



The Effect of Tax Education on Generation Alpha's Tax Awareness: An Experimental Study

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ABSTRACT

Tax education in children increases tax awareness. This study aims to increase tax awareness in children through tax education. Children born after 2010, called the alpha generation, were selected as the sample. In this context, a quasi-experimental design with pre-test and post-test comparisons was used to measure and improve tax awareness among 6th, 7th and 8th grade students. In addition, unstructured open-ended interview technique was used. According to the main findings of the study, tax education has positive effects on children's tax awareness. While tax awareness of children was low before tax education, it was observed that tax awareness increased after the education. The level of awareness among female students has improved proportionally more than that among male students. Following tax education, children developed an understanding of the connection between taxes and public services, fostering awareness of the purpose behind tax payments. Students also shifted their descriptions of those who do not pay taxes from 'cunning' to 'thieves'. Additionally, an increase was observed in students' willingness to engage in tax education.

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1. Introduction

Children are the architects of the society's future. Raising children's tax awareness improves their social awareness and positively influences future taxpayers. This study aims to increase tax awareness in children through tax education. Tax awareness is to comprehend and be aware of a nation's tax laws and system (Faizal et al., 2021: 66). Furthermore, tax awareness, which includes being aware of rules, regulations, procedures while fulfilling tax obligations, is a cognitive process. (Sanusi et al., 2021: 91). Tax awareness is significantly affected by the perceptions towards tax. Low public awareness of taxation leads to the failure to collect potential taxes. Therefore, it affects the awareness of the role of tax in the financing/provision of public services. One of the main motivations of taxpayers to fulfill their tax obligations is that taxes are a citizenship duty. The lack of this awareness means that there will be problems in the fulfillment of these duties. In this context, taxpayers should be aware of taxes' role in financing public services and ensure voluntary compliance. (Pandapotan & Tjen, 2017: 19). Awareness of tax payment has a significant effect on the willingness to pay tax. This is due to the taxpayer's motivation to pay taxes. This situation also plays a role in increasing the tax revenues of a country (Rahayu, 2022: 3). In this regard, countries work to raise tax consciousness (Gergerlioğlu & McGee, 2017: 383).

Generations are groups of people bound together by common events that change societies. They therefore have some common attitudes and expectations (Merriman, 2015: 3). In this context, the generation born after 2010 and expected to demand different approaches in terms of teaching and learning is defined as the Alpha Generation (Ziatdinov & Cilliers, 2021: 2-3). The alpha generation is seen as the world's new consumers. This generation plays an active role in the construction of popular culture and social media, and is expected to be the largest generation in history (McCrinkle & Fell, 2020: 3). Therefore, improving the tax awareness of the alpha generation, which is the taxpayer of the future, is an investment in the tax-compliant taxpayers of the future (Eriksen & Fallan, 1996: 399). This study, which aims to improve the tax awareness of the Alpha generation, is analyzed in three main sections. The first part presents a literature review, the second part details the research methodology, and the third part shares the findings from the collected data.

2. Literature Review

In the context of tax awareness across generations, the studies of Ciğerci (2021) and Topsakal and Gümüş (2023) are noteworthy. Ciğerci (2021) empirically investigated the tax awareness of Generations X, Y and Z in seven geographical regions across Turkey and conducted a face-to-face survey with 554 individuals. In the study, no significant difference was observed between generations in terms of tax awareness. Accordingly, while Generation X and Generation Y attach importance to the places where taxes are spent, this situation is less important for Generation Z. In addition, Generation Z finds the tax rates in Turkey less high compared to Generation X and Generation Y. Topsakal

& Gümüş (2023) conducted a study on tax morality/consciousness of Generations X, Y and Z in a study conducted with 430 people in Eskişehir. According to the findings of the study, while Generation Z has a high level of belief in the sanctity of tax, Generation Y has a low level of belief in the sanctity of tax.

Mohamad et al. (2023) investigated the impact of tax education programs on tax awareness in a survey study involving 371 secondary school students in Malaysia. The study found that formal and informal tax education programs have a significant effect on tax awareness. Güngüneş & Uğur (2023) surveyed to determine the tax awareness of students aged 9 to 11 in the 4th, 5th, and 6th grades in Kırıkkale grades in Kırıkkale. The study found that the most important factors that constitute the tax awareness of students are education and family. Faizal et al. (2021) conducted a study on 106 secondary school students in Malaysia to measure students' tax knowledge and awareness. According to the findings, taxation should be taught as a course in secondary schools and awareness campaigns should be implemented to enhance tax awareness.

Kandak & Mertol (2021) conducted an empirical study to measure the effect of education on tax awareness in a sample of 2nd, 3rd, and 4th grade students and 5th, 6th, 7th and 8th grade students in Isparta. Prior to the study, the tax awareness levels of the students were assessed through a pre-test. Then training on tax awareness was given by the classroom teachers for two weeks. According to the findings of the study, the training gave positive results in terms of tax awareness. Demir & Ciğerci (2016) examined the effects of education on tax awareness in primary school students with an empirical analysis. Accordingly, the tax awareness level of the students in the target group was first determined and then training was provided. It was determined that the tax awareness level increased after the training. Özen et al. (2015) conducted a survey and focus group study for 5th, 6th, 7th, and 8th grade students in Buca and Gaziemir districts of İzmir. The study found that students have a certain level of perception toward tax and that the income/education status of families affects the perception levels of students. Çelik & Eroğlu (2014) examined tax perception and its determining factors in a survey of 766 students studying in the 4th, 5th, 6th, 7th, and 8th grades of primary education in Zonguldak. The study found that half of the students cannot define the concept of tax, and tax-related concepts are primarily learned from families. Taytak (2010) conducted a survey to determine tax awareness among second level primary school students. The study found that families are the primary source of tax awareness, and that students correctly perceive the connection between tax and public service. Sağbaş & Başoğlu (2005) conducted a survey and interviews with primary school students in Afyonkarahisar. The study found that students' misconceptions about tax were high and that the tax-public service link could not be established. Zorlu (2012) measured the tax awareness of the 9-15 age group consisting of 3rd and 8th grade students with a survey. Accordingly, there is no significant difference in the tax awareness levels of the students according to their parents' education level, gender, father's occupation, and income status. There is a significant difference according to class, age and mother's occupation. Karaca (2015) conducted a study on 3rd grade students of secondary schools who received tax education. According to the findings,

tax education has improved and developed students' attitudes towards tax. Oğuz (2019) applied a survey to primary school 5th, 6th, 7th and 8th grade students and teachers to measure tax awareness. According to the findings of the study, students were able to establish a healthy link between public service and tax, and the majority of students found it useful to pay taxes. According to the findings of the survey conducted for teachers, it was determined that teachers between the ages of 41-45 have higher tax awareness, and men are more conscious than women. Gür (2019) applied a survey on 6021 secondary school students (12-19 years old) to measure tax awareness and tax morality. According to the study, while students' tax awareness differs for age, gender, and class factors, it does not differ for factors such as income, education, and parents' occupation. In addition, most of the students have a high level of tax awareness and morality. Akkurt (2023) aimed to determine the tax awareness of 6th and 7th grade secondary school students and conducted a survey. Accordingly, the tax awareness of students is low and this situation differs between variables.

3. Research Method

In the study, a quasi-experimental design with pre-test and post-test comparison was employed to measure and enhance tax awareness among 6th, 7th, and 8th grade students. The interview technique was also used to determine the perception of Generation Alpha towards tax awareness and to learn more about their personal experiences. According to this design, 12 experimental groups were formed by random assignment from the previously determined participant pool. In this context, 427 students from 12 classes randomly selected from 4 public schools located in 4 central districts (Kayapınar, Yenişehir, Sur and Bağlar) in Diyarbakır province were included in the study. The 427 students included in the study were determined as fixed and 16 multiple-choice questions were asked to these students before tax education. One month after the pre-test, tax awareness training was given for two months. One month after the tax awareness training, the post-test was applied with the questionnaire questions and interviews conducted at the beginning of the research. The training process of the study lasted six months in total, and 427 students participated in the pre-test, training and post-test phases. In tax awareness training, tax education documents prepared by the authors, brochures, gamified activities and tax awareness documents published by the Revenue Administration were used. Expert opinions were sought in the preparation of the research questions, and the research was conducted with the approval of the ethics committee and parental consent forms. In the study, the differences between the tax awareness levels of the participants before and after the tax awareness training were determined by descriptive analyzes. The evaluations regarding the reasons for the differences between the groups as a result of the unstructured open-ended interviews are explained under the relevant tables. While making explanations, "I" for the interview, "F" and "M" for the gender of the student and numbering for the student were used. In this context, expressions such as IF5, IM8 etc. were used.

4. Research Findings

Table 1 presents the demographic characteristics of the participants included in the study:

Table 1: Demographic Characteristics of Participants

Sex	Frequency	Percentage
Female	188	44,0
Male	239	56,0
Age		
11	37	8,7
12	122	28,6
13	163	38,2
14	105	24,5
Classroom		
6th grade	107	25,1
7th grade	137	32,1
8th grade	183	42,8
School Name		
Cemil Ozgur Secondary School	100	23,4
Piri Reis Secondary School	91	21,4
Hamrvat Secondary School	83	19,4
Yesildalli Secondary School	153	35,8
Total	427	100

Source: Author

There were 44% female students and 56% male students among the study participants. 8.7% of the students were 11 years old, 28.6% were 12 years old, 38.2% were 13 years old and 24.5% were 14 years old. 25.1% of the students were 6th grade students, 32.1% were 7th grade students and 42.8% were 8th grade students. The distribution of the schools in the study was Cemil Özgür Secondary School 23.4%, Piri Reis Secondary School 21.4%, Hamarvat Secondary School 19.4% and Yeşildallı Secondary School 35.8%.

Table 2: Awareness of the Term "Tax"

Expression	Before Training		After Training		Difference
	Frequency	Percentage	Frequency	Percentage	
I heard the term "tax"	391	91,6	413	96,7	+5,1
I didn't hear the term "tax"	36	8,4	14	3,3	-5,1
Total	427	100	427	100	

Source: Author

In the pre-test of the study and after the tax awareness training, students were asked whether they had heard the term 'tax'. As shown in Table 2, the number of

students who have heard of the term 'tax' increased significantly after the training. On the other hand, it can be concluded that the students who stated that they had not heard the term 'tax' before after the tax training did not read the relevant question correctly, answered quickly or were indifferent to the tax issue while filling out the questionnaires.

Table 3: Source of Information on the Term “Tax”

Expression	Before Training		After Training		Difference
	Frequency	Percentage	Frequency	Percentage	
Written and Visual Media (Newspaper or television)	144	33,7	77	18,0	-15,7
Family	122	28,6	90	21,0	-7,6
Internet	98	23,0	53	12,5	-13,5
Teacher	63	14,7	207	48,5	33,8
Total	427	100	427	100	

Source: Author

As shown in Table 3, while students' sources of information about taxes before tax education were primarily written and visual media, the teacher option became more prominent after the education. This situation shows that tax education when given at an early age, has an important effect on children. Because even though children have heard the tax word in some way, they do not have sufficient knowledge about the purposes for which taxes are levied. In the following sections, the reasons for this difference are explained in detail.

Table 4: The Meaning of the Term “Tax”

Expression	Before Training		After Training		Difference
	Frequency	Percentage	Frequency	Percentage	
It's the money the government collects to take care of us	161	37,7	221	51,8	+4,1
Civic duty	83	19,4	83	19,4	0
It is the money paid by people who have jobs	70	16,4	62	14,5	-1,9
Money taken by force	56	13,1	43	10,1	-3,0
I don't know	57	13,3	18	4,2	-9,1
Total	427	100	427	100	

Source: Author

As shown in Table 4, students view taxes as money collected by the government to care for its citizens, and this perception increased after the education. However, there was no change in the percentage of students who perceived taxes as a civic duty. It is

noteworthy that there was a significant decrease in the number of respondents who said that they did not know the meaning of the tax word. These responses show the importance of tax education at an early age in terms of tax awareness.

Table 5: Who Pays the Tax?

Expression	Before Training		After Training		Difference
	Frequency	Percentage	Frequency	Percentage	
Everyone who makes money	252	59,0	329	77,0	+18,0
Adult people	72	16,9	45	10,5	-6,4
People who want	26	6,1	29	6,8	+0,7
I don't know	77	18,0	24	5,6	-12,4
Total	427	100	427	100	

Source: Author

Table 5 shows the responses to the question of who pays the tax. It is seen that the highest number of responses before and after the tax awareness training concentrated on the option of everyone who earns money. After tax training, this response increased by 18%. Accordingly, students have the perception that everyone who earns income must pay taxes. On the other hand, it is seen that the perception that only big people should pay taxes has weakened and the perception that everyone should pay taxes has been formed. It was observed that there was a 12.4% decrease in the number of "I don't know" and that children generally have a better understanding of who pays taxes.

Table 6: Importance of Paying Tax

Expression	Before Training		After Training		Difference
	Frequency	Percentage	Frequency	Percentage	
In order for the state to build schools, hospitals and parks	224	52,5	315	73,8	+21,3
In order for the state to ensure our security, to protect us	83	19,4	49	11,5	-7,9
To be a rich country	22	5,2	13	3,0	-2,2
Unimportant	35	8,2	26	6,1	-2,1
I don't know	63	14,8	24	5,6	-9,2
Total	427	100	427	100	

Source: Author

Table 6 shows the responses to the question why paying taxes is important. In this question, the highest increase is observed in the option "In order for the state to build schools, hospitals and parks". This shows that children establish a relationship between paying taxes and public goods and services. On the other hand, the 9.2%

decrease in responses to the 'I don't know' option indicates that tax awareness education had a positive effect on children.

Table 7: What Comes to Mind When Tax is Mentioned

Expression	Before Training		After Training		Difference
	Frequency	Percentage	Frequency	Percentage	
Money	341	79,9	310	72,6	-7,3
School, Hospital, Park	45	10,5	88	20,6	+20,1
Security and Protection	19	4,4	23	5,4	+1,0
Goods	6	1,4	1	0,2	-1,2
I don't know	26	3,7	5	1,2	-2,5
Total	427	100	427	100	

Source: Author

As seen in Table 7, students initially associate taxes with money; However, after education, while the relationship between money and taxes persists, the selection of school, hospital, park has increased. This result is consistent with Table 6 and indicates that students are aware of the role of taxes in providing public services.

Table 8: Why is Tax Paid?

Expression	Before Training		After Training		Difference
	Frequency	Percentage	Frequency	Percentage	
Because it is a civic duty	148	34,7	161	37,7	+3,0
To contribute to the state	144	33,7	174	40,7	+7,0
Because it is mandatory	95	22,2	78	18,3	-3,9
I don't know	40	9,4	14	3,3	-6,1
Total	427	100	427	100	

Source: Author

As shown in Table 8, following tax education, the options of civic duty and contributing to the state increased, while the option of not knowing the reason for paying taxes decreased. This indicates that tax awareness has improved among children.

Table 9: What Happens If We Do Not Pay Taxes?

Expression	Before Training		After Training		Difference
	Frequency	Percentage	Frequency	Percentage	
School, Hospital, Park cannot be built	113	26,5	172	40,3	+13,8
State weakens	101	23,7	136	31,9	+8,2
The state cannot ensure our security and protect us	66	15,5	61	14,3	-0,8
Nothing will happen	48	11,2	23	5,4	-6,8
We get richer	35	8,2	15	3,5	-4,7
I don't know	64	15,0	20	4,7	-10,3
Total	427	100	427	100	

Source: Author

Table 9 shows that the responses to the survey questions before and after the tax awareness training were concentrated in the options of schools, hospitals, parks cannot be built and the state is weakened. After the tax awareness training, it was determined that there was a 22% increase in these two options in total, and therefore, there was an improvement in the tax awareness levels of the students. The increase in the "I don't know" and "nothing will happen" options also shows that tax awareness training has increased the level of tax awareness.

Table 10: What Happens If We Pay Taxes?

Expression	Before Training		After Training		Difference
	Frequency	Percentage	Frequency	Percentage	
More Schools, Hospitals, Parks are built	174	40,7	233	52,2	+11,5
State becomes stronger	99	23,2	122	28,6	+5,4
The state can more easily ensure our security and protect us	47	11,0	40	9,4	-2,6
We become poorer	36	8,4	19	4,4	-4,0
Nothing will happen	35	8,2	11	2,6	-5,6
I don't know	36	8,4	12	2,8	-5,6
Total	427	100	427	100	

Source: Author

As shown in Table 10, an improvement was observed in all options after the training. The most notable improvements were seen in the expressions 'schools, hospitals, parks will be built' and 'state becomes stronger.' Conversely, decrease significance were noted in the options 'nothing will happen' and 'I don't know'.

Table 11: Definition of Persons Who Do Not Pay Tax

Expression	Before Training		After Training		Difference
	Frequency	Percentage	Frequency	Percentage	
Cunning	112	26,2	58	13,6	-12,6
Intelligent	67	15,7	19	4,4	-10,7
Honest	44	10,3	19	4,4	-5,9
Thief	36	8,4	296	69,3	+60,9
I don't know	168	39,3	35	8,2	-31,1
Total	427	100	427	100	

Source: Author

As shown in Table 11, the high frequency of 'I don't know' responses prior to the training indicates that children lack sufficient awareness regarding tax evasion. Similarly, the most frequently selected option, 'cunning,' suggests that children require additional information about tax evasion. The highest rate of improvement after tax awareness training was realized in the thief option. Children's level of awareness about tax evasion increased after the tax education. After the training, there was a 12.6% decrease in the idea that those who do not pay their taxes are cunning, while there was a 60.9% increase in the perception that they are thieves.

Table 12: Students' Willingness to Receive Tax Education

Expression	Before Training		After Training		Difference
	Frequency	Percentage	Frequency	Percentage	
Yes	209	48,9	347	81,3	-32,4
No	218	51,1	80	18,7	-32,4
Total	427	100	427	100	

Source: Author

As shown in Table 12, the percentage of participants expressing a desire to receive tax education was 48.9% prior to the tax awareness training, while this percentage increased to 81.3% following the training. On the other hand, while the rate of those who did not want to receive tax education was 51.1%, this rate decreased to 18.7% after the tax awareness training. This is regarded as a positive outcome of the effective communication of the tax concept, which was previously perceived as abstract, through games and visuals presented by experts.

4.1. Difference Tests

In this section, it is aimed to analyze the differences between male and female students in the experimental research conducted to increase tax awareness in children. In this context, the findings obtained as a result of the experimental method were evaluated. The unstructured open-ended interview was conducted after the tax awareness training.

Table 13: Awareness of the Term 'Tax' Among Male and Female Students

Awareness of the term "tax"	Female Student					Male Student				
	Before Training		After Training		BT-AT	Before Training		After Training		BT-AT
	Frequency	Percentage	Frequency	Percentage	Difference	Frequency	Percentage	Frequency	Percentage	Difference
I heard the term "tax"	170	90,4	182	96,8	+12 (+6,4)	221	92,5	231	96,7	+10 (+4,2)
I never heard the term "tax"	18	9,6	6	3,2	-12 (-6,4)	18	7,5	8	3,3	-10 (-4,2)
Total	188	100	188	100		239	100	239	100	

Source: Author

According to Table 13, the awareness levels of male and female students regarding the term "tax" are similar. Tax education produced comparable levels of tax awareness in both groups, with a 2% greater improvement observed among female students compared to male students.

Table 14: Sources of Information on the Term 'Tax' for Female and Male Students

Awareness of the term "tax"	Female Student					Male Student				
	Before Training		After Training		BT-AT	Before Training		After Training		BT-AT
	Frequency	Percentage	Frequency	Percentage	Difference	Frequency	Percentage	Frequency	Percentage	Difference
Written and Visual Media (Newspaper or Television)	58	30,4	37	19,6	-21 (-10,8)	86	35,5	40	16,7	-46 (-18,8)
Family	53	28,3	37	19,6	-16 (-8,7)	69	28,8	53	22,2	-16 (-6,6)
Internet	43	23,0	30	16,0	-13 (-7,0)	55	23,1	23	9,6	-32 (13,5)
Teacher	34	18,3	84	44,7	+50 (+26,4)	30	12,6	123	51,5	+93 (+38,9)
Total	188	100	188	100		239	100	239	100	

Source: Author

In Table 14, it was determined that there was convergence in the sources of tax word acquisition of male and female students before tax awareness training. However, after the tax education, it is seen that differentiation occurs in the sources of the term

“tax” acquisition. In the unstructured open-ended interviews, the fact that the students coded IF2 and IF8 and IM4, IM7 and IM9 used expressions such as "We learned the word tax from you"; "You are a tax teacher", "How to be a tax teacher?" reveals the increase in the teacher option and the conclusion that it is related to the tax awareness training. In addition, it was observed that male students showed more proactive participation in tax awareness education than female students.

Table 15: Perceptions of the Meaning of 'Tax' Among Female and Male Students Before and After Education

Meaning of Tax	Female Student					Male Student				
	Before Training		After Training		BT-AT	Before Training		After Training		BT-AT
	Frequency	Percentage	Frequency	Percentage	Difference	Frequency	Percentage	Frequency	Percentage	Difference
It is the money the state collects to take care of us	70	37,2	98	52,1	+28 (+13,9)	91	38,1	123	51,5	+32 (+13,4)
It is a civic duty	35	18,6	40	21,3	+5 (+2,7)	48	20,1	43	18,0	-5 (-2,1)
It's money paid by people who have a job	34	18,1	25	13,3	-9 (-4,8)	36	15,1	37	15,5	+1 (+0,4)
Money taken by force	16	8,5	17	9,0	+1 (+0,5)	40	16,7	26	10,9	-14 (-5,8)
I don't know	33	17,6	8	4,3	+25 (+13,3)	24	10,0	10	4,2	-14 (-5,8)
Total	188	100	188	100		239	100	239	100	

Source: Author

Table 15 shows that male and female students have similar ideas about what tax means. However, the level of awareness about the meaning of the term “tax” is lower among female students. After the tax training, it was found that the improvement in the level of tax awareness was higher among female students than male students. The answers given by the students coded IM1, IM5, IM8 and IF3 respectively as “teacher, the state collects taxes and builds schools”, “tax is the money the state needs to take care of us”, “without taxes, the streets would be dirty, everywhere would remain dirty”, “without taxes, there would be no hospitals, we would not be able to get better” are qualitative indicators of the increase in the option “It is the money the state collects to take care of us”. The fact that male students responded more proactively to this question in the interviews explains why differences emerged.

Table 16: Views of Male and Female Students on Who Pays Taxes Before and After Training

Tax Payers	Female Student					Male Student				
	Before Training		After Training		BT-AT	Before Training		After Training		BT-AT
	Frequency	Percentage	Frequency	Percentage	Difference	Frequency	Percentage	Frequency	Percentage	Difference
Everyone who earns money	99	52,7	144	76,6	+45 (+23,9)	153	64,0	185	77,4	+32 (+13,4)
Adult people	28	14,9	21	11,2	-7 (-3,7)	44	18,4	24	10,0	-20 (-8,4)
People who want	14	7,4	12	6,4	-2 (-1,0)	12	5,0	17	7,1	+5 (+2,1)
I don't know	47	25,0	11	5,9	-36 (-19,1)	30	12,6	13	5,4	-17 (-7,2)
Total	188	100	188	100		239	100	239	100	

Source: Author

According to Table 16, the tax awareness level of male students is higher than that of female students before the tax education with the answer given to the question "everyone who earns money". However, the improvement in the tax awareness level is higher in female students after the tax education. The statements of the students with codes IF5 and IF7 in the interviews, "the rich should pay more taxes, the poor should not pay taxes" and "everyone who earns money should pay taxes, but the state should not collect taxes from those who work in daily jobs and earn less", show that female students have a more proactive attitude towards this issue. The high improvement rate in this question was also reflected in the interviews.

Table 17: Male and Female Students' Views on the Importance of Paying Taxes Before and After the Training

The Importance of Paying Tax	Female Student					Male Student				
	Before Training		After Training		BT-AT	Before Training		After Training		BT-AT
	Frequency	Percentage	Frequency	Percentage	Difference	Frequency	Percentage	Frequency	Percentage	Difference
In order for the state to build schools, hospitals and parks	94	50,0	136	72,3	+42 (+22,3)	130	54,4	179	74,9	+39 (+20,5)
In order for the state to ensure our	45	23,9	25	13,3	-20 (-10,6)	38	15,9	24	10,0	-13 (-5,9)

security, to protect us										
To be a rich country	10	5,3	4	2,1	-8 (-3,2)	12	5,0	9	3,8	-3 (-1,2)
Unimportant	5	2,7	15	8,0	-10 (+5,3)	30	12,6	11	4,6	-19 (-8,0)
I don't know	34	18,1	8	4,3	-26 (-13,8)	29	12,1	11	4,6	-18 (-7,5)
Total	188	100	188	100		239	100	239	100	

Source: Author

Table 17 shows differences in the question of why paying taxes is important according to the gender factor. Accordingly, the tax awareness levels of male students are higher than those of female students before and after the training. There are significant increases in the tax awareness levels of both groups after the tax training. This increase is greater in male students. In the unstructured open-ended interviews, the following statements were made by students with codes IM1, IM3, IM6, IM6 and IF4, respectively; “We have fewer parks because people pay less taxes”; “I now understand why hospitals are so crowded”, “If we give money, the state will be richer” and “Even if we pay taxes, nothing will happen, nothing will be done to us again”; these provide clues about the distribution in Table 17. They also explain the differences arising from the gender factor.

Table 18: Male and Female Students' Opinions Before and After the Training Regarding the Concept of Tax in Their Mental

The Mental Conception of Tax	Female Student					Male Student				
	Before Training		After Training		BT-AT	Before Training		After Training		BT-AT
	Frequency	Percentage	Frequency	Percentage	Difference	Frequency	Percentage	Frequency	Percentage	Difference
Money	156	83,0	139	73,9	-16 (-9,1)	185	77,4	171	71,5	-14 (-6,9)
School, hospital, park	14	7,4	31	16,5	+17 (+9,1)	31	13,0	57	23,8	+26 (+10,8)
Security and Protection	8	4,3	15	8,0	+7 (+3,7)	11	4,6	8	3,3	-3 (-1,3)
Goods	3	1,6	1	0,5	-2 (-0,9)	3	1,3	0	0	-3 (-1,3)
I don't know	7	3,7	2	1,1	-5 (-2,6)	9	3,8	3	1,3	-6 (-2,5)
Total	188	100	188	100		239	100	239	100	

Source: Author

Table 18 shows that both groups primarily associate taxes with money. This perception is higher among female students. After the tax awareness training, the highest change was observed in the option where male students associated taxes with

schools, hospitals and parks. There was a 10% increase in this option. In the unstructured open-ended interviews, the responses of the students coded IM1, IM3 and IF6 as “teacher, people pay less taxes, we have fewer parks”; “now I understand why hospitals are so crowded”, “the state buys guns and airplanes with taxes and protects us”, respectively, show the reasons for the differences in the table. It was observed that female students established the relationship between taxes and security more.

Table 19: Reasons for Individuals to Pay Tax According to Male and Female Students

Reasons to Pay Tax	Female Student					Male Student				
	Before Training		After Training		BT-AT	Before Training		After Training		BT-AT
	Frequency	Percentage	Frequency	Percentage	Difference	Frequency	Percentage	Frequency	Percentage	Difference
Because it is a civic duty	60	31,9	75	39,9	+15 (+8,0)	84	35,1	99	41,4	+15 (+6,3)
To contribute to the state	71	37,8	75	39,9	+4 (+2,1)	77	32,2	86	36,0	+9 (+3,8)
Because it is mandatory	32	17,0	31	16,5	-1 (-0,5)	63	26,4	46	19,7	-17 (-5,7)
I don't know	25	13,3	7	3,7	-18 (-9,7)	15	6,3	7	2,9	-8 (-3,4)
Total	188	100	188	100		239	100	239	100	

Source: Author

Table 19 shows that the level of tax awareness was lower in female students before the tax education, while the improvement in this level was greater in male students after the tax awareness education. While the perception that tax is a civic awareness was higher in female students, the improvement in this perception was greater in male students after the education. In the unstructured open-ended interviews, the answers given by the students coded IF1, IF7 and IF10, IM5 and IM11 respectively; “it is the duty of all of us to pay taxes”, “if we do not pay taxes, we do a disservice to the state”, “if we live here, we should give some of our money to the state”, “if we do not pay taxes, they will not beautify our city”, “teacher, we are all forced to pay taxes for everything” provide an understanding of the differences between male and female students in the table.

Table 20: Situations to be Faced if Taxes are Not Paid According to Male and Female Students

What happens if tax is not paid	Female Student					Male Student				
	Before Training		After Training		BT-AT	Before Training		After Training		BT-AT
	Frequency	Percentage	Frequency	Percentage	Difference	Frequency	Percentage	Frequency	Percentage	Difference
School, Hospital, Park cannot be built	45	23,9	65	34,6	+20 (+10,9)	68	28,5	107	44,8	+39 (+16,3)
State weakens	40	21,3	63	33,5	+23 (+12,2)	61	25,5	73	30,5	+22 (+5,0)
The state cannot ensure our security and protect us	36	19,1	27	14,4	-9 (-4,7)	30	12,6	34	14,2	+4 (+1,6)
Nothing will happen	17	9,0	14	7,4	-3 (-2,6)	31	13,0	9	3,8	-22 (-9,2)
We get richer	14	7,4	7	3,7	-7 (-3,7)	21	8,8	8	3,3	-13 (-5,5)
I don't know	36	19,1	12	6,4	-24 (-12,7)	28	11,7	8	3,3	-20 (-8,4)
Total	188	100	188	100		239	100	239	100	

Source: Author

Table 20 shows that female students chose the “I don’t know” answer at a higher rate in case of non-payment of taxes. Accordingly, female students’ awareness levels about what will happen if taxes are not paid are lower than male students. After the tax education, there was an increase in the level of tax awareness in both groups. This increase was proportionally greater among female students. According to the findings, the perception that schools, hospitals and parks cannot be built if taxes are not paid is at the highest level. The perception level in this question followed a positive course after the tax awareness education. The thought that nothing will happen if taxes are not paid is at a higher level among male students. In unstructured open-ended interviews: IF3, IF9, IF12 and IM1 and IM12, respectively; “a new school was opened next to our house, so they did it because we paid taxes”, ‘teacher, my relatives live in Germany and their streets are more beautiful because they pay their taxes in full’, ‘the economy is bad because people do not pay taxes because the state has no money left’, ‘teacher, there is a lot of theft in our neighborhood, if we pay taxes, the state will protect us more’, ‘the state will build a funfair for children if our fathers pay taxes’, etc. provide an understanding of the differences between male and female students in the table.

Table 21: Situations to be Faced if Tax is Paid According to Male and Female Students

What Happens if Tax is Paid	Female Student					Male Student				
	Before Training		After Training		BT-AT	Before Training		After Training		BT-AT
	Frequency	Percentage	Frequency	Percentage	Difference	Frequency	Percentage	Frequency	Percentage	Difference
More Schools, Hospitals, Parks are built	68	36,2	94	50,0	+26 (+13,8)	106	44,4	129	54,0	+23 (+9,6)
State becomes stronger	46	24,5	54	28,7	+8 (+4,2)	53	22,2	68	28,5	+15 (+6,3)
The state can more easily ensure our security and protect us	24	12,8	15	8,0	-9 (-4,8)	23	9,6	25	10,5	+2 (+0,9)
We become poorer	18	9,6	10	5,3	-8 (-4,3)	18	7,5	9	3,8	-9 (-3,8)
Nothing will happen	9	4,8	8	4,3	-1 (-0,5)	27	11,3	3	1,3	-24 (-10,0)
I don't know	23	12,2	7	3,7	-16 (-8,5)	12	5,0	5	2,1	-7 (-2,9)
Total	188	100	188	100		239	100	239	100	

Source: Author

As Table 21 shows, female students had lower tax awareness levels before tax education. The perception that more hospitals, schools and parks would be built if taxes were paid was higher among male students. The perception that the state would provide security was higher among female students. While the response of "I don't know" was higher among female students before tax awareness education, the percentage of improvement in this question after tax awareness education was more significant among female students. In the unstructured open-ended interviews, the responses of the students coded IM1, IM3, IM11, IF6, IF9 and IF12, respectively, "my teacher gives too little tax, we have too few parks", "now I understand why hospitals are overcrowded", "I think nothing will happen even if we do not pay taxes", "with taxes, the state buys weapons, airplanes and protects us", "if we pay taxes, our country will be strong like foreign countries", "I cannot say exactly what will happen if we pay taxes" provide an understanding of the differences between male and female students in the table.

Table 22: Intention of Male and Female Students to Pay Tax

Intention to Pay Tax	Female Student					Male Student				
	Before Training		After Training		BT-AT	Before Training		After Training		BT-AT
	Frequency	Percentage	Frequency	Percentage	Difference	Frequency	Percentage	Frequency	Percentage	Difference
I Want to Pay	55	29,3	131	69,7	+76 (+40,3)	59	24,7	175	73,2	+116 (+49,5)
I don't want to pay	55	29,3	14	7,4	-41 (+21,9)	93	38,9	20	8,4	-73 (-30,5)
I'll pay if everyone else pays	55	29,3	33	17,6	-22 (-11,7)	59	24,7	32	13,4	-27 (-11,3)
I don't know	23	12,2	10	5,3	-13 (-6,9)	28	11,7	12	5,0	-16 (-6,7)
Total	188	100	188	100		239	100	239	100	

Source: Author

According to Table 22, there is a significant increase in the level of awareness regarding the willingness to pay taxes in both groups after the tax awareness training. This rate is 49.5% for male students. In the unstructured open-ended interviews, IM1, IM7, IM8 and IM12 and IM2, IF6 and IF10 coded students gave the following responses respectively; ‘paying taxes would be beneficial for everyone’, ‘why shouldn't I pay taxes if I earn money’, ‘when I grow up, I will work for my father and pay taxes’, ‘when I grow up, I will work for my father and pay taxes’, ‘I will be a teacher and pay taxes’, ‘I will be a hairdresser and I would like to pay taxes’, ‘the moment I get a job, I would also like to pay taxes’ provide an understanding of the similarities and differences between male and female students.

Table 23: Adjectives Used by Male and Female Students for Those who Do Not Pay Taxes

Adjective	Female Student					Male Student				
	Before Training		After Training		BT-AT	Before Training		After Training		BT-AT
	Frequency	Percentage	Frequency	Percentage	Difference	Frequency	Percentage	Frequency	Percentage	Difference
Cunning	39	20,7	26	13,8	-13 (-6,9)	73	30,5	32	13,4	-41 (-17,1)
Intelligent	30	16,0	12	6,4	-18 (-9,6)	37	15,5	7	2,9	-30 (-12,6)
Honest	19	10,1	9	4,8	-10 (-5,3)	25	10,5	10	4,2	-15 (-6,3)
Thief	9	4,8	125	66,5	+116 (+61,7)	27	11,3	171	71,5	+144 (+60,2)

I don't know	91	48,4	16	8,5	-75 (-39,9)	77	32,2	19	7,9	-58 (-24,3)
Total	188	100	188	100		239	100	239	100	

Source: Author

Table 23 shows that the level of tax awareness of female students prior to tax education is lower than that of male students. The response "I don't know" is higher among female students. The highest response to this question in both groups before the tax awareness training was "I don't know". This rate increased by 39.9% for female students and 24.3% for male students after the tax awareness training. Students who selected "cunning" before tax awareness training chose "thief" afterward. After the tax awareness training, the perception that those who do not pay their taxes are thieves increased by 62.7% among female students and 60.2% among male students. This shows the importance of tax awareness training. In the unstructured open-ended interviews, students coded IM3, IM5, IM6 and IM10 and IF2, IF8 and IF11 gave the following statements respectively; "I think it is a thief who steals all of our money", 'teacher, I always pay my taxes, I do not eat haram money', 'if people do not pay taxes and do not realize it, then they are very cunning', 'if I earn a lot of money, maybe then I will pay my taxes in full, if I earn less, I may not pay them either', 'you stole the state's money and you stole my money', provide an understanding of the similarities and differences between male and female students in the table. These responses appear as positive outcomes of tax awareness education.

Table 24: Female and Male Students' Willingness to Receive Tax Education

Willingness to Receive Training	Female Student					Male Student				
	Before Training		After Training		BT-AT	Before Training		After Training		BT-AT
	Frequency	Percentage	Frequency	Percentage	Difference	Frequency	Percentage	Frequency	Percentage	Difference
Yes	98	52,1	148	78,7	+50 (+26,6)	111	46,4	199	83,3	+88 (+36,9)
No	90	47,9	40	21,3	-50 (-26,6)	128	53,6	40	16,7	-88 (-36,9)
Total	188	100	188	100		239	100	239	100	

Source: Author

Table 24 shows that female students are more willing to receive education than male students. It can be said that this situation is due to the fact that female students are more interested in the subject or have less knowledge about the subject than male students. However, after the tax awareness training, there was a high increase in the option of "I want to receive tax awareness training" in both groups. This rate; It is 36.9% for male students and 26.6% for female students. It is believed that explaining the tax

issue to students in a fun way through games has achieved a result in this direction. In the unstructured open-ended interviews, students coded IF1, IF6, IF9 and IF11 and IM2, IM5, IM10 and IM12 respectively stated "I learned what taxes are for in a fun way, I wish you would come every year", "We were bored with other courses, this course was very fun". "We are very lucky, only our class was given tax training, I wish it was given to our other friends as well", "I think this course is a bit boring and we don't pay taxes anyway as we are children so we can learn it when we grow up", "Will you come next year too?" Answers such as "Come again, teacher", "I will make money from Keloglan's piggy bank at home, I will save it there and support my family", "The best part of this course is that there is no exam, so I wish you would always come", "Taxes are so boring, teacher, I don't want to grow up" are shown in the table from male and female students. It provides an understanding of the similarities and differences between them. These answers appear as positive outcomes of tax awareness training.

5. Conclusion

Studies in the literature have revealed that tax education has positive effects on children's tax awareness and that the education of future taxpayers should start at an early age. The main findings of this study are consistent with the existing literature. According to the findings of the survey, tax awareness is an area in need of improvement within the sample. Accordingly, students' tax awareness is at a low level before education. After the first survey conducted in the experimental study, students were informed about taxes and given training on the importance of tax revenues for the sustainability of public services in the country. According to the findings, tax education increases the tax awareness of the alpha generation. In this context, tax administrations and organizations such as the Ministry of National Education should carry out activities aimed at increasing tax awareness. For example, tax education in primary and secondary schools in Turkey can be added as an independent course in the Human, Society and Science category of the curriculum. After it is added to the course curriculum, the development of tax awareness can be monitored with surveys. In addition, course materials enriched with games and visual content can be given to students. According to another finding of the study, tax awareness is lower among female students than male students. Although there is also an increase in the level of awareness of male students, this increase is higher in female students. It is concluded that as a result of tax awareness education, children acquire the awareness that public services are provided through taxes and that paying taxes is a civic duty. In addition, there is a remarkable improvement in children's awareness of those who do not pay taxes. While children largely defined those who did not pay taxes as cunning before the tax awareness training, it was observed that they mostly defined those who did not pay taxes as thieves after the tax awareness training. The gender factor causes differences in the level of tax

awareness, and the level of positive outcomes of tax awareness education also varies according to gender.

The alpha generation was born into an era of technology and the internet, and the world has transformed into a digital one. Thus, creating tax games that can be downloaded for social media, mobile devices, and PCs is the most crucial way to raise tax knowledge. Game platforms to be developed for tax awareness need to be updated regularly and improved with feedback. In this context, developing tax awareness in children requires continuous policy and action. It is thought that unsustainable tax awareness policies are only temporary and cannot achieve the expected cultural/social transformation in the long term. The focal point in the development of tax awareness of the alpha generation, which can establish the closest connection with technology and is familiar with the digital world, is quite clear. Integrating tax administration with technology, such as through educational games and digital resources, can significantly enhance tax awareness among Generation Alpha. In future studies to develop tax awareness in children, other factors affecting tax awareness in children can be addressed. Studies on tax awareness can be increased specifically for teachers and families, who have an impact on children's development processes. In this context, tax awareness training can be given to families and teachers. In addition, considering the limitation of the study sample in representing the universe, the sample can be expanded and carried out in more provinces and with more students.

Ethics Committee Approval:

Name of the Board: Dicle University Social and Human Sciences Ethics Board

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Author Contributions:

Osman Geyik ^{ID} - Idea, Design, Data Collection, Interpretation of Data, Drafting, Critical Review, Final Approval and Responsibility, Literature Review, Supervising. Overall Contribution - 34%.

Gamze Yıldız Şeren ^{ID} - Design, Interpretation of Data, Critical Review, Final Approval and Responsibility, Literature Review, Supervising. Overall Contribution - 33%.

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