Encyclopedia of the UN Sustainable Development Goals* (pp. 1–16). Springer. https://doi.org/10.1007/978-3-319-69902-8_10-1
- Shrestha, B., Tiwari, S., Bajracharya, S., & Keitsch, M. (2020). *Role of gender participation in household energy technology to achieve sustainability: A case of Kathmandu*. Research Square. <https://doi.org/10.21203/rs.3.rs-113822/v1>

- Solano-Sánchez, M. Á., Domínguez-Valerio, C. M., Lendínez-Turón, A., & Aguilar-Rivero, M. (2022). Sustainable economic development education: The use of artificial neural networks for the profile estimation of students from developing countries. *Sustainability*, 14(3), Article 1192. <https://doi.org/10.3390/su14031192>
- Stevenson, R. (2022). Approaches to education for sustainability. In K. Hytten (Ed.), *Oxford Research Encyclopedia of Education*. Oxford University Press. <https://doi.org/10.1093/acrefore/9780190264093.013.93>
- Sugara, G. S., Rakhmat, C., Nurihsan, J., & Ilfiandra, I. (2020). Quality of life and burnout among university students. *Universal Journal of Educational Research*, 8(8), 3742–3750. <https://doi.org/10.13189/ujer.2020.080855>
- Taar, J., & Palojoki, P. (2022). Applying interthinking for learning 21st-century skills in home economics education. *Learning, Culture and Social Interaction*, 33, Article 100615. <https://doi.org/10.1016/j.lcsi.2022.100615>
- Tapia, M., & Marsh, G. E. (2004). An instrument to measure mathematics attitudes. *Academic Exchange Quarterly*, 8(2), 16–21.
- Teoli, D., & Bhardwaj, A. (2023, March 27). *Quality of life*. In *StatPearls*. StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK536962/>
- Ursachi, G., Horodnic, I. A., & Zait, A. (2015). How reliable are measurement scales? External factors with indirect influence on reliability estimators. *Procedia Economics and Finance*, 20, 679–686. [https://doi.org/10.1016/S2212-5671\(15\)00123-9](https://doi.org/10.1016/S2212-5671(15)00123-9)
- Vogt, C. A., Andereck, K. L., & Pham, K. (2020). Designing for quality of life and sustainability. *Annals of Tourism Research*, 83, Article 102963. <https://doi.org/10.1016/j.annals.2020.102963>
- Vošnjak, M., Rebolj, N., & Devetak, I. (2025). Environmental content as a part of science-oriented sustainable development goals in Grades 6 and 7 of Slovenian primary school: An analysis of science textbooks. *Center for Educational Policy Studies Journal*, 15(4), 247–276. <https://doi.org/10.26529/cepsj.1792>
- Waitt, G., Caputi, P., Gibson, C., Farbotko, C., Head, L., Gill, N., & Stanes, E. (2012). Sustainable household capability: Which households are doing the work of environmental sustainability? *Australian Geographer*, 43(1), 51–74. <https://doi.org/10.1080/00049182.2012.649519>
- WCED. (1987). *Our common future*. Oxford University Press.
- WHO. (2022). *WHOQOL: Measuring quality of life*. World Health Organization. <http://www.who.int/healthinfo/survey/whoqol-qualityoflife/en/>
- Wiesli, T. X., & Hammer, T. (2019). *Lebensqualität und Nachhaltigkeit: Die Sicht der Bevölkerung in Parks von nationaler Bedeutung* [Quality of life and sustainability: The perspectives of residents in parks of national importance]. Universität Bern, Interdisziplinäres Zentrum für Nachhaltige Entwicklung und Umwelt (CDE). <https://doi.org/10.7892/boris.132887>
- Zaman, B., & Lovšin Kozina, F. (2021). Textile literacy of ninth-grade students in the context of sustainable development. *Problems of Education in the 21st Century*, 79(4), 674–685. <https://doi.org/10.33225/pec/21.79.674>

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