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Determining Learning Difficulties in Economics Education: A Micro-Scale Analysis

Ekonomi Eğitiminde Öğrenme Güçlüklerinin Belirlenmesi: Mikro Ölçekli Bir Analiz

Çağatay Tunçsiper[1]

Abstract

This study examines the learning difficulties encountered by first-year undergraduate students enrolled in the Introduction to Economics I course at İzmir Democracy University, where many students lack prior economics education. To identify specific challenges, a survey and difficulty index were administered to 147 students during the fall semester of the 2023-2024 academic year. Results indicated that students found several topics particularly difficult, including price elasticity of demand, supply curves, monopolies, and oligopoly theory. Additional topics, such as fundamental definitions and economic analysis, were also perceived as challenging. The findings align with existing literature, revealing that students struggle with economic concepts, graphical representations, and require enhanced mathematical skills. Recommendations include the development of economic simulations, practical examples, and tailored assignments to improve comprehension and engagement. This research underscores the need for targeted instructional strategies to enhance student understanding and interest in economics.

Keywords: *Sustainable Education, Economics Education, Education Analysis.*

Öz

Bu çalışma, birçok öğrencinin daha önce ekonomi eğitimi almadığı İzmir Demokrasi Üniversitesi'nde Ekonomi I dersine kayıtlı birinci sınıf lisans öğrencilerinin karşılaştığı öğrenme zorluklarını incelemektedir. Belirli zorlukları tespit etmek amacıyla, 2023-2024 akademik yılının güz döneminde 147 öğrenciye bir anket ve zorluk indeksi uygulanmıştır. Sonuçlar, öğrencilerin talep esnekliği, arz eğrileri, tekel ve oligopol teorisi gibi konuları özellikle zor bulduklarını göstermiştir. Ayrıca, temel tanımlar ve ekonomik analiz gibi konular da öğrenciler tarafından zorlayıcı olarak algılanmıştır. Bulgular, öğrencilerin ekonomik kavramlar, grafiksel gösterimler konusunda zorlandığını ve geliştirilmiş matematiksel becerilere ihtiyaç duyduğunu ortaya koyarak mevcut literatürle uyum göstermektedir. Öneriler arasında, ekonomik simülasyonların geliştirilmesi, pratik örnekler ve özel olarak hazırlanmış ödevler yer almakta olup, bu yöntemlerin öğrencilerin kavrayışını ve katılımını artırabileceği belirtilmiştir. Bu araştırma, ekonomi alanında öğrenci anlayışını ve ilgisini artırmak için hedefe yönelik öğretim stratejilerinin gerekliliğini vurgulamaktadır.

Anahtar Kelimeler: *Sürdürülebilir Eğitim, İktisat Eğitimi, Eğitim Analizi.*

Jel Kodları: *A20, A23, I21.*

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Introduction

Under the United Nations' "Sustainable Development Goals" (UN, 2015) and the "Quality Education" objective, it is emphasized that by 2030, all students should acquire the knowledge and skills necessary to promote sustainable development. This includes education for sustainable lifestyles, human rights, gender equality, a culture of peace and non-violence, global citizenship, and appreciation for cultural diversity and its contributions to sustainable development. In this context, high-quality economics education is critical for sustainable development.

Economics education within the framework of sustainability examines the impact of economic decisions not only on current but also on future generations in a world with limited resources. Through economics education, students gain an understanding of efficient production methods, environmentally friendly policies, circular economic models promoting recycling, environmental sustainability, economic growth, and development. Additionally, economics education addresses concepts of individual and social benefits and costs, also known as externalities. Students learn about the increasing social costs caused by negative externalities and explore policy tools to mitigate such effects, understanding the economic costs of environmental damage caused by economic activities. Furthermore, economics education teaches students crucial topics such as energy conservation, the use of renewable energy sources, and the transition to a green economy. Thus, students learn that sustainability is not only based on environmental awareness but also encompasses societal welfare, efficient resource use, and economic development. Economics education aims to equip students with the competencies to propose effective solutions within a sustainable economic framework on a global scale.

The relationship between this study and sustainable education can be evaluated within the framework of the United Nations Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education) (United Nations, 2015). The learning difficulties identified and the proposed solutions in this research directly align with UNESCO's (2017) principles of "learning to learn," "lifelong learning," and "inclusive education" for sustainable education. The recommended economic simulations and applied learning methods are consistent with Kolb's (1984) experiential learning theory and Prince's (2004) active learning approaches. Furthermore, the study expands upon the work of Tunçsiper and Sürekçi (2012) and Okoye and Ndubuzor (2021) on difficulty index applications in economics education by proposing a sustainable economics education model in the Turkish context. In this regard, the research not only identifies current learning gaps but also aims to develop long-term effective teaching strategies in line with Tilbury and Wortman's (2004) principles of sustainable education pedagogy. Ultimately, the study contributes to what Vare and Scott (2007) categorize as "sustainable education" enhancing the sustainability of education systems themselves.

This study investigates the challenges encountered in learning "Introduction to Economics I" within the sustainability framework, exploring the reasons behind these difficulties as a micro-scale case study to contribute to effective education objectives. This course is essential for students to understand, comprehend, and utilize economic terms and also supports other subject areas in the curriculum (Green, 2013). Identifying the areas where students face learning difficulties, examining the causes of these difficulties, and developing measures to alleviate them are vital in "Introduction to Economics I." This study was conducted by applying surveys and difficulty index calculations to students enrolled in "Introduction to Economics I" in English at the Faculty of Economics and Administrative Sciences, İzmir Democracy University, during the 2023-2024 fall semester. The study population consists of 170 undergraduate students receiving instruction in English, with a sample size of 147 students. The study comprises sections on introduction, literature review, methodology, findings, and conclusions. Identifying topic-based learning challenges within "Introduction to Economics I" and discussing their causes provide a micro-level perspective on sustainability in economics education.

1. Literature Survey

Educators employ various methods to assess student performance, such as assignments, tests, laboratory work, final exams, and group projects. A fundamental issue is whether these assessment methods genuinely evaluate students' abilities. In other words, it is not always easy for educators to determine if students have achieved the specified program outcomes. Therefore, developing different quantitative assessment systems is crucial for measuring success accurately. Studies in the literature that utilize the difficulty index method are predominantly in the fields of science and education, focusing on exam result evaluations. For instance, studies by Aduloju and Kpum (2019), Missildine et al. (2013), Hotiu (2006), Saud and Foong (2006), Fauzia et al. (2021), Suruchi and Rana (2014), Çimer (2012), Bahar et al. (1999), Bahar (2001), Johnstone and Hansel (1999), Johnstone and Mahmoud (1980), Karimah, Retnawatil, Pujiastuti, Yusron (2021), Johnstone (1993), Johnstone, McDonald, and Webb (1977), Thorndike and Hagen (1977), and Ausubel, Novak, and Hanesian (1978) employed the difficulty index method to analyze exam results and identify questions students found challenging. The results indicated that questions involving conceptual knowledge and those requiring mathematical or statistical understanding tended to have difficulty index coefficients close to zero, suggesting learning difficulties in these areas.

In the field of economics, studies using the difficulty index method remain limited. These studies also examine the difficulty levels of exam questions, similar to those in science and education (Okoye and Ndubuzor, 2021). For example, Okoye and Ndubuzor (2021) calculated the difficulty levels of economics practice exams using the difficulty index method, finding that the exam items fell within acceptable ranges. They further recommended that tests should be developed and maintained at high quality to enhance student success. Other studies focused on economics education have explored factors influencing learning processes using survey methods (Truckman, 1998; Caldwell, 1992; Greenlaw, 1999; John, 2010; Chizmar and Walbert, 1999; Daniel, 2000; Friedman et al., 2001; Schuhmann et al., 2005; Altınöz (2014); Sütçü, 2014; Özçelik, and Özcan, 2017; Baafi, 2020). For instance, Truckman (1998) investigated the effectiveness of test and assignment approaches to improve the recall and comprehension of course material. Caldwell (1992) addressed the need for an integrated human factors approach, including ergonomic, aesthetic, and facility management aspects, within Total Quality Management (TQM) criteria as a strategy for improving the quality of education in increasingly challenging economic environments. Greenlaw (1999) highlighted the significance of software technology and virtual learning environments in fostering active learning. John (2010) examined the role of collaborative learning using a computer simulation package, finding that it enhanced student engagement, problem-solving, and critical thinking skills. Chizmar and Walbert (1999) reported increased student success in web-based courses focused on statistics, microeconomics, and econometrics. Schuhmann et al. (2005) assessed quantitative skills in economics education, and Baafi (2020) studied the influence of physical school environments on students' academic performance. According to Altınöz (2014) states that debates on methods and systems intensify when the current economic system proves inadequate in meeting society's expectations and needs. Sütçü (2014) emphasizes that the function of economics education should focus on cultivating individuals for the market and providing practical knowledge rather than theoretical knowledge. Özcan ve Özçelik (2017) concluded that students perceive economics as a social science discipline and consequently prefer limited use of advanced mathematics in the course. Unlike the studies mentioned above, Tunçsiper and Sürekçi (2012) calculated the difficulty index values of topics covered in Introduction to Economics I and II for 207 students from the Economics, Business Administration, and Finance departments at Balıkesir University's Faculty of Economics and Administrative Sciences in Turkey. Their findings identified topics where students experienced learning difficulties and those where they did not.

This study contributes uniquely to the literature by analyzing the learning difficulties faced by first-year undergraduate students taking the Introduction to Economics I course at İzmir Democracy University, most of whom lacked prior economics education, using the difficulty index method. While the difficulty index is typically applied in science and education fields, its use in economics education remains limited (Okoye & Ndubuzor, 2021; Tunçsiper & Sürekçi, 2012). The research reveals that students particularly struggle with concepts such as price elasticity of demand, supply curves, monopoly, and oligopoly theory, aligning with existing literature on challenges in graphical analysis and mathematical skills, while also identifying unexpected difficulties in basic definitions and economic analysis. Unlike most studies in the field, which focus solely on analyzing exam question difficulty levels, this work goes a step further by proposing pedagogical interventions such as economic simulations, practical examples, and tailored assignments, adding an applied perspective. In the Turkish context, while Tunçsiper and Sürekçi (2012) examined students at Balıkesir University, this study centers on İzmir Democracy University, offering a new case study that enables comparisons of learning challenges across different institutions. These findings provide valuable insights for developing student-centered curricula and improving teaching methods in economics education.

2. Material and Methods

The study was conducted at the Faculty of Economics and Administrative Sciences at İzmir Democracy University using survey and difficulty index calculation methods. A total of 170 students were enrolled in the Introduction to Economics I course, taught in English during the Fall semester of 2023-2024, with a sample size of 147 students. The survey was sent to all enrolled students via email. It included the course topics, and students were asked to indicate their level of difficulty in understanding each topic by selecting one of the following options:

(1) Easy (Understood without difficulty)

(2) Moderate (Struggled but understood)

(3) Difficult (Still do not understand)

(4) I did not cover this topic.

The course topics included in the survey were based on the syllabus and international field standards. Using the survey results, the difficulty index values for each topic were calculated. Cheang & Hasni (1998) defined the difficulty index as

the ratio of the number of students who can correctly answer the questions to the total number of students taking the exams. The formula for calculating the difficulty index for a small group of students is as follows:

$$\text{Difficulty index} = B/J\text{-}L \quad (1)$$

where

- B = Number of students who answered the questions correctly,

- I = Total number of students who took the exams,

- L = Number of students who selected "I did not cover this topic."

The Difficulty Index ranges between 0 and 1 (Hendrik et al., 2022). A value within 0.00-0.20 indicates the topic is very difficult, 0.20-0.40 denotes a difficult topic, 0.40-0.60 signifies a moderate level of difficulty, 0.60-0.80 indicates an easy topic, and 0.80-1.00 reflects a very easy topic (Crocker & Algina, 1986).

After calculating the difficulty indices for each topic, one-on-one interviews were conducted with students to explore the causes of learning difficulties, resulting in the formulation of eight propositions. These propositions were subsequently presented to students via a survey, and the responses were analyzed as percentages. The identified propositions are listed below:

Proposition 1: I face difficulties due to challenges in understanding economic terms and concepts.

Proposition 2: I struggle with comprehending and interpreting graphs and tables.

Proposition 3: I have issues due to the course duration and credit load.

Proposition 4: My difficulties are due to inadequate knowledge in mathematics and statistics.

Proposition 5: I experience challenges because of insufficient participation in class.

Proposition 6: I face difficulties due to physical conditions such as classroom capacity.

Proposition 7: My learning difficulties stem from a lack of audiovisual materials in the course.

Proposition 8: My learning difficulties are due to the course being taught in a foreign language.

3. Results and Discussion

In this study, the difficulty index values for the topics in the Introduction to Economics I course were first calculated based on survey results. The difficulty levels of the topics are presented in Table 1. Overall, an assessment of Table 1 indicates that the topics in Introduction to Economics I fall under the classifications "The topic is very difficult," "The topic is difficult," and "The topic is moderately difficult." No topics were identified that fit into the classifications of "The topic is easy" or "The topic is very easy." In this regard, the Introduction to Economics I course is generally considered challenging for the surveyed students.

Table 1. Topics and Difficulty Index Values

Order number	Subjects	Difficulty index
1	Basic definitions such as Supply, Demand, Factors of Production, Consumption, Utility, Economic Issues, Efficiency.	0.33
2	Economic Analysis	0.24
3	Basic concepts such as Economic Growth, Unemployment, Inflation, Balance of Payments	0.22
4	Individual Demand, Demand Function, Law of Demand	0.23
5	Price Elasticity of Demand	0.19

6	Firm's Supply Schedule, Changes in Supply, and Movement along the Supply Curve	0.15
7	Elasticity of Supply	0.18
8	Characteristics of Perfect Competition Market, Equilibrium Price in Perfect Competition, The Effect of Changes in Supply and Demand on Market Prices	0.29
9	Non-Price Factors Affecting Supply and Demand	0.37
10	Paradox of Plenty, Cobweb Theorem	0.19
11	Government Intervention	0.38
12	Utility Analysis: Cardinal Approach	0.18
13	Utility Analysis: Ordinal Approach	0.21
14	Relationships Between Changes in Prices and Consumer Equilibrium	0.36
15	Short Run, Law of Diminishing Returns	0.30
16	Long Run, Returns to Scale	0.31
17	Isoquant Analysis and Isocost Line	0.27
18	Firm Equilibrium, Profit Maximization	0.25
19	Short and Long Run Firm Equilibrium in Perfect Competition, Industry Equilibrium	0.28
20	Types of Imperfect Competition Markets and Their Causes	0.22
21	Firm Equilibrium in Monopoly	0.15
22	Short and Long Run Firm Equilibrium in Monopolistic Competition	0.16
23	Definition of Oligopoly, Sweezy Model	0.19
24	Labor and Wage Formation, Land and Rent, Capital and Entrepreneurship, Formation of Entrepreneurship and Profit	0.39
25	Income Distribution, Inequality in Personal Income Distribution, Lorenz Method, and GINI Coefficient	0.29

Note: Difficulty index values indicate the following: For 0.00-0.20, "The topic is very difficult"; For 0.20-0.40, "The topic is difficult"; For 0.40-0.60, "The topic is of moderate difficulty"; For 0.60-0.80, "The topic is easy"; For 0.80-1.00, "The topic is very easy."

Source: Author's own work

According to the results in Table 2, the topics that students found very difficult to learn include price elasticity of demand, firm and industry supply curves, changes in supply and movement along the supply curve, supply elasticity, the paradox of plenty, the cobweb theorem, utility analyses, the causes of monopoly emergence, equilibrium in monopoly, price discrimination in monopoly, short- and long-run firm equilibrium in monopolistic competition, the definition of oligopoly, and the Sweezy model.

Table 2. Very Difficult Topics and Difficulty Index Values

Order number	Subjects	Difficulty index
1	Price Elasticity of Demand	0.19
2	Firm Supply Schedule, Changes in Supply, and Movement Along the Supply Curve	0.15
3	Supply Elasticity	0.18
4	Paradox of Abundance, Cobweb Theorem	0.19
5	Utility Analysis: Cardinal Approach	0.18
6	Firm Equilibrium in Monopoly	0.15
7	Short and Long-Term Firm Equilibrium in Monopolistic Competition	0.16
8	Definition of Oligopoly, Sweezy Model	0.19

Source: Author's own work

In Table 3, the topics identified as difficult by the students and their difficulty index values are presented.

Table 3. Difficult Topics and Difficulty Index Values

Order number	Subjects	Difficulty index
1	Basic definitions such as Supply, Demand, Factors of Production, Consumption, Utility, Economic Issues, and Efficiency	0.33
2	Economic Analysis	0.24
3	Key concepts such as Economic Growth, Unemployment, Inflation, and Balance of Payments.	0.22
4	Individual Demand, Demand Function, Law of Demand	0.23
5	Characteristics of Perfect Competition, Equilibrium Price in Perfect Competition, Effects of Supply and Demand Changes on Market Price	0.29
6	Factors other than Price that Affect Supply and Demand	0.37
7	Government Intervention	0.38
8	Utility Analysis: Ordinal Approach	0.21
9	Relationships between Changes in Prices and Consumer Equilibrium	0.36
10	Short Run, Law of Diminishing Returns	0.30
11	Long Run, Returns to Scale	0.31

12	Iso-Product Analysis and Iso-Cost Line	0.27
13	Firm Equilibrium, Profit Maximization	0.25
14	Short and Long-Term Firm Equilibrium in Perfect Competition, Industry Equilibrium	0.28
15	Types of Imperfect Competition and Their Causes	0.22
16	Labor and Wage Formation, Land and Rent, Capital and Entrepreneurship, Entrepreneurship and Profit Formation	0.39
17	Income Distribution, Inequality in Personal Income Distribution, Lorenz Method, and GINI Coefficient	0.29

Source: Author's own work

Based on the results from Table 3, the topics that are difficult to learn include: basic definitions, economic analysis, unemployment, inflation, balance of payments, individual demand, demand function, law of demand, definition of perfect competition market, equilibrium price in perfect competition market, effects of changes in supply and demand on market price, factors affecting supply and demand beyond the price of that good, government intervention in the market, indifference analysis, cardinal-ordinal approaches, changes in consumer equilibrium, short-term and diminishing returns, long-term and returns to scale, analysis of equivalent products, equal cost curve, firm equilibrium, short and long-term firm and industry equilibrium in perfect competition market, pricing of production factors, income distribution policy, Lorenz Curve, and GINI coefficient.

In light of these findings, in order to determine the reasons for the learning difficulties in the course, students participating in the survey were presented with seven statements based on the results of studies in literature, using a 5-point Likert scale (1: Strongly Disagree; 2: Disagree; 3: Neutral; 4: Agree; 5: Strongly Agree). The statements and the students' responses are presented below:

Proposition 1 - I am having trouble understanding economic terms and concepts, which is causing me difficulties.

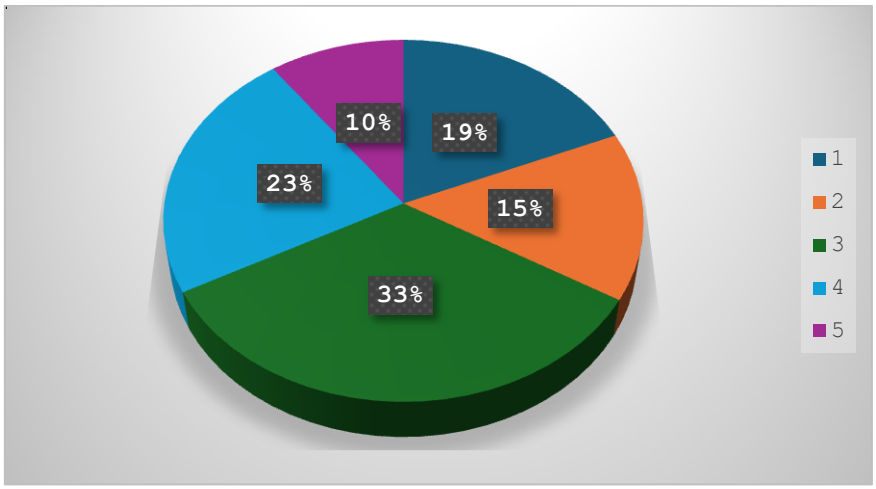

Figure 1. Learning difficulties related to economic concepts

Source: Author's own work

In Figure 1, 19% of students responded "strongly disagree," 15% "disagree," 33% "neutral," 23% "agree," and 10% "strongly agree" to the proposition. The combined percentage of those who agreed or strongly agreed with the statement is 33%. These results align with the findings of Chen (2006) and Tunçsiper and Sürekci (2012), who also examined learning difficulties associated with economic concepts and terms.

Proposition 2 - I am having problems due to not being adequate in understanding and interpreting graphs and tables.

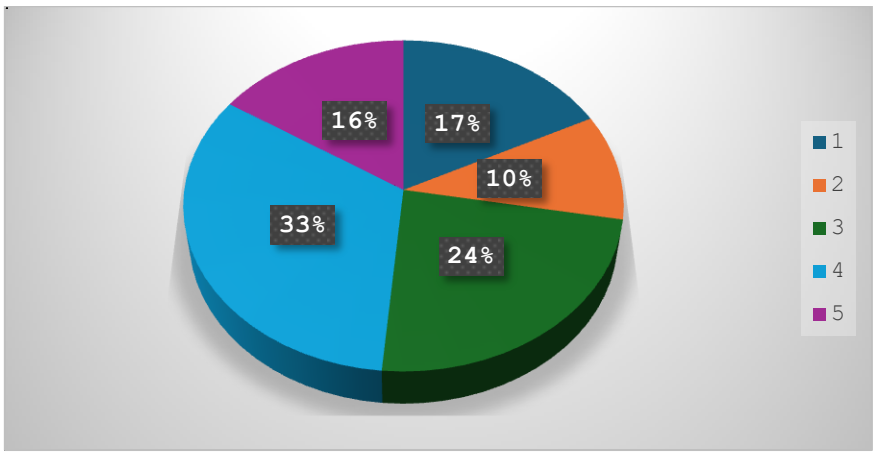

Figure 2. Problems with using, understanding, and reading figures and graphs.

Source: Author's own work

In Figure 2, 17% of students responded with "strongly disagree," 10% with "disagree," 24% were "undecided," 33% "agree," and 16% "strongly agree" regarding the proposition. The proportion of those who "agree" and "strongly agree" is 49% of the total. The results of the proposition are consistent with Walbert (1999) and Tunçsiper and Sürekci (2012).

Proposal 3- I'm having trouble depending on the duration and credits of the course.

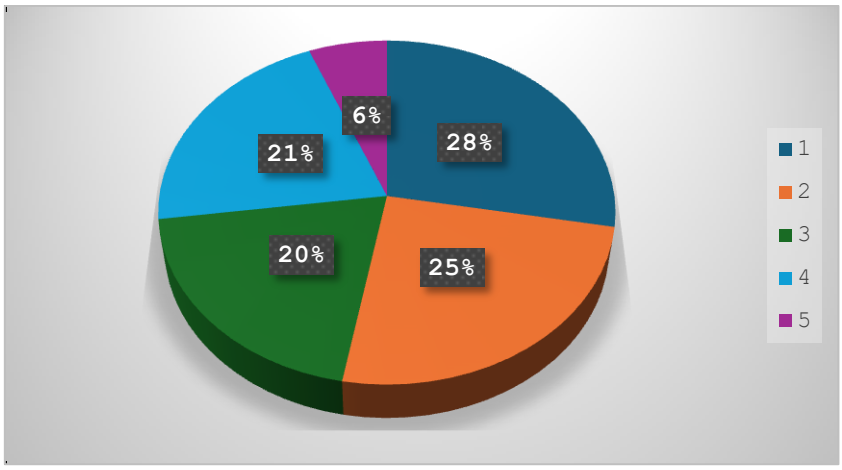

Figure 3. Problems related to the duration and credits of the course.

Source: Author's own work

In Figure 3, 28% of students responded with "strongly disagree," 25% with "disagree," 20% with "neutral," 21% with "agree," and 6% with "strongly agree" to the proposition. The combined percentage of those who "agree" and "strongly agree" is 27%. The results for this proposition align with the findings of Daniel (2000) and Tunçsiper and Sürekci (2012).

Proposal 4- I am having trouble due to my insufficient knowledge of mathematics and statistics.

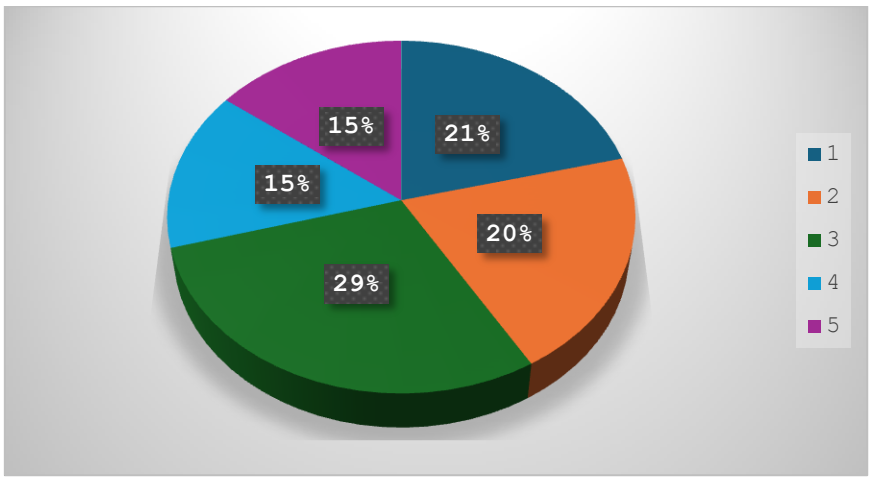

Figure 4. Problems related to knowledge of mathematics and statistics

Source: Author's own work

In Figure 4, 21% of students responded with "strongly disagree," 20% with "disagree," 29% with "neutral," 15% with "agree," and 15% with "strongly agree" regarding the proposition. The combined proportion of those who agree and strongly agree is 30%. The results of this proposition align with the findings of Schuhmann et al. (2005) and Tunçsiper and Sürekci (2012).

Proposal 5- I am having problems due to my insufficient participation in the class.

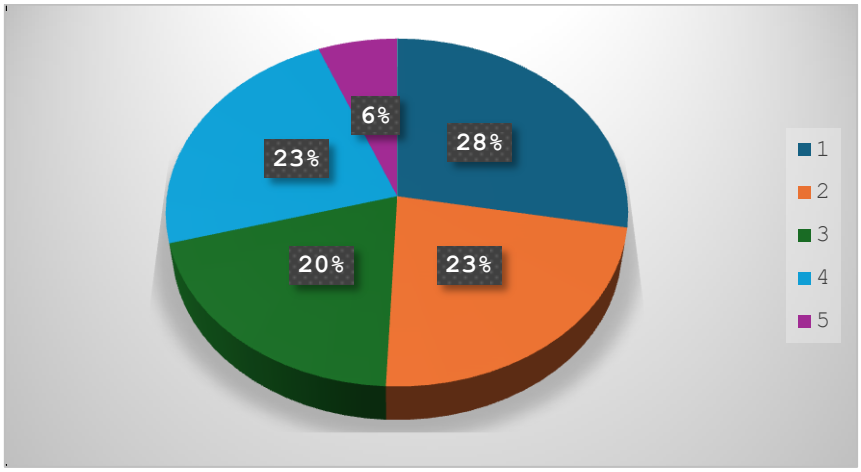

Figure 5. Problems related to lack of participation in the class.

Source: Author's own work

In Figure 5, 28% of students responded "strongly disagree," 23% "disagree," 20% "neutral," 23% "agree," and 6% "strongly agree" to the proposition. The combined percentage of those who "agree" and "strongly agree" is 29%. The results of this proposition align with findings by Friedman et al. (2001) and Tunçsiper & Sürekci (2012).

Proposal 6- I am having problems due to physical conditions such as classroom and class capacity.

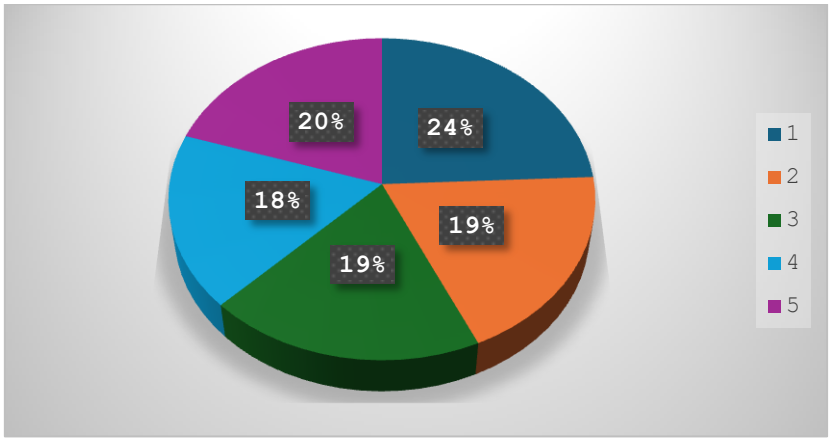

Figure 6. Problems related to physical conditions such as classrooms, class capacity, etc.

Source: Author's own work

In Figure 6, 24% of students responded with "strongly disagree," 19% with "disagree," 19% with "neutral," 18% with "agree," and 20% with "strongly agree" to this proposition. The combined percentage of those who agree and strongly agree with the proposition is 38%. The results of this proposition are consistent with the findings of Caldwell (1992), Baafi (2020), and Tunçsiper and Sürekçi (2012).

Proposal 7- The learning difficulty has arisen from the way the lesson is taught/presented.

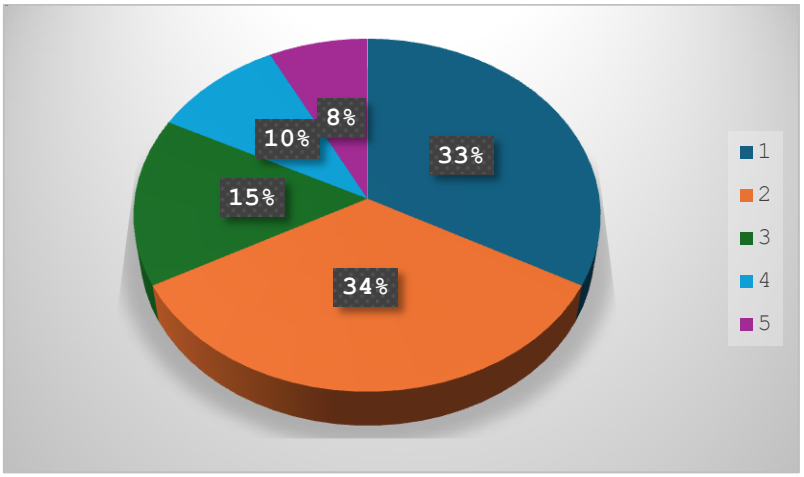

Figure 7. Problems arising from the course's instruction/presentation.

Source: Author's own work

In Figure 7, 33% of students responded with "strongly disagree," 34% with "disagree," 15% with "neutral," 10% with "agree," and 8% with "strongly agree" to the proposition. The combined percentages of those who agree and strongly agree with the proposition total 18%. These results are consistent with the findings of Tunçsiper and Sürekçi (2012) but are not in alignment with those of McLaughlin (2013) and Missildine et al. (2013).

Proposal 8- The learning difficulty arises from the fact that the course is taught in a foreign language.

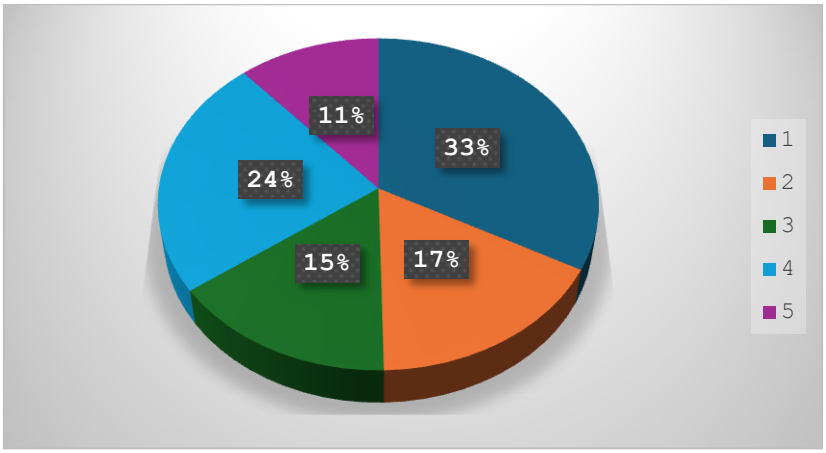

Figure 8. Problems arising from the fact that the course is taught in a foreign language.

Source: Author's own work

In Figure 8, 33% of the students responded with "strongly disagree," 17% with "disagree," 15% with "undecided," 24% with "agree," and 11% with "strongly agree" to the proposition. The combined percentage of those who agreed and strongly agreed with the proposition is 35%. These results are consistent with the findings of Tunçsiper and Sürekçi (2012).

Conclusion

The Introduction to Economics I course is conducted with a large number of first-year students in undergraduate programs who have not previously received economics education. Ensuring that students can learn the course material without difficulty is crucial for guaranteeing the program's competencies and increasing interest in subsequent area courses. Accordingly, a survey and difficulty index calculation method were applied to 147 students enrolled in the English Introduction to Economics I course at İzmir Democracy University during the 2023-2024 fall semester to identify the learning difficulties associated with the course. Subsequently, to determine the reasons for these learning difficulties, eight propositions were presented to the participating students, and their responses were reported.

According to the survey results, the topics considered very difficult by the students included price elasticity of demand, supply curves for firms and industries, changes in supply and movements along the supply curve, supply elasticity, the paradox of plenty, the Cobweb theorem, analyses of utility, reasons for the emergence of monopolies, equilibrium in monopolies, price discrimination in monopolies, short and long-term equilibrium for firms in monopolistic competition, definitions of oligopoly, and the Sweezy model. The topics deemed difficult by the students included basic definitions, economic analysis, unemployment, inflation, balance of payments, individual demand, demand functions, the law of demand, the definition of perfect competition, equilibrium price in perfect competition, the effect of changes in supply and demand on market prices, factors affecting the supply and demand of a good other than its price, government intervention in the market, indifference analysis using cardinal and ordinal approaches, changes in consumer equilibrium, short-term and diminishing returns, long-term returns to scale, isoquant analysis, firm equilibrium, short and long-term firm and industry equilibrium in perfect competition, pricing of production factors, income distribution policy, the Lorenz curve, and the Gini coefficient. These results indicate that the Introduction to Economics course is generally perceived as a difficult course by the students. These findings are consistent with the research of Tunçsiper and Sürekçi (2012).

Regarding the causes of learning difficulties, it has been determined that, in line with Chen (2006), students experience difficulties in learning economic concepts and terms; in agreement with Walbert (1999), they face issues in using graphs and tables; consistent with Daniel (2000), the duration of the course affects its success; in line with Schuhmann et al. (2005), there is a need to improve mathematics and statistics knowledge; in accordance with Friedman et al. (2001), attending the course positively affects success; and consistent with Caldwell (1992) and Baafi (2020), classroom capacity is effective in learning. The fact that students experience learning difficulties due to the course being taught in a foreign language is also in line with the findings of Tunçsiper and Sürekçi (2012).

This study makes a significant contribution to the literature on higher education by providing an in-depth analysis of the challenges faced by first-year students in understanding foundational economics concepts, particularly in courses conducted in a foreign language. By identifying specific topics and instructional factors that hinder learning, this research enriches the discourse on pedagogical strategies in economics education. Moreover, it highlights the importance of

integrating interdisciplinary skills, such as mathematics and statistics, into economics curricula and addressing the unique needs of diverse student populations in multilingual settings.

While the findings of this study provide valuable insights, it is important to consider the generalizability of the sample. The research was conducted with a specific cohort of students from İzmir Democracy University, which may limit its applicability to broader contexts. Factors such as institutional policies, teaching methods, and the language of instruction could vary significantly across universities and regions. Therefore, caution should be exercised when extrapolating these results to other settings. Future studies could address this limitation by incorporating larger, more diverse samples from multiple institutions to validate and extend the findings.

The results of this study have significant implications for the field of higher education, particularly in the design and delivery of introductory courses in economics. Institutions should consider adopting evidence-based teaching practices that address the common challenges identified, such as conceptual complexity, mathematical prerequisites, and language barriers. Furthermore, the findings underline the importance of a student-centered approach, emphasizing the use of active learning strategies, visual aids, and real-world applications to enhance engagement and comprehension. Additionally, this study highlights the need for professional development programs to equip educators with the skills required to teach complex subjects effectively in multilingual and diverse classrooms. By addressing these challenges systematically, higher education institutions can foster a more inclusive and effective learning environment, ultimately improving student outcomes and retention rates.

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