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Life Skills in Life Science Teaching: An Investigation on Primary School Teachers' Awareness

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Abstract

This study examines primary school teachers' awareness of life skills within the context of the Life Science course. It proposes practices that contribute to the literature by evaluating primary school teachers' understanding of life skills. Data were collected from 120 primary school teachers selected through purposive sampling using the "Life Skills Scale" (Bastık, 2018). In this quantitative study, the data were analysed using descriptive statistics, including mean scores and percentages. The data obtained from the survey revealed that primary school teachers generally have a high level of awareness regarding life skills. The highest awareness was observed in communication, time management, and nature conservation. Participants had differing opinions on decision-making and problem-solving skills. Additionally, the findings revealed that primary school teachers believe the Life Science course helps students in their cognitive, emotional, and social development.

Keywords: life skills, life science, primary school teachers

Hayat Bilgisi Öğretiminde Yaşam Becerileri: İlkokul Öğretmenlerinin Farkındalığı Üzerine Bir Araştırma

Özet

Bu çalışma, sınıf öğretmenlerinin Hayat Bilgisi dersi bağlamındaki yaşam becerileri farkındalığını incelemekte ve sınıf öğretmenlerinin yaşam becerilerinin değerlendirilmesi yoluyla alanyazına katkı sağlayacak uygulamalar önermektedir. Amaçlı örnekleme yöntemiyle seçilen 120 sınıf öğretmeninden veriler "Yaşam Becerileri Ölçeği" kullanılarak toplanmıştır. Nicel yöntemle yürütülen bu çalışmada veriler, ortalama puanlar ve yüzdelikler gibi betimsel istatistiklerle analiz edilmiştir. Anketten elde edilen veriler, sınıf öğretmenlerinin genel olarak yaşam becerilerine yönelik yüksek düzeyde bir farkındalığa sahip olduklarını ortaya koymuştur. En yüksek farkındalık iletişim, zaman yönetimi ve doğayı koruma alanlarında gözlemlenmiştir. Katılımcılar karar verme ve problem çözme becerileri konusunda farklı görüşler bildirmişlerdir. Ayrıca bulgular, sınıf öğretmenlerinin Hayat Bilgisi dersinin öğrencilerin bilişsel, duygusal ve sosyal gelişimlerine katkı sağladığına inandıklarını ortaya koymuştur.

Anahtar Kelimeler: yaşam becerileri, hayat bilgisi, ilkokul öğretmenleri

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Introduction

Teaching the Life Science course with a constructivist approach develops personal, social, and environmental skills, also known as life skills. The primary school teachers' understanding and awareness of life skills in the context of the Life Science course influence the instructional methods, innovations, and course materials used to achieve the goal set by the Ministry of National Education (MEB, 2018) of equipping students with life skills (Kılınç & Uygun, 2015).

Life Science is very essential for cognitive, emotional, and social development. It helps students recognise themselves and discover their various skills and abilities (Taneri & Ayyıldız, 2024). This course enhances primary school education with critical thinking, problem-solving, and communication skills. Teacher awareness significantly affects instruction. Teachers' attitudes and strategies impact the success of the Life Science course and its effect on students.

Life Science enables students to understand their environment, embrace cultural values, and develop critical thinking, problem-solving, communication, and digital literacy skills (Taneri & Ayyıldız, 2024). Life skills prepare students for other core subjects, higher grades, and the challenges of life. The Life Science course also provides life skills and guidance through its content. Therefore, evaluating the Life Science course and life skills from teachers' perspectives is important because teachers' attitudes, methods, and materials affect student learning.

Since information processing, problem-solving ability, and communication are crucial in the rapidly changing 21st century, it is necessary to teach these skills in primary schools. Life Science equips students with lasting social, emotional, and cognitive skills preparing them to overcome obstacles and integrate into society (Taneri & Ayyıldız, 2024). Additionally, the Life Science curriculum emphasises critical thinking, creativity, problem-solving, communication, and decision-making (Karakuş, 2021). How students learn these skills also depends on teachers' instructional approaches.

Upon reviewing the literature, it becomes apparent that only a few studies have evaluated primary school teachers' awareness of teaching life skills, highlighting the need to identify barriers and solutions for life skills instruction (Bastık, 2018; Kurşun, 2013; Yıldırım, 2020). Since acquiring life skills within the scope of the Life Science course benefits both current and future students, it is necessary to assess teachers' awareness of life skills.

The 2018 Life Science Curriculum emphasised personal awareness, health, safety, environmental awareness, curiosity, productivity, and patriotism. This was carried out with 14 goals (Ministry of Education, 2018). In 2023, eight changes were made to the 2018 curriculum. Updates included the arrangement and page size of the Life Science textbook, revisions to first-grade achievement and descriptions, changes to second-grade descriptions, and updates to third-grade learning outcomes and descriptions. These changes are related to recent global events and natural disasters (Akkaya, 2023). The recent Life Science curriculum emphasises "core life skills," one of the three main components for students and courses.

Life skills are critical for mental and physical development. According to Gülhane (2014), life skills programs support "being healthy, staying safe, enjoying life, achieving success, making positive contributions, and ensuring economic well-being." Life skills strengthen reasoning, problem-solving, and communication, thereby enhancing education, children's understanding of their environment, and their behaviour beyond their cognitive and emotional abilities (UNICEF, 2012), ultimately increasing children's emotional and relational awareness. Life skills teach children "self-confidence and socialisation" (Coşkuner et al., 2021).

The research question of this study is: "What is the level of primary school teachers' life skills awareness?" This study aims to examine primary school teachers' awareness levels regarding life skills in the Life Science course. The study assessed teachers' knowledge, attitudes, and instructional approaches regarding life skills, addressed the challenges teachers face in teaching these skills, and offered suggestions for improvement. The ultimate aim of the study is to increase teachers' awareness throughout the educational process, thereby enhancing the effectiveness of life skills instruction and improving student achievement.

Related National Studies

Karaca (2008) found, in his study, that textbooks improved both general and specialised skills, as indicated by the results of a survey involving 194 primary school teachers in Afyon. Kurşun (2013) examined teachers' perceptions of research accessibility in the 2005 Life Science Curriculum in his study. The research results showed that Life Science teachers enjoyed teaching research skills; however, environmental factors, including families' socioeconomic conditions and school type, limited the teachers' abilities to do so.

Öztürk (2015) found that students learned communication and basic concepts in Life Science subjects at a "good" level and other skills at a "medium" level. It was also determined that there was no difference regarding teachers' opinions on these basic competencies based on gender, educational background, professional experience, or grade level. Bastık (2019), in his study using a mixed-method approach, found that teachers who believed that the Life Science course taught life skills also indicated that it was insufficient. Teachers who believed that life skills were not being taught stated that the curriculum was inadequate, activities were not suitable for students' levels, they were unrelated to students' lives, the course was theoretical, and the textbooks were incomplete.

Yıldırım (2020) examined the acquisition of basic life skills by primary school students in the context of the Life Science course and it was found that only 128 of the 143 achievements corresponded to skills, and there was also an unequal distribution of basic life skills among the achievements. There was one achievement each for "perceiving change and continuity," "cooperation," and "problem-solving"; 15 for "nature conservation"; 12 for "spatial perception"; and 11 for "health protection." Entrepreneurship and personal care were only present in the 1st and 3rd grades. At the same time, "decision-making" was present in the 1st and 2nd grades, with three achievements, and "career awareness" was included in the 2nd and 3rd grades, with two achievements. There was no notable achievement in self-management in the 2nd grade, whereas such achievements were observed in the 1st and 3rd grades.

Topaloğlu (2023) found that the most common material in 1st-grade Life Science books was "adherence to rules," in 2nd grade it was "recognition of national and cultural values," and in 3rd grade it was "self-protection" skills. Köseoğlu (2023) found that digital storytelling applications in the Life Science course enhanced students' self-management skills, increased active learning, made lessons more engaging, and could be effectively applied in other classes as well.

Erbağcı (2024) found that students struggled to recognise problems and decision-making scenarios, generate solutions, make judgments based on specific criteria, and justify their decisions. Issues such as students not writing, not drawing, or not filling out activity journals, misunderstanding instructions, limited class time, and attention difficulties during expert guest activities were reported. Educational games, think-aloud approaches, brainstorming, drama, animations, graphics, red-green expression cards, riddles, and humour were recommended to address these problems. The applications improved students' problem-solving and decision-making skills, and most students enjoyed the practices. Salman (2024), found that the life skills of 4th-grade students differed by gender and parental education, and problem-solving skills differed by gender and mother's education level, with fathers who were university graduates having significantly higher skills. It was found that life skills were moderately and positively correlated with problem-solving skills, and that problem-solving skills predicted life skills.

Related International Studies

Simone (2013) found that 21 digital applications improved children's basic skills by developing developing their emotional and cognitive abilities, including emotional awareness, responsibility, decision-making, interaction, and learning from consequences. She stated that games, puzzles, drawing, and other application methods could help children develop life skills. Bwayo (2014), in his study found that Ugandan primary school teachers struggled to teach life skills. Teachers were asked to fill out personal information forms about their approaches to teaching life skills. Life skills were valued by teachers, parents, and school administrators, and life skills education approaches were associated with their development. The survey revealed that teachers required additional in-service training.

Okech and Role (2015), in their study found a relationship between life skills education and character development. Chupradit et al. (2020), in their study found that the new paradigm enabled students to acquire life skills recommended by the World Health Organisation. Ghabakhlou, Ghalavandi, and Hosseinpour (2021), in their quantitative study titled found that life skills contributed to students' social, academic, and mental development , but were difficult to measure. Additionally, life skills were not widely incorporated into the school education system, and school administrators and teachers did not receive sufficient training in life skills.

Methodology

This study describes the life skills awareness of primary school teachers. In descriptive research, a phenomenon or situation is explained allowing its meaning to be understood. Within the scope of this study, life skills awareness was measured quantitatively among

teachers, and a cross-sectional survey study was used. In this type of study, the opinions, attitudes, and awareness of a group can be examined over time (Büyüköztürk et al., 2013).

Participants

This research covers Turkish primary school teachers. The research sample comprises primary school teachers working in public schools in the provinces of Istanbul and İzmir. A total of 120 teachers voluntarily participated in the study. The convenience sampling method was used in participant selection which aligns with the characteristics of convenience sampling (Creswell, 2012). That is, the researchers collected data from willing and accessible individuals. All teachers in this study participated voluntarily, and ethical approval was obtained from the participants. The purpose of the study was explained to the participants before they completed the informed consent form. The demographic information of the teachers is presented in Table 1.

Table 1. Demographic Characteristics of the Participants

Variable	**Category**	**f**	**%**
Gender	Female	78	%
	Male	42	
Age	20–29 years	25	20.8
	30–39 years	50	41.7
	40–49 years	30	25.0
	50 years and above	15	12.5
Seniority	1–10 years	55	45.8
	11–20 years	40	33.3
	21–30 years	15	12.5
	30 years and above	10	8.4
Location	İstanbul	60	50.0
	İzmir	60	50.0

Table 1 shows the demographic characteristics of the study participants. This survey covered 120 teachers working in public primary schools in Istanbul and İzmir. The study consisted of 65% female (78) and 35% male (42) teachers. The most common age group among participants was 30–39 (41.7%), followed by 40–49 (25.0%), 20–29 (20.8%), and 50+ (12.5%). Of the participants, 45.8% had 1–10 years of experience, 33.3% had 11–20 years, 12.5% had 21–30 years, and 8.4% had 30 years or more of teaching experience. The sample consisted of 60 teachers (50.0%) from each of Istanbul and İzmir.

Data Collection

Within the scope of this study, data were collected from participants using the “Life Skills Scale” (Bastık, 2018). The life skills awareness of primary school teachers was tested with a 29-item scale. Items were evaluated using a five-point Likert scale (1: Strongly Disagree, 5: Strongly Agree). The online survey was created and distributed using Google Forms. Before data collection, participants were informed about the study's purpose and encouraged to participate. All data obtained from participants were anonymised.

For this study, the data collection tool used was the “Life Skills Scale” developed by Bastık (2018). The Bastık (2018) Life Science course scale consists of five sub-dimensions: communication and interpersonal skills, effective use of time and resources, healthcare skills, decision-making and problem-solving skills, and nature and environmental protection skills. According to Bastık’s (2018) study, the Cronbach’s Alpha score is 0.95. Confirmatory factor analysis confirmed the five sections of the scale. The scale is valid and reliable, assessing primary school teachers’ views on life skills.

Data Analysis

In this study, responses from Google Forms were examined. Likert-type scale graphs created with Google Forms and teacher responses for each topic were analysed. Means were determined for each Likert item, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The averages rated the teachers’ life skills. Descriptive analysis revealed data patterns. Graphs and average scores demonstrated teachers' awareness of life skills. The study confirmed the reliability and validity of the data, and the results were interpreted to meet the research objectives.

Findings

Survey responses were analysed using percentage distributions and average scores. Participation rates and patterns of each item were examined. Participants’ agreement-based scores were evaluated.

The Life Skills Scale used in this study consists of five sub-dimensions (Bastık, 2018):

1. Communication and interpersonal skills
2. Effective use of time and resources
3. Health care skills
4. Decision-making and problem-solving skills
5. Nature and environmental protection skills

Descriptive statistics for each sub-dimension, including the mean scores and standard deviations based on teacher responses, are presented in Table 3.

Table 2. Descriptive Statistics by Sub-Dimensions of the Life Skills Scale

Sub-Dimension	Number of Items	Mean	Standard Deviation
Communication and interpersonal skills	7	4.20	0.755
Effective use of time and resources	3	4.07	0.875
Health care skills	4	4.25	0.748
Decision-making and problem-solving skills	11	4.01	0.872
Nature and environmental protection skills	4	4.32	0.662

Table 2 lists the five Life Skills Scale sub-dimensions from 120 primary school teachers. Teachers comprehended environmental responsibility and sustainability best with nature and environmental preservation abilities scoring highest (M = 4.32, SD = 0.662). Teachers prioritize health and social participation, as health care (M = 4.25, SD = 0.748) and communication and interpersonal skills (M = 4.20, SD = 0.755) followed. Decision-making

and problem-solving had the lowest mean score (M = 4.01, SD = 0.872) but strong agreement. Teachers recognize the value of teaching decision-making and resilience, but they may need more help. High ratings across all sub-dimensions demonstrate primary school teachers include life skills into Life Science.

Teachers' survey responses, average scores, and standard deviation values are presented in Table 3.

Table 3. Descriptive Statistics for Life Skills Awareness Scale

Item	Mea .	SD	Min	Max
Item 1	4.3	0.752	2	5
Item 2	4.1	0.813	2	5
Item 3	4.2	0.705	2	5
Item 4	4.2	0.782	2	5
Item 5	4.3	0.659	3	5
Item 6	4.1	0.843	2	5
Item 7	3.9	0.921	2	5
Item 8	4.2	0.732	2	5
Item 9	4.1	0.854	2	5
Item 10	4.0	0.872	2	5
Item 11	4.1	0.899	2	5
Item 12	4.4	0.612	3	5
Item 13	4.3	0.734	2	5
Item 14	4.2	0.801	2	5
Item 15	4.1	0.845	2	5
Item 16	4.3	0.665	3	5
Item 17	4.0	0.911	2	5
Item 18	4.2	0.829	2	5
Item 19	4.1	0.853	2	5
Item 20	4.0	0.886	2	5
Item 21	4.1	0.832	2	5
Item 22	4.0	0.912	2	5
Item 23	3.9	0.887	2	5
Item 24	4.1	0.825	2	5
Item 25	3.8	0.859	2	5
Item 26	4.0	0.874	2	5
Item 27	4.3	0.655	3	5
Item 28	4.3	0.728	2	5
Item 29	4.4	0.601	3	5

Table 3 describes the Life Skills Awareness Scale for 120 primary school teachers. All 29 items had mean scores between 3.8 and 4.4, indicating strong participant agreement on the usefulness of teaching primary school life skills. The highest average ratings of 4.4 and 4.3 were for items 12, 29, and 27, suggesting strong agreement on health, environmental awareness, and nature protection. Items 7 (3.9), 23 (3.9), and 25 (3.8) had lower averages, indicating less consensus among students on their abilities to say "no," handle change, and build self-confidence. The majority of teachers agreed, but they had varied opinions, as

indicated by SD values ranging from 0.601 to 0.921. No one rated life skills education as “1 – strongly disagree.”

Conclusion and Discussion

Data from 120 primary school teachers in Istanbul and İzmir public schools were used to study their awareness of life skills in the Life Science course. Teachers were questioned on communication, time and resource management, health care, decision-making, problem-solving, and environmental conservation using the 29-item Life Skills Awareness Scale. Teachers averaged 3.8–4.4 life skill awareness across all categories. Health (Item 12), environmental awareness (Item 29), and nature conservation (Item 27) obtained the highest average ratings (4.4 and 4.3) in life skills education. The results indicate that early promotion of healthy habits, environmental responsibility, and sustainability is widely approved.

However, categories including students' ability to say “no” (Item 7), handle change (Item 23), and generate self-confidence (Item 25) had lower mean scores (3.8–3.9), suggesting that teachers think these are harder to learn or that current teaching methods may not emphasise these attributes. Children's life skills instruction may emphasise the development of resilience, flexibility, and assertiveness. Most teachers appreciate life skills. However, attitudes vary by competence or classroom experience, ranging from 0.601 to 0.921.

The research highlights the importance of Life Science in students' cognitive, emotional, and social development. Understanding life skills shows teachers' dedication to real-world education. The findings suggest prioritising decision-making, problem-solving, and self-management skills. The findings suggest that future teacher professional development programs should prioritise promoting resilience, flexibility, and self-confidence. To enhance these abilities, curriculum designers may incorporate more hands-on exercises, role-playing, and real-world problem-solving scenarios. Life skills education may help students become well-rounded, confident, and responsible 21st-century citizens by broadening educators' approaches and resources.

A survey of 120 primary school teachers in Istanbul and İzmir revealed strong awareness of life skills, particularly in the areas of health, environmental awareness, and nature conservation. There is an alignment between the findings of this study and those of other national studies, as discussed in the literature review section. For instance, Karaca (2008) demonstrated that textbooks enhanced general and specialised abilities, supporting this study's finding that teachers recognise health and environmental problems, as indicated in Items 12, 27, and 29 of the questionnaire used in this study, which received high mean scores. Kurşun (2013) states that teachers appreciate teaching research skills but are limited by socioeconomic conditions, which is consistent with the variation in teachers' perceptions of students' self-confidence, change management, and saying “no” (Items 7, 23, and 25), which scored lower. Lower scores may indicate difficulties with instructional or environmental skill practice.

In the broader sample, Öztürk (2015) found that students scored well in communication and key ideas but only at a “medium” level in other essential competencies. Communication and health scores were higher, while personal and interpersonal resilience scores were lower in our research. Although Öztürk found no correlation between gender, education, and

teaching experience, the study discovered substantial variations in teacher perceptions based on competency or classroom experience (SD 0.601–0.921).

Bastık (2019) found that teachers enjoyed life skills Education, but found the program weak and not linked with student levels. Our participants' timidity and adaptability may be due to this. Yıldırım (2020) found unequal distribution of life skills in the curriculum, and our study reveals particular skill areas are preferred. According to Topaloğlu (2023), teachers' views on life skills materials shifted following the COVID-19 pandemic, with a greater emphasis on rules, cultural values, and self-protection. This study did not examine the consequences of the pandemic, although high health and environmental scores may indicate the long-term impact of global health problems.

Köseoğlu (2023) found that digital storytelling enhances self-management and active learning, suggesting that an interactive curriculum can address weaker areas, such as self-confidence and change management. Research by Erbağcı (2024) and Salman (2024) emphasises the importance of decision-making and problem-solving for future advancements. Salman (2024) also noted how demographic factors, such as parental education, affect life skills, which can be studied.

According to Simone (2013), digital tools improve emotional and cognitive abilities. Therefore, more interactive and immersive methods may help Turkish schools become more resilient and flexible. Bwayo (2014), Okech and Role (2015), and Chupradit et al. (2020) all noted life skills education's challenges and opportunities across contexts and stressed the need for better teacher training, supporting this study's recommendation for resilience, flexibility, and self-confidence-focused professional development. Ghabakhlou et al. (2021) found that the measurement and application of life skills were problematic in Iran and Turkey.

This study confirms the enthusiasm of Turkish primary school teachers for life skills but reveals deficiencies in assertiveness, adaptability, and self-confidence. National and worldwide research shows that life skills education requires greater teacher training, additional instructional techniques, and curricular balance. Future research may examine their viewpoints.

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