


Action research on interdisciplinary teaching of financial literacy in elementary schools

Burcu Sel 

Republic of Türkiye Ministry of National Education, Ankara, Türkiye, burcusel3@gmail.com



ABSTRACT Although there has been a recent surge of interest in financial literacy some inadequacies based on interdisciplinary approach in teachers' instructional practices within the scope of financial education draw attention. This research focused on improving the teaching process of elementary school teachers by integrating financial literacy into an interdisciplinary approach to social studies teaching. Research was conducted in three elementary schools with low socioeconomic status in three different cities in Türkiye. The data obtained from reflection forms, student products, and semi-structured interview forms were analyzed using MAXQDA 2020 program. As a result of examining views on the instructional practices implemented, participants indicated that they contributed to developing various instructional competencies, such as the acquisition of interdisciplinary skills, the effective use of information technologies, observing the effects of interdisciplinary, and preparing original materials and activities. In addition, participants indicated that the activities implemented provided students with opportunities to learn new financial concepts, new skills, sustained and meaningful learning, active participation, transfer to real life, positive feedback from parents, learning, and reinforcement with fun.

Keywords: *Action research, financial literacy, social studies*

İlkokullarda disiplinlerarası finansal okuryazarlık öğretimi üzerine bir eylem araştırması

ÖZ Son zamanlarda eğitim sistemlerinde finansal okuryazarlığa ilgide artış olmasına rağmen öğretmenlerin finansal eğitim kapsamındaki öğretim uygulamalarında disiplinlerarası yaklaşıma dayalı bazı yetersizlikler dikkat çekmektedir. Bu çalışmada sosyal bilgiler dersine disiplinlerarası bir anlayışla finansal okuryazarlık becerisinin entegre edilmesi ve böylelikle sınıf öğretmenlerinin öğretim sürecinin iyileştirilmesine ve geliştirilmesine odaklanılmıştır. Araştırma Türkiye'nin üç farklı şehrinde sosyoekonomik düzeyi düşük üç ilkokulda 2021-2022 yılları arasında gerçekleştirmiştir. Veri toplama aracı olarak kullanılan yansıtma formları, öğrenci ürünleri ve yarı yapılandırılmış görüşme formlarından elde edilen veriler MAXQDA 2020 programı aracılığıyla analiz edilmiştir. Sonuç olarak araştırma süreci boyunca gerçekleştirilen öğretimsel uygulamalara ilişkin görüşler incelendiğinde katılımcılar; disiplinler arası yetkinlik kazanma, bilişim teknolojilerinin etkili kullanımı, disiplinlerarasılığın etkilerini gözlemlenme, özgün materyal ve etkinlik hazırlama olmak üzere öğretimsel yetkinliklerin gelişimine katkı sağladığını belirtmişlerdir. Ayrıca katılımcılar gerçekleştirilen etkinliklerin öğrencilere; yeni finansal kavramları öğrenme, yeni beceriler öğrenme, kalıcı ve anlamlı öğrenme, aktif katılımı sağlama, gerçek yaşama transfer etme, olumlu veli geri bildirim, eğlenerek öğrenme ve pekiştirme olanağı sağladığını belirtmişlerdir.

Anahtar Sözcükler: *Eylem araştırması, finansal okuryazarlık, sosyal bilgiler*

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INTRODUCTION

With the increasing interest in financial literacy skill recently, there have been various attempts to integrate this skill into the education system. Since the global financial crisis, the interest of governments, researchers, and educators in the level of financial literacy and financial education has taken centre stage (Sawatzki, 2017, p.25). In recent years, this increasing interest in financial literacy (Danes & Haberman, 2007; OECD, 2019; Sherraden et al., 2011) has put the teaching of this skill in educational processes up for discussion. It is seen that little attention has been paid to the impact of the quality and content of education on financial literacy (Grohmann et al., 2015, p.118). There are several criticisms of targeting the older age group, particularly in the context of financial literacy. In general, the low financial status of young adults is emphasized, and less attention is paid to the early years (Suiter & Meszaros, 2005, p.92). However, starting financial education earlier, even in elementary school, is recommended because financial habits are formed in high school, and some social/family influences occur (Batty et al., 2015, p.71). Surprisingly, however, there is a lack of research on many aspects of the impact of business, finance, or entrepreneurship education in elementary school (Collins & Odders-White, 2015, p.107). In recent years, in particular, increasing concerns and initiatives about early financial education have created an important area of research.

Given current research and conventional wisdom, it is recommended that financial education begins at a young age (O'Neil-Haight, 2010). Studies in economics, education, and early childhood development have found that young children enter the elementary grades with experiential knowledge of economics and learn basic economic concepts (Hawthorne et al., 2003, p.17). Moreover, today's children will face economic issues in adulthood and will make decisions about education, career choices, saving, and spending or using credit that will significantly impact their own lives and the lives of others (Suiter & Meszaros, 2005, p.93). Although adults make most financial decisions, there is a growing interest in financial literacy because it is believed that children will develop the skills necessary to successfully manage their finances in adulthood (Batty et al., 2015, p.69). However, when studies conducted in the context of financial education and financial socialization (income, age, etc.) are evaluated, the amount of importance given to young adults, college and high school students (Adeleke, 2013; Alkaya & Yağlı, 2015; Chen & Volpe, 1998; Chen & Volpe, 2002; Jorgensen, 2007; Jorgensen & Savla, 2010; Koroğlu, 2021; Lusardi et al., 2010; Önlen, 2022; Özbek & Aydın, 2021; Sönmez & Kılıç, 2020; Temizel & Bayram, 2011; Tetik & Işıldak, 2022; Üğüdücü, 2018; Yıldırım & Özbek, 2021; Yücel & Çiftçi, 2018), educational programs (Adams, 2019; Amagir et al., 2018; Asarta et al., 2014; Avcı, 2022; Blue et al., 2014; Cole et al., 2014; Danes et al., 1999; Er et al., 2014; Güvenç, 2017; Özkale, 2018; Tural Sönmez, 2022; Varcoe et al., 2005) and textbooks (Adams, 2019; Tufan, 2019; Tural Sönmez, 2019) does not seem to be given on improving the financial teaching skills of elementary students and teachers. It becomes crucial to develop the teaching skills of teachers who are almost mainly responsible for teaching financial education in elementary schools. In this direction, firstly, various initiatives related to financial literacy in Türkiye in the educational context and then the concept of financial literacy as an interdisciplinary concept were discussed.

Various Financial Literacy Initiatives in Türkiye

Since the early years of the proclamation of the Republic in Türkiye, the curricula have emphasized the teaching of subjects related to economics. However, it has become apparent that the curricula have become superficial and insufficient in teaching economics (Akhan, 2013, p.3). If we examine the studies on economic education in the context of non-formal education in Türkiye, we find that they generally focus on "saving, savings, and money management" and take a limited perspective (Yıldırım, 2017). As for the development of social studies curricula, especially concerning economics and financial literacy, the most critical change was made with the 2005 curricula. Although teaching economic topics is one of the objectives of the said program, in practice, economic issues are primarily covered in the context of geography classes and quite superficially (Adalar, 2019, p.80). When assessing financial literacy within the framework of social studies and life skills curricula in Türkiye, it can be seen that the term

"resource" is used to "become conscious consumers and develop an awareness of saving, but instead of the effective use of resources in terms of saving and conscious consumption, the effective use of "money" is emphasized. It has been shown that the term "resource" is mostly limited to the concept of "money" (Yıldırım, 2017). In addition, it is noted that financial literacy skills are included in the social studies curriculum in most cases, although they are not sufficient as a learning outcome (Güvenç, 2017). In addition, the skill of "financial literacy" has been directly included in the 2018 social studies curriculum for the first time (Ministry of National Education, 2018). Another notable element in the financial literacy framework is mathematics instructional programs. In this regard, the research conducted by Tural Sönmez (2019) found that mathematics textbooks and curricula implicitly support financial literacy. Similarly, the study conducted by Özkale and Özdemir Erdoğan (2017) found that the subject was implicitly included in the mathematics curriculum and has received increasingly weaker treatment in the latest revised curricula. As can be seen, although there have been various initiatives to teach financial literacy in Türkiye recently, it can be seen that there are some shortcomings, especially in the curricula and textbooks.

After the 2008 global crisis in Türkiye, which was accelerated by the projects supported by the OECD and the decisions taken at the G20 summits, interest in financial education increased, and more projects were launched (Adalar, 2019, p. 56-57). Workshops and activities such as the "Price Discovery Lab," which focuses on how prices are determined and how the mechanisms of supply and demand work, are organized by the İşbank Museum (2019), "The Money of the World," which examines the currencies of Türkiye and other countries, "Children, the Heroes of the Economy" by Akbank (2012) on the topic of economics and savings in particular, and "Economy for All" (CBRT, 2019) by the Central Bank of the Republic of Türkiye are organized for children in Türkiye. Various activities and projects such as "3 Moneybox Financial Literacy Education Program" (FODER, 2016), "I Can Manage My Budget" (General Directorate of Lifelong Learning, 2016), "Children Who Know Their Budget" project (FODER, 2019) are also conducted in partnership with the Money Situation, Financial Literacy, and Access Association of the Ministry of National Education.

Financial Literacy in the Context of Interdisciplinary Understanding

In examining the literature, it is noted that financial literacy is an interdisciplinary concept and has many dimensions (Potrich et al., 2016, p.357-358). Gelen (2017) considers financial literacy as one of the interdisciplinary topics of the 21st century. It is also stated that financial education in elementary school has an interdisciplinary nature (Opletalová, 2015, p.1181). "However, there are interdisciplinary curriculum connections to real-world finance in almost all learning areas and each of the general skills" (Sawatzki & Sullivan, 2017, p. 52). Financial literacy has an interdisciplinary character as it integrates social studies, mathematics, and ICT (Opletalová, 2015, p.1183). Financial literacy is considered an ideal concept for mathematics and interdisciplinary education (Sole, 2021, p.153). In the context of financial subjects that require the use of mathematics, "mathematics" can be seen as an appropriate starting point, but financial literacy requires much more than mathematics (Edmond, 2019, p.46). It turns out that financial literacy is a multi-component, interdisciplinary, and complex concept, especially when considering issues such as unemployment, inflation, democracy, sustainable development, the environment, energy resources, global relations, political systems, and social justice in the context of active citizenship. The skill in question can be considered as an important life skill that can be considered within the framework of many different disciplines and mathematics education. In this direction, the research conducted by Yıldırım and Öztürk (2017) shows that the majority of participants (economists, social studies experts, social studies teachers) indicated that economics education should be designed according to an interdisciplinary approach.

In social studies classes, which is one of the other areas where financial literacy is applied, students learn how much money they get for their allowance, how much their family spends per week in the market, or the average house prices in their area. They realize that everyone experiences life differently and that respect, tolerance, and empathy for others are necessary (Edmond, 2019, p.46). However, financial literacy can also be seen as a crucial active citizenship skill, such as paying taxes, voting,

democracy, and active participation. In a world of intense international exchange and confusing challenges, economic literacy can contribute to civic education (Wentworth & Schug, 1993, p.27). Because financially literate citizens understand how their economic interests relate to those of other citizens, they are more likely to support government policies that consider all citizens' economic interests and assess the long-term effects of economic policies (Davies, 2006). Good economic education has a significant impact on creating a more democratic society, a more informed and empowered citizenry in decision making, and initiating change (Adams, 2019, p.17). When students learn the concepts and functions of economics competently, they can become active citizens who can more easily make effective economic decisions in the future in their roles as consumers, producers, and investors (Akhan, 2013, p.7). On the other hand, citizenship means independence, freedom, and responsibility, including financial issues, but "economic citizenship" represents an important aspect of the civic education curriculum that has not received much attention (Amagir et al., 2018, p.57). Since social studies is not a high-priority subject in many schools, it is not surprising that economic and financial education has also received little attention (Posnanski et al., 2007, p.197). However, there is a necessary link between citizenship and economics in democracy education, and this link should be reflected in school curricula (Branson, 2003). In other words, curricula should be designed and strengthened with a broad perspective within the financial literacy framework, taking into account active citizenship and democratic processes in social studies classes.

The interdisciplinary teaching of financial literacy that considers social studies, mathematics, ICT, etc., is also crucial in terms of teachers. Since teachers who know more about economics have students who learn more about economics, studies on economic literacy emphasize the importance of teacher education (Schug & Lopus, 2008, p.361). However, it is found that there are shortcomings in both teacher education and teachers' knowledge, self-efficacy, responsibility, interest, or competencies related to economics and finance (Akhan, 2015; Anthony et al., 2015; De Moor & Verschetze, 2017; Joshi & Marri, 2006; Kılıçoğlu & Akhan, 2014; Loibl, 2008; Schug & Lopus, 2008, Way & Holden, 2009). Among prospective teachers, there are deficits ineffective practices in teaching economics (Joshi & Marri, 2006), teachers' self-efficacy in teaching economics is low (Akhan, 2015); it is found that there are misconceptions about economics (Kılıçoğlu & Akhan, 2014), and there are some pedagogical needs related to teaching financial literacy (Sawatzki & Sullian, 2017). Moreover, it can be seen that there are some uncertainties in the teaching processes related to the interdisciplinary practices of financial literacy. In Tanase and Lucey's (2017) study examining pre-service teachers' awareness of interdisciplinary contexts, it was found that participants had a highly narrow perspective.

As more elementary schools incorporate the topic of personal finance into their curricula (through courses taught by classroom teachers or through programs offered by outside organizations), research that determines the appropriate content and structure of this instruction becomes critical (Collins & Odders-White, 2015, p.107). As the above discussion indicates, despite the recent interest in integrating financial education into educational systems, there are some uncertainties and shortcomings in teachers' pedagogical practices, especially at the elementary school level, that need to be addressed in the context of financial education. Considering that the economic background affects the teaching of financial knowledge and the heterogeneous stratification in schools, diversification of teaching practices with an interdisciplinary perspective becomes essential. In this context, the present study aims to develop teachers' teaching practices related to financial literacy with an interdisciplinary approach through action research. In this direction, answers to the following sub-problems were sought:

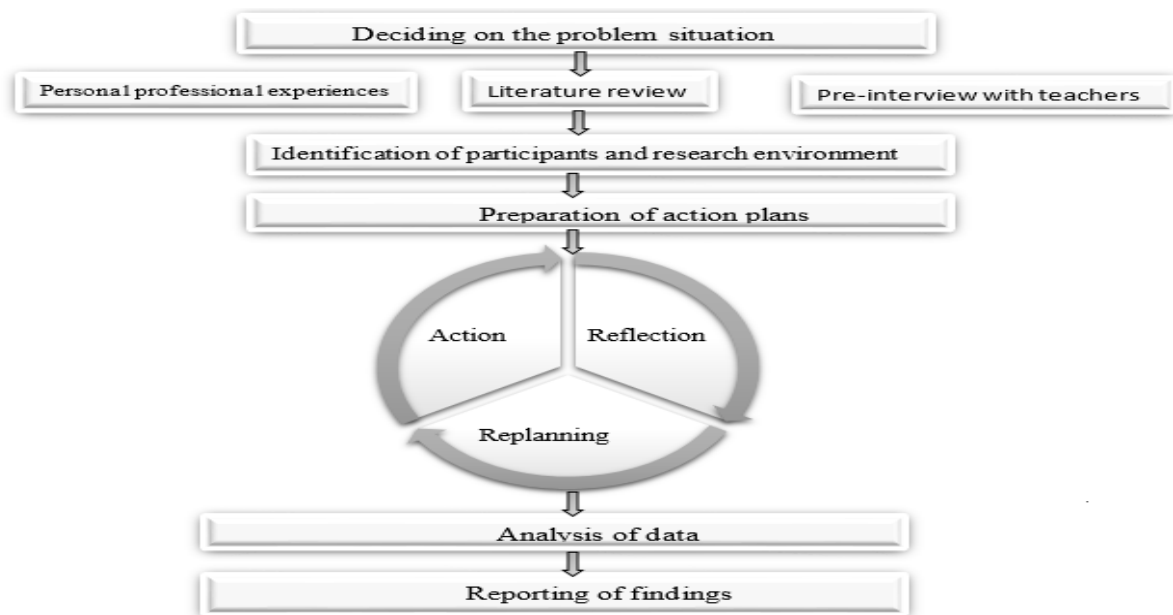
What problems do elementary school teachers face in the area of financial literacy?

What are teachers' views on the instructional application of financial literacy using an interdisciplinary approach?

METHOD

In this study, the action research model was used to improve teachers' teaching process of financial literacy. There are different views on conducting action research (Fraenkel et al., 2011; Hendricks, 2006; Johnson, 2014; McNiff & Whitehead, 2010; Mills, 2007; Norton, 2009; Pelton, 2010). In general, action research involves planning the action based on an identified problem or research process, observing and evaluating the operational process, usually with a collaborator, and continuing the process by reevaluating the plan through reflection (Van Lier, 1994, p.35). In this research, the approach introduced by Fraenkel et al. (2011) consists of the stages; identifying the problem/issue, collecting, analyzing, and interpreting the necessary information about the problem/issue, and developing an action plan. Figure 1 shows the process of action research:

Figure 1.
Action Research Process



Identification of the Problem Situation

In the problem identification phase, the researcher's personal, professional experiences, findings from the literature, and initial interviews with classroom teachers were instrumental in identifying the inadequacies encountered in teaching financial literacy in the educational process. At the same time, in the experience of the researcher, who has also taught in public elementary schools for many years, the uncertainties in teaching financial literacy, which is one of the most critical skills in daily life, and the presence of an understanding of teaching that is far from an interdisciplinary approach, have accelerated this process. In the day-to-day pedagogical conversations between the researchers and teachers, it appeared that the ideas based on the above problems and the findings from the literature were supported by other colleagues, especially in rural areas or in schools with low socio-economic status.

A literature review of financial literacy processes at the elementary school level was first conducted to determine the problem. Then, based on the obtained data, the first interview was conducted with online participation of the classroom teachers and the researcher about the concept of financial literacy, the level of financial literacy of the students, their socio-cultural and economic level, the practices related to the teaching of financial literacy in the classroom and the difficulties encountered. The primary purpose of this study is to enable teachers to look critically at their practices in accordance with the nature of action research.

Participants

Since the main objective of the research was to improve teaching skills of teachers in financial literacy, teachers were considered "focus" participants, and the data obtained were supported by student learning products. Three different schools where participants work has low to moderate socio-economic levels and moderately adequate physical conditions. The income status of students in the schools, which include immigrant students, is low to moderate. The majority of the students' mothers are housewives, and their fathers are self-employed or civil servants. In line with ethical considerations, nicknames and numbers were assigned to each participant:

Teacher Ayşe (K1): Teacher Ayşe is 32 years old, graduated from a state college's elementary school teaching department and has a non-thesis master's degree in educational administration and supervision. Teacher Ayşe, who has been an elementary school teacher for 11 years, has taught fourth grade three times. The class size is 32 people.

Teacher Tülin (K2): Teacher Tülin is 34 years old, graduated from a state college's elementary school teaching department, and worked as a school administrator; she has a master's degree in elementary school teaching. Teacher Tülin, who has 11 years of experience, has taught fourth grade three times. The class size is 20 people.

Teacher Tuna (K3): Tuna, a teacher, is 30 years old, has a master's degree in elementary school teaching, and is a graduate of a state college's elementary school teaching department. Tuna, who has been an elementary school teacher for seven years and has taught fourth grade three times, has a class size of 15.

Developing Action Plans

Based on the data obtained during the first session, the preparation of the action plans phase was started. In the three elementary schools where the research was conducted in Türkiye, the teaching of financial literacy is mainly part of the 4th-grade social studies curriculum, as in all other public elementary schools. In particular, it can be seen that the skill in question is related to the acquisition of the "Production, Consumption and Distribution" learning area. However, in this research, technology, mathematics, and social studies were combined with an interdisciplinary approach to develop teachers' instructional practices related to financial literacy. As a result of the initial interview, four basic principles were established for the research. It was decided to build the research process on an interdisciplinary perspective of financial literacy, to limit it to 7-8 weeks, to plan the process (and to support this process with the learning products obtained from the students), to implement and evaluate, and to focus on the active responsibility of the teachers to continue the course. In this context, the draft action plans prepared by the researcher were sent to the participating teachers online; were asked to express their opinions, suggestions and criticisms. Especially in the dimension of associating with technology and in the effective use of lesson time, their possible concerns that they think they may experience were taken into consideration. Before taking action, it was decided to inform the researcher about web 2.0 tools.

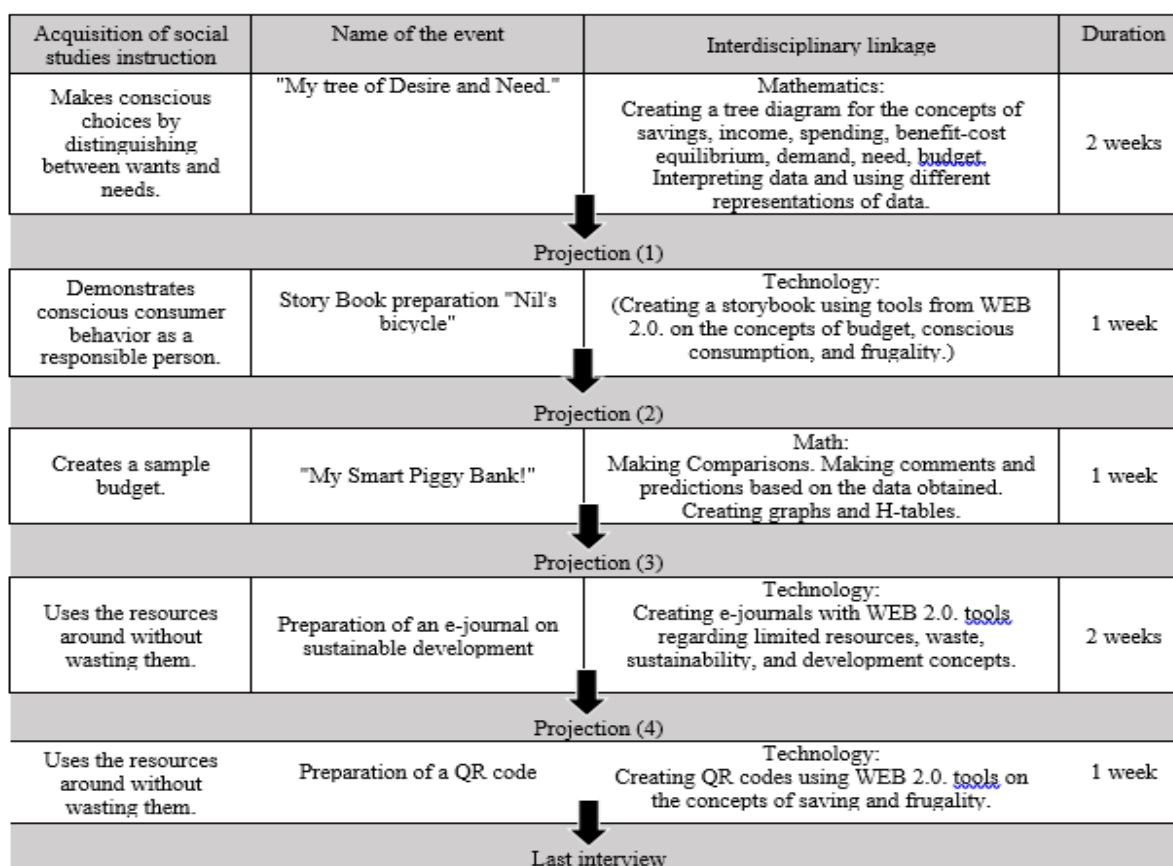
A work plan for the implementation process of the action cycles was created and prepared in collaboration with the researchers and teachers. After each action plan, it was stated to the teachers that they should reflect their views on the process through student products and reflection forms. These processes based on reflection allowed the preparation of the next cycle.

The Teaching Programme

Care was taken to ensure that each cycle implemented was related to the four basic principles of the study. In this sense, the teaching of social studies was linked to the subjects of technology and mathematics from an interdisciplinary point of view, and in this context, a cyclical teaching process was prepared in collaboration between researchers and teachers. Each cycle was given a thematic name that

referred to the acquisition of social studies teaching based on it. Before each activity, online interviews were held with the participation of three teachers and researchers regarding the action that will take place the following week. The "Production, Distribution, and Consumption" learning area of the 2018 social studies curriculum was focused on determining the learning content and financial concepts based on it. Prior to the activities, assessments of relevant performance, interdisciplinary linkage, and example applications were made in collaboration with teachers, particularly Web 2.0. tools used by the researcher as part of the technology discipline. In this context, Figure 2 provides information on the cycles and reflection processes.

Figure 2.
Cycles and Reflections in the Action Research



The teachers carried out their activities independently of each other within the prepared lesson plans. All teachers were asked to base the interdisciplinary and activity-based teaching approaches in their lesson plans while the activities were carried out, and it was emphasized that they should not use any different approach. Then, after each activity, each reflection form and student products prepared by the teachers as a group with the online participation of the researcher and the teachers were evaluated together. Thus, the teachers became aware of each other's experiences and the next process was planned on the basis of consensus. Lesson plans created as part of the action plans were evaluated with participating teachers, and interviews were conducted before and after implementation. Implementation of all action plans, observation of the process and outcome, reflection, and replanning took a total of eight weeks. After all the cycles were completed, semi-structured interviews were conducted on the experiences and opinions of the teachers.

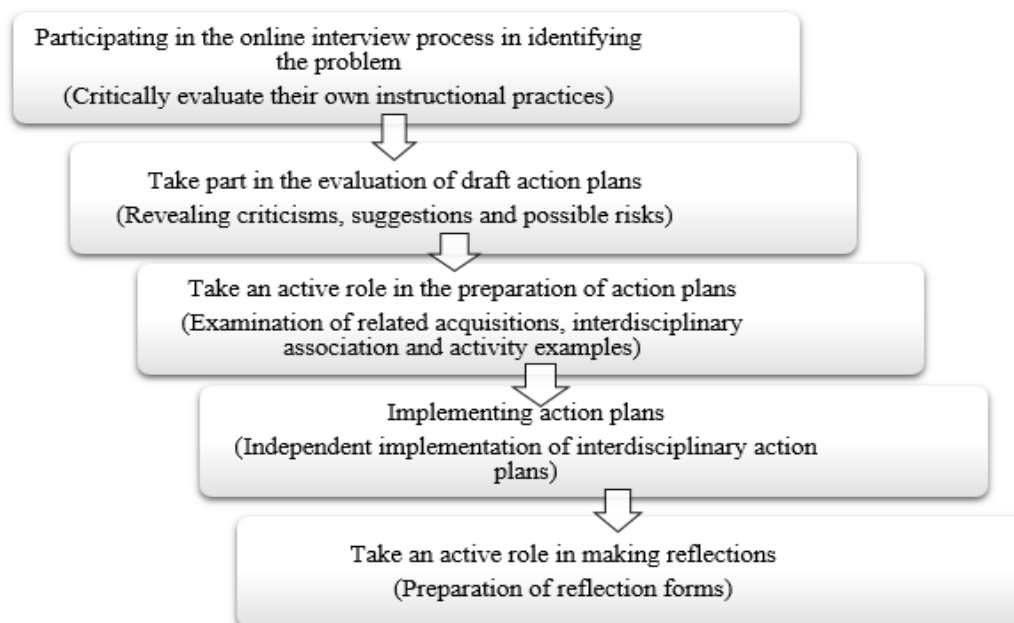
The Role of the Researcher and Ethical Principles

Looking at the role of the researcher in the action research process, it is found that the researcher does not solve problems for "others" but is in a shared learning process with the stakeholders (Ottosson,

2003), that there is a continuous collaboration between researchers and practitioners (Bargal, 2008, p.19), and that this collaborative process is an empowering factor as the researcher provides healing-change (Craig, 2009). Given this collaboration, the classroom teachers participating in the study assumed the role of implementers of action plans in the classroom, and the researcher assumed the role of facilitator. The collaboration continued throughout the problem situation identification, action plan development, and reflection processes. Although the researcher has 11 years of teaching experience, he has received various training on action research, has published various publications based on action research in journals scanned in international professional directories, authored various scientific publications on financial literacy, and has been a founding member of projects.

The role of the participating teachers in the action research process is explained in Figure 3, including the determination of the problem situation, the evaluation of the draft action plans, the preparation of the action plans, the implementation of the action plans and the reflection processes.

Figure 3.
The Role of Participating Teachers



Ethical aspects that should be emphasized in action research include the creation of ethical documents such as an official permission or ethical statement, negotiation with stakeholders such as participant groups, parents, or administrators, offering to withdraw from the research, commitment to professional and academic conduct, and ensuring goodwill (McNiff & Whitehead, 2010, p.76-78). In this regard, necessary ethical approval was obtained from Ankara University Social Sciences Ethics Committee on 28.07.2021 (the document number was 85434274-050.04.04/195072), participants' personal information was kept confidential, parental consent forms were obtained, and it was stated that they could withdraw from the study at any time without giving a reason. Students and parents were informed about the purpose of the study, the protection and confidentiality of personal data, and the reporting of findings.

Data Collection and Analysis

Semi-structured interview forms, reflection forms, and learning products were used in data collection. First, the researcher prepared semi-structured interview forms to determine the problem situation of the study and to find out the teachers' opinions after completing the action plans. In this context, the semi-structured interview format highlighted thoughts about interdisciplinary practices in financial literacy, their reflections on professional development, superior and unsuccessful aspects, and the impact of the

practices on students. Furthermore, teachers were asked for weekly reflection sheets and visualizations of student-created learning products to reflect their views and evaluations of the process after each cycle. The reflection sheets listed the contributions of the action plan activities to the instructional processes, any negatives experienced, and suggestions for the following action plan. The reflection reports written by the teachers weekly were regularly transferred to the computer environment. Simultaneously, the learning products created by the students that could support, confirm or refute the interview processes were also collected. However, the data collection and analysis focus is on the semi-structured interview questionnaires and the reflection reports.

The content analysis method was used to analyse the data obtained through the interview and reflection forms. The macro analysis of the data was conducted simultaneously with the data collection after each action cycle. Then, the data from the final interview and reflection reports were transferred to the computer environment, and content analysis was started. In the first phase, all data were read and reviewed, sorted by type, and the obtained data were transferred to the MAXQDA 2020 program and analysed.

Validity and Reliability

In qualitative research, the concepts of validity and reliability are defined as credibility, transferability, consistency, and confirmability (Guba, 1981), while in action research, the concepts of validity and reliability deviate from the traditional research paradigm and are described as "authenticity" (Zuber-Skerritt & Fletcher, 2007). In this direction, the triangulation technique was adopted in the confirmation process of the research.

The main reason for combining several different data in action research conducted with a qualitative perspective is to provide triangulation (Craig, 2009, p.19). This variation can be achieved by different data sources, collecting data in different ways, collecting data at different times, and having other people review the data (Johnson, 2014, p.111).

The data collection instruments (semi-structured interviews, reflection forms, and student products) were diversified as triangulation in this study. Therefore, the data were mutually confirmed and verified. Additionally, as part of transferability, detailed descriptions of the action plan implementation process, participant characteristics, data collection, and analysis processes were made and supported with direct quotes. As part of credibility, the data obtained by requesting participant confirmation were e-mailed to participating teachers.

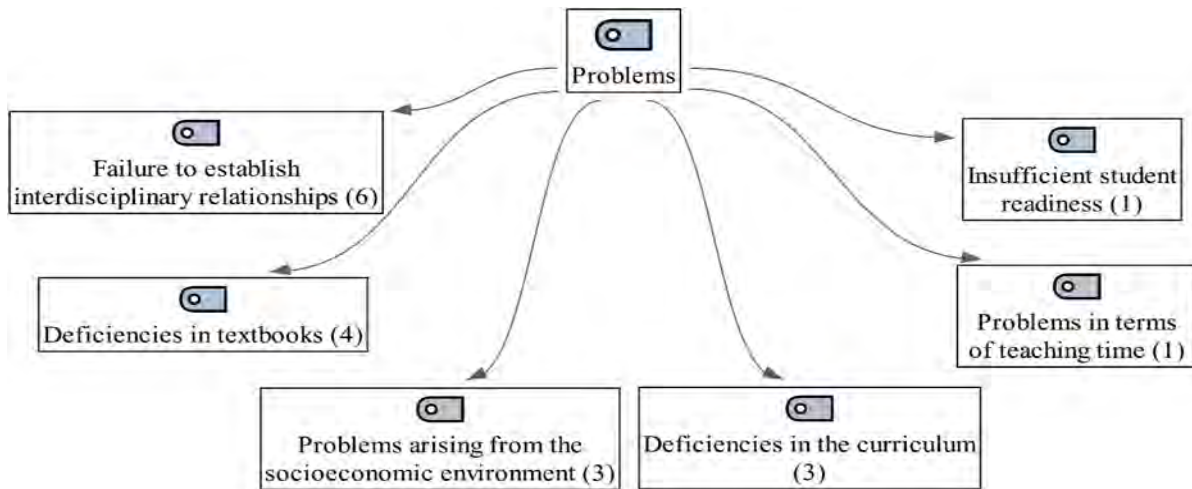
FINDINGS

Current Problems of Teachers in the Context of Financial Literacy Education

When analysing the preliminary interviews on the problems that participants experienced in teaching financial literacy, the categories shown in Figure 4 were reached.

As can be seen in Figure 4, the instructional problems experienced by participating classroom teachers before the activities conducted as part of the action plans consisted of six categories: Failure to establish interdisciplinary relationships (f=6), Deficiencies in textbooks (f=4), Problems arising from the socio-economic environment (f=3), Deficiencies in the curriculum (f=3), problems in terms of teaching time (f=1), and insufficient student readiness (f=1). In this regard, some of the views of the participants are as follows, particularly concerning the inadequacies in establishing the interdisciplinary relationships that form the basis of the research:

Figure 4.
Problems Experienced in Teaching Financial Literacy



"I teach economic concepts such as saving and budgeting as part of financial literacy instruction in my classroom. I also refer to efficient and effective use of resources at home and school and social leadership skills. I use them mainly in the Production-Distribution-Consumption unit of the social studies class. Such as making a budget and being frugal. Honestly, it is a fact that it is not included in the books of different courses. As I said before, I use it in social studies class. Maybe we can teach by making relationships, if it is emphasized in other lessons" (K2).

"I try to do activities related to demands, needs, economy, production, our money, sharing experiences in shopping, and using savings activities in my classroom and projects. Considering the current age group, we use it the most in social studies class. We try to make cross-curricular connections in class, but this topic is a little different. For example, I wish there was more in Math and Turkish. We are incompetent in that regard and have to be disappointed. I do not know if the children are learning completely when I only teach in social studies" (K1).

"I generally relied on textbooks. I have not done any other study on this topic before. Frankly, I did not think in an interdisciplinary way. The basis of financial literacy is controlling money and calculating profit and loss. This is information that will always be useful to the student. In other words, a broad subject can be related to almost any course of study, but as I said, I do not consider myself sufficient in this subject. It is the same with textbooks" (K3).

Moreover, considering the low-income level, which is another element that forms the basis of the research, the category of problems arising from the socio-economic environment stands out. In this regard, some of the participants express themselves as follows:

"This is a place with a low to medium socio-economic level. There is no environment in the district where students can go shopping and apply what they have learned. First of all, students have little idea of what they can buy with their money. For example, ten pieces of 10 Liras is more than 100 Liras for them, but with time they solve this situation in the upper grades. However, this time they cannot believe that ten pieces of 10 Liras are worth 100 Liras" (K3).

"I work in a school with students from lower and middle socioeconomic classes. Our students often have difficulty getting pocket money. It is challenging to gain financial knowledge such as budgeting, shopping, bills, and saving without money. When they receive pocket money, I observe that they shop with great enthusiasm for their wants and not for their needs" (K1).

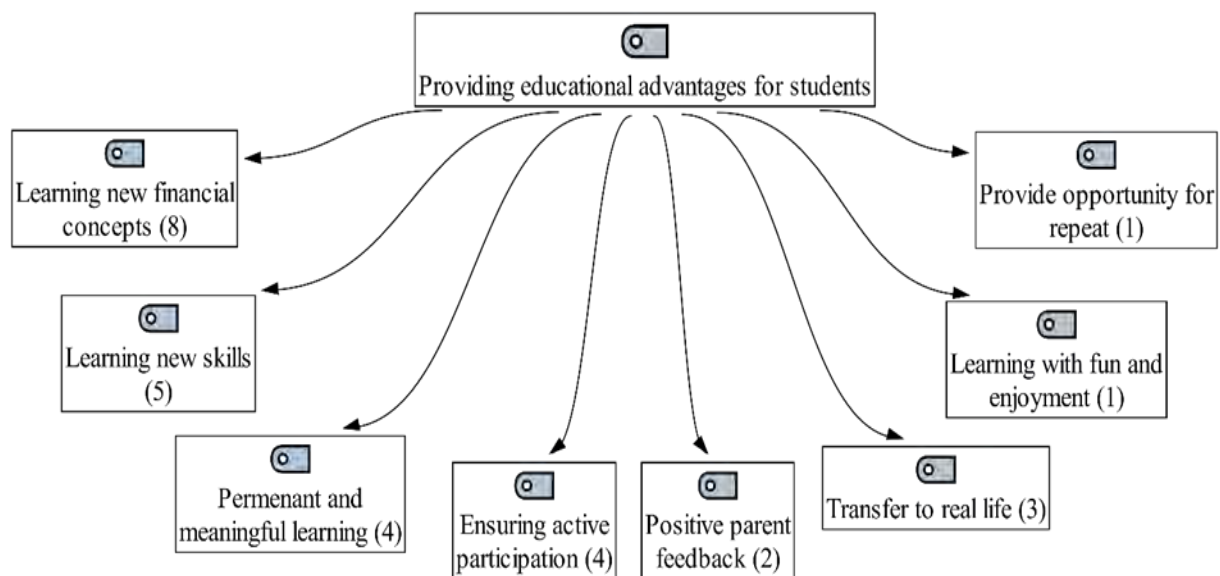
"It was more difficult to develop financial literacy when the socio-economic level of the students was low. I observed that the components of this skill were strongly developed in children were given a differentiated environment in the places where I worked before" (K2).

In addition to the difficulties experienced by the participants in the interdisciplinary network and the problems they experienced due to the socio-economic environment, it also appears that they stressed that the mentioned skill is not sufficiently included in the textbooks and curricula, that there is no homogeneous distribution and that the time allocated to this skill is insufficient.

Teachers' Views on the Practices Carried Out With an Interdisciplinary Approach to Financial Literacy

Looking at teachers' views of practices conducted with an interdisciplinary approach to financial literacy, we find that there are two main themes: "providing educational benefits to students" and "developing educational skills." Figure 5 shows the data for the "educational benefits for students" category.

Figure 5.
Providing Educational Advantages for Students



As can be seen in Figure 5, participant financial literacy activities conducted with an interdisciplinary approach enable students to learn new financial concepts ($f=8$), learn new skills ($f=5$), engage in permanent and meaningful learning ($f=4$), and actively participate ($f=4$), transfer to real-life ($f=3$), positive feedback from parents ($f=2$), making learning fun and enjoyable ($f=1$), and providing reinforcement opportunities ($f=1$).

Consequently, participants mainly emphasized the main category of learning financial concepts and skills. In this regard, some of the participants' opinions are as follows:

"The practices we have conducted have contributed to the development of our students' entrepreneurial and digital skills, as well as their financial literacy. Mainly, the technological tools they use have contributed to the development of visual arts and digital skills. I can say that our students have developed awareness of energy, food, water conservation, and recycling. We have contributed to developing our students' sensitivity to the environment and environmental problems and taking responsibility. We have made them conscious of the contribution that effective and conscious use of resources at home and school would make to the country's economy" (K2).

"I think it teaches students life skills. Because students' ability to manage money is not just a skill for the classroom, they should think about their wants and needs and know how to manage money. These are the skills that will give meaning to saving. Skills that can always be present in students' lives. With these activities, students also remembered their wants and needs. They deepened the topic with short discussions about it. They learned about saving, income and expenses" (K3).

Furthermore, participants indicated that the activities conducted reinforced students' meaningful and lasting learning by transferring it to real life and active participation, and they received positive feedback from parents:

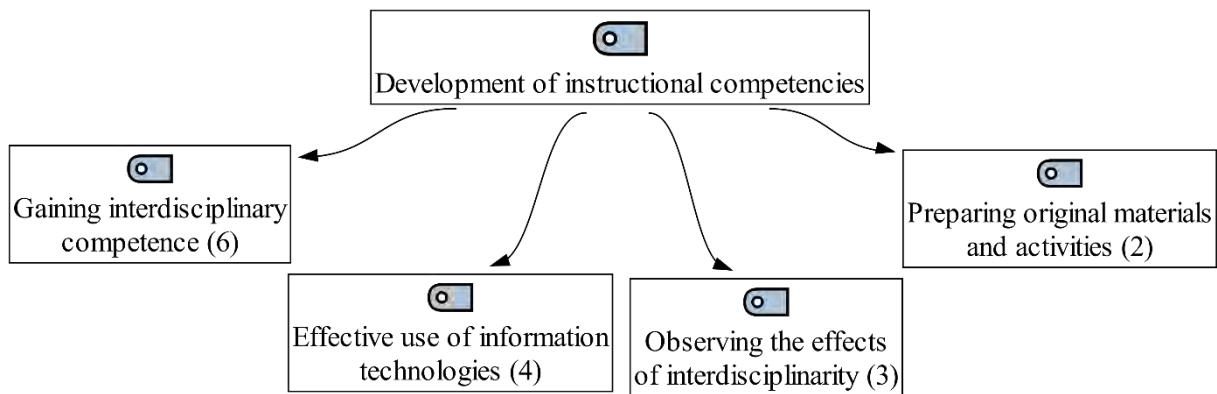
"Using the new Web 2.0 tools in this area with the activities and the activities I had the students do contribute a lot. I think the students were more aware of these topics after the activities and learned in a lasting way. It was nice to see that my students knew about the topic in the math lesson without having to repeat it later when it was the turn of the related subjects" (K1).

"I think the students were also very active. They used a lot of technological programs. They researched organized activities and presented them to their friends. They studied other friends' activities. They also enjoyed the project process because they made different applications in different lessons; they learned and had fun doing it. It was a nice and fun process for them" (K2).

"I got positive feedback from my students and even from my parents. The families always helped the students with the activities, I had almost no problems. I think the kids enjoyed it too." (K1).

It can be seen that the participants emphasize the development of their educational skills and the educational benefits derived from the interdisciplinary financial literacy activities. Along these lines, the categories achieved in the development of teaching competencies are shown in Figure 6.

Figure 6.
Development of Instructional Competencies



As can be seen in Figure 6, teachers' views on the instructional applications of financial literacy conducted with an interdisciplinary approach are aimed at acquiring interdisciplinary competence (f=6), effectively using information technologies (f=4), and observing the effects of interdisciplinary (f=3). It can be seen that they indicated contributing to the development of various instructional competencies, especially in the creation of original materials and activities (f=2).

"Financial literacy is a multi-faceted concept. Now I think it is important from the 1st grade. I will also try to explain the topic in an interdisciplinary way. The events were excellent. I can relate it not only to social studies but also to many different subjects such as math, Turkish, science, fine arts, and technology" (K3).

"I have prepared different activities related to teaching financial literacy from a professional point of view. I used many Web 2.0 tools that I did not know, even if it was a bit difficult. In math, outstanding results have been achieved. Financial literacy can be linked to math, social studies, science, and Turkish, and minors such as fine arts and music. I think I can do effective studies now" (K2).

"For example, I am now thinking of linking it to data processing and table graph reading performance in the math course. I can ask my students to use their imagination to develop an

original design to prevent the waste of energy, food, and water in science class, or I can work on saving money in Turkish class. I can ask them to prepare poems, slogans, and posters" (K1).

Some of the participants' views on preparing interdisciplinary activity materials and observing interdisciplinary effects are as follows:

"The activities where we proceeded together with the students on an activity basis, such as my wishing tree, money box, and preparing stories and magazines, were beneficial. I think from now on I can prepare similar activities in different lessons. This was a good example for me" (K3).

"Maybe the children do not have the environment to apply economic concepts, but they have practiced a lot with these activities in different classes despite their young age. They have learned many things that I thought they could not learn, such as sustainable development, limited resources, QR code preparation. When I observed these practices, the topics actually solidified because they saw the same topic over and over again in different lessons. I did not need to repeat it" (K1).

When examining the participants' views of the activities conducted in general, we find that they view themselves positively from two different perspectives, their teaching skills and the benefits they feel they provide to students, and they feel more active in the process.

DISCUSSION AND CONCLUSION

Young people today are growing up in a complex financial environment where financial responsibility is essential. Financial education in school helps overcome these difficulties (Amagir et al., 2018, p. 57). In this regard, financial literacy is considered one of the interdisciplinary issues of the 21st century (Partnership for 21st Century Skills, 2009). This study aims to develop the instructional practices of elementary school teachers, who are almost exclusively responsible for teaching financial literacy, with an interdisciplinary approach.

In examining the instructional problems teachers face in teaching financial literacy, six main categories were formed: Inadequacies in making interdisciplinary connections, inadequacies in textbooks, problems stemming from the socio-economic environment, inadequacies in curricula, problems related to instructional time, and inadequacies related to student readiness. When examining the literature, it is found that financial literacy is not sufficiently included in the social studies curriculum (Altay, 2020), solid interdisciplinary relationships cannot be established within the framework of financial literacy (Çelikten, 2020), and there are some inadequacies in social studies textbooks (Tufan, 2019). It is also claimed that one of the concepts that need to be emphasized in curriculum development studies is financial literacy (Özkaral, 2015) and that more emphasis should be placed on economic concepts, values, and skills (Tufan, 2019), that the content of the curriculum needs to be improved (Yıldırım, 2016), and that the curriculum should be revised (Mammadova, 2020). In the study conducted by Seyhan (2020), which examined the views of social studies teachers, the participating teachers also pointed out the interdisciplinary nature of financial literacy and the inclusion of more topics/texts in the textbooks. In the study conducted by Çelik (2021), the problems faced by teachers in teaching financial literacy were similarly cited as insufficient time, insufficient socio-economic, environmental conditions, and insufficient textbooks. In addition, it was found that the teaching materials were not sufficiently enriched, and teacher training was not at an appropriate level in this regard (Çelikten, 2020).

Another finding of the study is that according to the teachers, financial literacy activities conducted with an interdisciplinary approach provide certain educational benefits, including learning new financial concepts, learning new skills, lasting and meaningful learning, ensuring active participation, transfer to real life, positive feedback from parents, learning and reinforcement with fun and enjoyment. When examining the literature, it has been shown that interdisciplinary practices similarly help to connect to real-life (Bolat, 2016; Demir, 2009; Özhamamcı, 2013; Trent & Riley, 2009; Turan et al., 2020), that

the processes developed depending on the interdisciplinary approach attract attention, that they are fun and enjoyable (Bolat, 2016; Demir, 2009; Demirel et al., 2008; Öztürk, 2019; Trent & Riley, 2009), students develop a positive attitude (Head, 1997; Schug & Hagedorn, 2005), enable repetition of the topic and reinforcement processes (Bolat, 2016; Turan et al., 2020), contribute to students' better understanding and ongoing learning (Özhamamcı, 2013; Turan et al., 2020). It has been found that parents express themselves positively within interdisciplinary practices (Coşkun & Demirel, 2010; Demir, 2009). In addition, it has been seen that activities based on an interdisciplinary approach support the process of creating and using materials (Demirel et al., 2008).

Examining teachers' views on the instructional applications of financial literacy conducted with an interdisciplinary approach, we find that these activities contribute to the development of various instructional competencies, such as the acquisition of interdisciplinary competence, the effective use of information technologies, the observation of the effects of interdisciplinarity, and the preparation of original materials and activities. Especially considering the interdisciplinary nature of financial literacy, diversifying the teaching process in this direction is vital for developing teaching practice of teachers. From the interviews conducted by Yıldırım (2016) with experts to identify the standards for economic literacy, it is clear that the majority of the participants expressed the importance of designing the process according to an interdisciplinary approach. Social studies instruction is generally limited to social topics such as history, geography, and civics. However, the typical structure of school subjects tends to place economics in traditional high school curricula (Posnanski et al., 2007, p.197). However, childhood is no longer viewed as separate from finance and economics (Webley et al., 2001). Economics is the study of decision-making in the context of limited resources. In this context, even the youngest school-age children decide what to wear, what to eat, what games to play, and how to spend their time and money (Suiter & Meszaros, 2005, p.92). In the early school years, financial education can teach saving and sound financial management norms by laying the foundation for saving and spending habits that will serve students well throughout their lives (Suiter & Meszaros, 2005, p.93).

For this reason, it is essential that teachers, who are primarily responsible for teaching financial literacy in elementary school, provide a structured instructional process for young students by integrating various disciplines. In this context, teachers must design a teaching process that focuses on building financial literacy in the different disciplines. The subject of social studies provides a reasonable ground for this process as it encompasses different disciplines. One of the tasks of teacher education should be to ensure that elementary school teachers understand interdisciplinary contexts and provide instructional methods along these lines, rather than involving single and independent disciplines in teaching financial literacy.

This study used students from low to middle socioeconomic levels and teachers working in these schools as a baseline. Different socio-economic groups and teachers working in different fields can be considered. In addition, in this study, interdisciplinary associations were made in financial literacy with the subjects of mathematics and technology based on the subject of social studies. In this context, associations can also consider different disciplines such as language arts and science.

Limitations

Because of COVID-19, the researcher was unable to observe classrooms regularly in this study, which can be deemed an essential limitation in ensuring a diverse sample.

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TÜRKÇE GENİŞLETİLMİŞ ÖZET

Son dönemde özellikle finansal eğitimin, eğitim sistemlerine entegre edilmesine ilişkin güçlü bir ilginin varlığı dikkat çekse de; finansal eğitim kapsamında özellikle ilkökul düzeyinde öğretmenlerin öğretimsel uygulamalarında yaşanan bir takım belirsizlikler ve yetersizlikler dikkat çekmektedir. Özellikle ekonomik arka planın finansal okuryazarlık öğretimini etkilediği ve bu anlamda okullardaki heterojen tabakalaşma düşünüldüğünde öğretimsel uygulamaların disiplinlerarası bir perspektifle çeşitlendirilmesi önemli hale gelmektedir. Bu kapsamda bu çalışmada sınıf öğretmenlerinin disiplinlerarası bir anlayışla finansal okuryazarlık becerisine ilişkin öğretimsel uygulamalarının eylem araştırması aracılığıyla geliştirilmesi amaçlanmıştır. Bu doğrultuda aşağıda yer alan alt problemlere yanıt aranmıştır:

Sınıf öğretmenlerinin finansal okuryazarlık becerisi kapsamında karşılaştıkları mevcut sorunlar nelerdir?

Disiplinlerarası yaklaşımla gerçekleştirilen finansal okuryazarlık becerisinin öğretimsel uygulamalarına ilişkin öğretmen görüşleri nelerdir?

Bu çalışmada finansal okuryazarlık becerisi kapsamında öğretmenlerin öğretim sürecinin iyileştirilmesine yönelik olarak eylem araştırması modelinden yararlanılmıştır. Bu kapsamda Fraenkel vd., (2011) tarafından ortaya konulan ve problemin/sorunun tespiti, probleme/soruna yönelik gereken bilgileri toplama, analiz etme ve yorumlama, eylem planı geliştirme aşamalarından oluşan yaklaşım benimsenmiştir. Problem durumu belirleme aşamasında araştırmacının kişisel mesleki deneyimi, literatür bulguları ve sınıf öğretmenleriyle yapılan ön görüşmeler, öğretimsel süreçlerde finansal okuryazarlık becerilerinde yaşanan yetersizlikler konusunda belirleyici olmuştur. Araştırmanın temel hedefi öğretmenlerin finansal okuryazarlık kapsamında öğretimsel becerilerini geliştirmek olduğu için öğretmenler “odak” katılımcı olarak değerlendirilmiş ve elde edilen veriler öğrencilerden elde edilen öğrenme ürünleriyle desteklenmiştir. Gerçekleştirilen her bir döngünün çalışmanın dört temel prensibi ile ilişki içerisinde olmasına dikkat edilmiştir. Bu doğrultuda disiplinlerarası bir bakış açısıyla sosyal bilgiler dersi teknoloji ve matematik disiplinleri ile bütünleştirilmiş bu kapsamda araştırmacı ve sınıf öğretmenlerinin işbirliği ile döngüsel öğretim süreci hazırlanmıştır. Her bir döngüye temele alınan sosyal bilgiler dersi kazanımı ile ilgili tematik bir isim verilmiştir. Temele alınan kazanımlar ve finansal kavramlar belirlenirken 2018 sosyal bilgiler öğretim programında yer alan “Üretim, Dağıtım ve Tüketim” öğrenme alanı merkeze alınmıştır. Eylem planları kapsamında hazırlanan ders planları katılımcı öğretmenlerle birlikte değerlendirilmiş, uygulama süreci öncesinde ve sonrasında derslere ilişkin görüşmeler gerçekleştirilmiştir. Tüm eylem planlarının gerçekleştirilmesi, süreci ve sonucu gözleme, yansıtma ve yeniden planlama aşamaları toplamda sekiz hafta sürmüştür. Araştırmacı ve öğretmenlerin işbirliği içerisinde hazırlanan eylem döngülerinin uygulanma sürecine ilişkin olarak çalışma takvimi oluşturulmuş, gerçekleştirilen her bir eylem planının ardından öğretmenlerden sürece ilişkin öğrenci ürünleri ve yansıtma formları aracılığı ile görüşlerini yansıtma istenmiştir. Yansıtma dayalı bu süreçler bir sonraki döngünün hazırlanmasına zemin hazırlamıştır. Bu işbirliği göz önünde bulundurularak çalışmada katılımcı olan sınıf öğretmenleri sınıf içi eylem planlarının uygulayıcısı, araştırmacı ise kolaylaştırıcı rolünü üstlenmiştir.

Veri toplama sürecinde yarı yapılandırılmış görüşme formu, yansıtma formları ve öğrenme ürünleri kullanılmıştır. İlk olarak araştırmanın problem durumunun belirlenmesi ve eylem planları tamamlandıktan sonraki öğretmen görüşlerinin belirlenebilmesine yönelik araştırmacı tarafından yarı yapılandırılmış görüşme formları hazırlanmıştır. Ayrıca öğretmenlerden her bir döngüden sonra sürece ilişkin görüşlerini ve değerlendirmelerini yansıtılabilmek amacıyla haftalık yansıtma formları ve öğrencilerden elde edilen öğrenme ürünlerine ilişkin görseller istenmiştir. Yansıtma formlarında eylem planı kapsamında gerçekleştirilen etkinliklerin öğretimsel süreçlere sağladığı katkılar, bu süreçte yaşanan olumsuzluklar ve bir sonraki eylem planı için öneriler yer almaktadır. Her hafta öğretmenler tarafından yazılan yansıtma raporları düzenli olarak bilgisayar ortamına aktarılmıştır. Veri toplama

süreciyle her bir eylem döngüsünden sonra eş zamanlı olarak verilerin makro analizi gerçekleştirilmiştir. Sonrasında nihai görüşme ve yansıtma raporlarından elde edilen veriler bilgisayar ortamına aktarılmış ve içerik analizi sürecine geçilmiştir. İlk aşamada tüm veriler okunarak gözden geçirilmiş, türüne göre dosyalanmış ve elde edilen veriler MAXQDA 2020 programına aktarılarak analiz edilmiştir.

Araştırmada sınıf öğretmenlerinin finansal okuryazarlık becerisi kapsamında yaşadıkları öğretimsel problemler incelendiğinde disiplinlerarası bağlantıları kurmada yetersizlik, ders kitaplarındaki yetersizlikler, sosyoekonomik çevreden kaynaklanan problemler, öğretim programlarındaki yetersizlikler, öğretimsel süre açısından yaşanan sorunlar ve öğrencilerin hazırbulunuşlukları açısından yetersizlikler olmak üzere altı ana kategorinin oluştuğu görülmüştür. Araştırmanın bir diğer bulgusu ise öğretmen görüşlerine göre disiplinlerarası yaklaşımla gerçekleştirilen finansal okuryazarlık becerisi etkinliklerinin; yeni finansal kavramları öğrenme, yeni beceriler öğrenme, kalıcı ve anlamlı öğrenme, aktif katılımı sağlama, gerçek yaşama transfer etme, olumlu veli geri bildirim sağlama, eğlenerek ve keyif alarak öğrenme ve pekiştirme olanağı sağlama olmak üzere belirli eğitsel avantajlar sağladığı yönündedir. Disiplinlerarası yaklaşımla gerçekleştirilen finansal okuryazarlık becerisinin öğretimsel uygulamalarına ilişkin öğretmen görüşleri incelendiğinde ise söz konusu etkinliklerin disiplinlerarası yetkinlik kazanma, bilişim teknolojilerinin etkili kullanımı, disiplinlerarasılığın etkilerini gözleme, özgün materyal ve etkinlik hazırlama olmak üzere çeşitli öğretimsel yetkinliklerin gelişimine katkı sağladığını belirttikleri görülmektedir. Özellikle finansal okuryazarlığın disiplinlerarası doğası göz önünde bulundurulduğunda öğretimsel sürecin bu doğrultuda çeşitlendirilmesi sınıf öğretmenlerinin öğretimsel uygulamalarının gelişimi açısından önem taşımaktadır. Bu araştırmada düşük-orta düzey sosyoekonomik düzeydeki öğrenciler ve bu okullarda görev yapan sınıf öğretmenleri temele alınmıştır. Farklı sosyoekonomik düzeyler ve farklı branşlarda görev yapan öğretmenler göz önünde bulundurulabilir. Ayrıca bu araştırmada finansal okuryazarlık becerisi kapsamında disiplinlerarası ilişkilendirmeler sosyal bilgiler disiplini temele alınarak matematik ve teknoloji disiplinleri ile gerçekleştirilmiştir. Bu kapsamda dil, sanat ve fen gibi farklı disiplinlerin göz önünde bulundurulduğu ilişkilendirmeler gerçekleştirilebilir.