ISSN: 2252-8822, DOI: 10.11591/ijere.v11i4.22241

Early tax education: Could it change the future compliance behavior?

Albert Albert, Rien Agustin Fadjarenie

Department of Accounting, Universitas Mercu Buana, Jakarta, Indonesia

Article Info

Article history:

Received Jun 3, 2021 Revised Jul 12, 2022 Accepted Aug 13, 2022

Keywords:

Early tax education Future taxpayer Junior and senior high school Self-assessment system Tax compliance behavior

ABSTRACT

Many developing countries face the challenges of low tax compliance behavior due to the self-assessment system. Therefore, the purpose of this study was to obtain empirical evidence about the implication of early tax education toward the changes in future taxpayers' compliance behavior. Previous research found that early tax education can develop the compliance paradigm in human behavior. This study employed a quantitative research method with a case study approach. Data was gathered through a survey of 719 students of junior and senior high school in Jakarta, Indonesia as respondents, and divided into two groups: those who receive tax learning at school and those who did not. The results revealed that early tax education positively affects taxpayers' compliance behavior, especially for those who had received tax learning. This study reports preliminary findings in tax education and fills the gap of research in this area. The research contributes to learning and behavior studies and sheds light on implementing early tax education to resolve non-compliance tax behavior.

This is an open access article under the <u>CC BY-SA</u> license.



1912

Corresponding Author:

Albert

Department of Accounting, Universitas Mercu Buana South Meruya, Kembangan, Jakarta 11650, Indonesia

Email: albert.kamadjaya@gmail.com

1. INTRODUCTION

Taxes play a central role in promoting sustainable development. Tax revenue provides funds for a country's economic growth, decreases poverty, delivers excellent public services, and builds physical and social infrastructures. However, many countries face challenges in increasing their tax revenue from domestic sources. These challenges include a small tax base, a large informal sector, weak governance, and administrative capacity, low per capita income, domestic savings [1], low tax morale, and tax compliance of taxpayers, especially in developing countries [2].

Since the implementation of the self-assessment system 37 years ago, Indonesia's revenue from taxes has never reached the target set in the *Anggaran Pendapatan Belanja Negara* (State Budget) or abbreviated as APBN. In the case of the self-assessment system is a voluntary basis, it relies on the compliance behavior of the taxpayer itself [3] and has a risk to non-comply with tax obligations [4]. In the last five years, state tax revenue in Indonesia has ranged from 81% to 92%, the highest in 2018 is 92.35%. Meanwhile, in 2018 Indonesia's tax ratio was only 11.9 %, which is the lowest in the ASEAN region and lower than the organization for the Economic Co-operation and Development (OECD) member countries, which have an average of 34.3% as shown in Figure 1 [5].

In recent years, total revenues have been about 5% of GDP, below the average of other ASEAN countries and 10% (ten percent) lower than the average of emerging market economies outside the region [6]. The very small amount of tax revenue and tax ratio is due to the low level of public compliance with

voluntary tax payments. Out of the 265 million Indonesians, only 38.6 million have Taxpayer Registration Number, and only 11.01 million are compliant to report their annual tax returns [7]. The noncompliance of the citizen in fulfilling their tax obligations is influenced by several factors, such as the public assumption that taxes are burdens (costs) taken forcibly from income, too many tax regulations that challenge taxpayers' understanding, unstable macroeconomic conditions, and nonaggressive tax extensification. These reasons cause reluctance of people to pay and report their taxes; also, there is a tendency for tax avoidance.

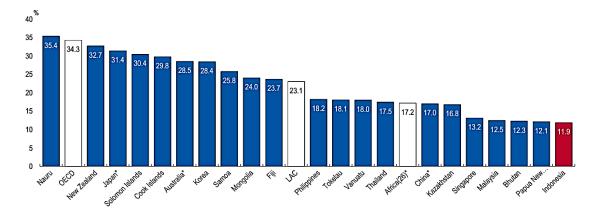


Figure 1. Tax-to-GDP ratio compared to other Asian and Pacific economies and regional averages in 2018

Conversely, the lack of tax education is also one of the many reasons why people are reluctant in fulfilling their tax obligations. Tax education programs, which focused on encouraging taxpayers about the socioeconomic implications of tax avoidance opportunities, transparency, and accountability in using taxes, have a significant influence on the voluntary compliance of taxpayers [8]. The same research was explained that taxpayers will certainly respond well to various information from tax education, which will then prompt more people to learn about taxes [9].

Changing the ways of thinking and the perceptions of prospective taxpayers through tax education programs given as early as possible (junior and senior high school or vocational school) helps increase voluntary compliance behavior in paying and reporting taxes. According to the Ministry of finance of the Republic of Indonesia in 2018, an increase in tax awareness needs to be done from an early age and should be inculcated in the educational environment from elementary to tertiary level. Tax education must be started early on, through the understanding of tax knowledge on high school students, to be able to increase tax awareness and tax attitudes in the future [10]–[13], this manner also could be applied to school children as a potential taxpayer who has an impact on educated their ability to pay taxes in the future [12], [14].

The purpose of this study is to obtain empirical evidence about the implications of early tax education on changes in taxpayer compliance behavior in the future. This study focuses on how to build tax compliance behavior as early as on the students, especially in junior and senior high school, with the exact formulation of tax education and an understanding of tax knowledge, which has an impact on the tendency of taxpayers' behavior changes in future. Some of the underlying theories used in this research as the basis for the formation of hypotheses about the correlation between early tax education, tax knowledge, and tax compliance behavior are the planned behavior theory and behavioral education theory.

The Planned Behavior Theory is one of the psychological theories that renewed the reason action theory [15]. This theory explains the correlation of individual attitudes toward behavior, which is influenced by intentions, beliefs, and subjective norms, and affects the control of behavior in the future. Subjective norms are the individual's perceptions of behavior that is influenced by other people in their lives; this also regards behaviors that can be done or not. Behavior is another factor that supports the creation of compliance character and based on the planned behavior theory, behavior can be formed as long as there are intentions and beliefs, also support of subjective norms as its limits. Likewise, with tax compliance, the obedient and voluntary behavior of taxpayers can be built as long as there are intentions, beliefs, rules, and individual norms. This can ultimately increase state revenue [16].

Behavioral education theory states that behavior change is the result of experiences gained from the learning process. This theory prioritizes measurement because the measurement is an important thing to see whether behavior changes occur or not. This theory also places someone who learns as a passive individual. Responses and behavior are the results of training and learning, which then become habits [17].

The factor that is considered important by the flow of behaviorism is the reinforcement factor. The rise of individual behavior will be stronger if the individual is given a stimulus and will disappear if the individual is subject to sanctions. Some of the principles in behaviorism learning theory include: reinforcement and punishment, primary and secondary reinforcement, schedules of reinforcement, contingency management, stimulus control in operant learning, and the elimination of responses [17].

This theory looks at how a person's behavior is controlled by environmental changes, and learning is a permanent environment that shapes individual behavior based on training and experience. Therefore, learning theory places more emphasis on individual behavior as reactive creatures that will respond to environmental changes and learning is a relatively permanent change that shapes behavior as a result of strengthened experience or practice. Behaviorism is that the learning process emphasizes the process of providing stimulus and response routines carried out by students. The essence of learning in the view of behaviorism lies in the stimulus-response.

Tax education can be defined as an informal or formal program instituted by the tax authority or independent interested agencies to facilitate taxpayers in comprehending the tax system and the application of the tax laws in completing tax returns correctly and also to cultivate awareness of their responsibilities in respect of the tax system [18]. Tax education must be taught, not just learned or practiced. Therefore, tax education should not be ignored. High state institutions need to offer a unique perspective on tax curriculum to all students in the school. Tax education also allows someone to understand well the applicable taxation system. With an adequate understanding of taxation laws, people will automatically respect the existing taxation system and will eventually become more obedient in paying taxes than avoiding them. This is also supported by the behavioral education theory, where it is said that behavior change is the result of experiences gained from the learning process. Responses and behavior are the results of training and learning, which then become habits. This theory looks at how a person's behavior is controlled by environmental changes, and learning is a permanent environment that shapes individual behavior based on training and experience. A person is considered to have learned something if he can show a behavior change.

Tax education focuses on providing a curriculum related to taxation for students. The aim is to produce good citizens who can understand various tax knowledge and carry out tax rights and obligations according to statutory provisions. Tax education is expected to build moral behaviors and attitudes of people or groups of people, which then can lead to the improvement of tax obligation awareness. Research proved that tax education can influence the attitudes and mindsets of students, who are the future taxpayers, toward tax compliance [19]. Another research has suggested introducing formal early tax education in schools, which will help students to be able to influence attitudes of tax compliance behavior [13]. Early education of a child is provided in the early days when he/she can begin to receive material prepared in accordance with the power of thought and reasoning. Its nature is relatively dependent on the material and the purpose of education. Tax education from an early age can be applied in surrounding environments such as homes and schools. Balanced with formal education, this approach is considered capable of providing a stimulus to children to be more aware of carrying out their tax obligations. The first hypothesis is to explore the possibility of early tax education on junior and senior high school students having a significant impact on their behavioral changes in tax compliance. The Hypothesis1 (H1) stated that early tax education has significant and positive implications on the behavioral change in the future individual taxpayer's compliance.

Knowledge is everything that is known to be obtained from the touch of the sensory panda to a particular object. Knowledge can basically be obtained through teaching and training efforts, as well as through education in both formal and non-formal education [20]. Tax knowledge means as the level of awareness or sensitivity of taxpayers to the tax legislation or law [21], [22], it also refers to the processes by which taxpayers become aware of various information related to taxation [22]. Knowledge and understanding of tax regulations is a process in which taxpayers know about taxation, and apply that knowledge to pay taxes [23]. Meanings tax knowledge will improve the awareness of the taxpayer's social responsibility [13] and by having relevant tax knowledge, taxpayers will meet their obligation on when it due date, and hesitate to go for tax avoidance [24], [25]. By knowing tax knowledge, a person will understand the general provisions and tax procedures, which include how to convey tax annual report, when and how to pay tax, place of payment, the deadline for payment or reporting, and also the tax sanction. The taxpayer's interpretation of tax regulations is the way to taxpayer's understand current tax regulations.

Knowledge of tax regulations through formal and non-formal education will have a positive impact on the awareness of taxpayers' compliance [9]. Taxpayers who do not understand tax laws, appear to be non-compliant [26]. Previous results revealed that tax knowledge was seen as a factor that contributes to the non-compliance behavior among taxpayers [27], and individuals who knew the aspects of planning and tax law have better awareness and ethics to comply with paying taxes [13]. Other researchers stated that it is important to increase tax knowledge for all levels of society. Thus, society needs to be equipped with tax education so that everyone has sufficient knowledge of competent taxpayers [28], [29]. The more taxpayers

know and understand tax regulations, the more they will understand the sanctions they receive if they neglect their obligations and the benefits of paying taxes. The second hypothesis is to explore the possibility of tax knowledge on high school students has a significant impact on their behavioral changes in tax compliance. The Hypothesis 2 (H2) stated that understanding of tax knowledge has significant and positive implications on the behavioral change in the future individual taxpayer's compliance.

2. RESEARCH METHOD

Research design is the various procedures needed in conducting research [29]. This was quantitative research with a case study approach. It used primary data and gathered through a survey using questionnaires and interviews for data collection.

2.1. Sampling

The research population comprised 719 respondents from 50 junior high schools and 50 senior high/vocational schools (grades 9 and 12) with an A grade accreditation in the area of Jakarta Province-Indonesia. The respondents were purposively taken using the Taro Yamane formula [30] and were then divided into two groups: those who received tax learning and/or tax socialization (n=377) and those who did not (n=342). The detail is displayed in Table 1.

Table 1. Summary of sampling procedures

No.	Criteria	Total
1	Sampling time	1st week of November until
		3 rd week of December 2019
2	Number of middle schools selected for research	50
3	Number of high schools / vocational schools selected for research	50
4	Number of students used as research samples (middle and high schools)	768
5	Number of samples that received tax learning/ socialization (middle and high schools)	390
6	Number of samples not receiving tax learning/socialization (middle and high schools)	378
7	Total received back respondent answers	751
8	Total invalid respondent's answers	32
9	Valid Respondents' answers from junior and senior high school students who receive tax learning	377
10	Valid Respondents' answers from junior and senior high school students who do not receive tax learning	342
	Total valid respondents' answers	719

2.2. Research instrument

The questionnaire consisted of 20 positive statements, used as a data collection tool, in accordance with the established indicators. The researchers also interviewed the respondents to strengthen the answers obtained from the questionnaire. The respondents were asked to answer the questionnaire by choosing answers that have been prepared using the Likert scale (strongly disagree=1 to strongly agree=5). To provide a better understanding, the independent variable of early tax education was divided into three dimensions: i) Personality dimension (building characters, cultivating awareness, building habits); ii) Attitude dimension (building motivation, having initiative); and iii) Teaching dimension (sense of responsibility, understanding of tax education, transfer of knowledge).

The independent variable of understanding of tax knowledge consists of two dimensions: the understanding dimension (understanding, being able to analyze, curiosity, logic) and the tax knowledge dimension (exploring tax science, knowing taxation rules). The dependent variable of changes on taxpayers' compliance behavior consists of two dimensions: behavioral change dimension (desire to change, sustainable, build permanent morals) and tax compliance dimension. The analysis method was divided into three parts: demographic analysis, descriptive analysis, and hypothesis analysis. Multiple linear regression testing tools were used, which was assisted with Statistical Product and Service Solution (SPSS) version 24.

3. RESULTS AND DISCUSSION

3.1. Demographic analysis

The demographic analysis compared the number of respondents from the group who received tax learning and the group that did not receive tax learning. Comparison number of respondents from the group who received tax learning and the group who did not were 52.3% and 48.8% for junior high school level and 47.7% and 51.2%, for senior high/vocational school level as shown in Table 2. Refers to gender in a tax

learner group (junior and senior high school), about 51.12% (on average) of respondents were male and 48.88% were female. On the other side, for the group who did not receive tax learning, about 52.22% were male and 47.78% were female (on average) as displayed in Table 3. Related to the age of the respondents, junior high school students having age between 15 and 16 years old, and 18 to 19 years old for senior/vocational high school levels.

Table 2. Characteristics of respondent education levels

Characteristics of respondent education levels	Received tax le	earning	Did not receive tax learning		
Characteristics of respondent education levels	Total student	%	Total student	%	
Private and public junior high schools	197	52.3	167	48.8	
Private and public senior high schools	180	47.7	175	51.2	
Total	377	100	342	100	

Table 3. Characteristics of respondents' genders

Characteristics of Respondents' genders	Received tax learning (%)			Did not receive tax learning (%)		
Characteristics of Respondents genders	Male	Female	Total	Male	Female	Total
Public middle schools	47.66	52.34	107	52.25	47.75	96
Private middle schools	54.44	45.56	90	53.95	46.05	71
Public high schools	52.94	47.06	96	46.23	53.77	99
Private high schools	49.45	50.55	84	56.47	43.53	76
Average total	51.12	48.88	377	52.22	47.78	342

3.2. Descriptive analysis

Descriptive analysis showed that the average answers produced by those who received tax learning gained maximum results (in score and percentage) on the following variables: 4.43 or 88.6% for variable early tax education; 4.36 or 87.1% for the understanding of tax knowledge variable; and about 4.36 or 87.1% for the tendency of changes in tax compliance behavior variable. Conversely, in a group those who did not receive tax education showed less than optimal results (in score and percentage): variable early tax education got 3.54 or 70.8%; variable of understanding of tax knowledge got 3.35 or 66.9%; and the tendency of change in tax compliance behavior variable, only got 3.69 or 73.8%. The details are presented in Table 4.

Table 4. Result of descriptive analysis

	1	autc 4. Kcs	uit of uc	escriptive and	11 y 51 5			
		Students who received tax learning			Students wh	Students who did not receive tax learning		
Variable	Dimension	Average answer	%	Remark	Average answer	%	Remark	
E-d-4	Personality	4.462	89.2	Maximum	3.662	73.2	Less maximum	
Early tax education	Attitude	4.401	88.0	Maximum	3.352	67.0	Moderate	
education	Teaching	4.430	88.6	Maximum	3.622	72.4	Less maximum	
Understanding of	Understanding	4.387	87.7	Maximum	3.234	64.7	Moderate	
tax knowledge	tax knowledge	4.328	86.6	Maximum	3.459	69.2	Less maximum	
Changes on taxpayer's	Behavior change	4.378	87.6	Maximum	3.846	76.9	Less maximum	
compliance behavior	Compliance	4.335	86.7	Maximum	3.536	70.7	Less maximum	

The instrument quality test in the form of a validity test of 20 statements in the questionnaire was carried out by finding the correlation coefficient value. The results show that the correlation coefficient of all indicators and statements in the questionnaire is greater than the r table value of 0.1381 at an alpha significance level of 0.05 as presented in Table 5. While the results of the instrument quality test in the form of a reliability test showed that the Cronbach's alpha value of the early tax education variable was 0.639, understanding of tax knowledge was 0.641, and the tendency of change in tax compliance behavior was 0.641. All variables have a Cronbach's alpha value above 0.60. Therefore, the questionnaire is reliable as a research measurement tool as shown in Table 6.

The classical assumption test was performed by using a probability plot diagram and Kolmogorov-Smirnov statistical test for both groups of respondents. Results show that the probability plot of both groups of respondents spread around the diagonal line, which means the residuals are normally distributed. The same result was shown by the Kolmogorov-Smirnov normality test, which has probability values above the significant alpha of 0.05 as revealed in Table 7 and Figure 2.

Table 5. Validity test results in two groups of respondents

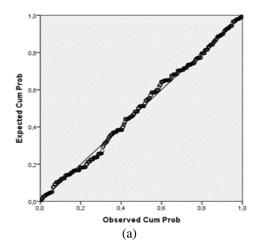
		Received tax	x learning	Not received	tax learning	
Variable	Indicator	Correlation coefficient	r table	Correlation coefficient	r table	Remark
Early tax education (X1)	Form character	0.519	0.1381	0.603	0.1381	Valid
	Cultivate awareness	0.520	0.1381	0.569	0.1381	Valid
	Build habits	0.581	0.1381	0.603	0.1381	Valid
	Build motivation	0.553	0.1381	0.618	0.1381	Valid
	Has initiative	0.512	0.1381	0.468	0.1381	Valid
	Form responsibility	0.509	0.1381	0.522	0.1381	Valid
	Understand tax knowledge	0.558	0.1381	0.424	0.1381	Valid
	Knowledge transfer	0.512	0.1381	0.428	0.1381	Valid
Understanding of tax	Understand	0.521	0.1381	0.637	0.1381	Valid
knowledge (X2)	Able to analyze	0.653	0.1381	0.670	0.1381	Valid
	Curiosity	0.624	0.1381	0.636	0.1381	Valid
	Logical	0.625	0.1381	0.644	0.1381	Valid
	Explore tax science	0.584	0.1381	0.568	0.1381	Valid
	Know tax rules	0.580	0.1381	0.518	0.1381	Valid
The tendency of change	Desire to change	0.470	0.1381	0.540	0.1381	Valid
in tax compliance	Continuously	0.634	0.1381	0.628	0.1381	Valid
behavior (Y)	Form permanent morale	0.595	0.1381	0.645	0.1381	Valid
	Voluntarily	0.618	0.1381	0.548	0.1381	Valid
	Discipline	0.681	0.1381	0.574	0.1381	Valid
	Done correctly	0.581	0.1381	0.560	0.1381	Valid

Table 6. Reliability test results of two groups of respondents

	Received ta	x learning	Not receive tax learning		_	
Variable	Cronbach	Sig	Cronbach	Cronbach		
	Alpha	Sig	Alpha	Sig.		
Early tax education (X1)	0.639	0.000	0.635	0.000	Reliable	
Understanding of tax knowledge (X2)	0.641	0.000	0.668	0.000	Reliable	
The tendency of change in tax compliance behavior (Y)	0.641	0.000	0.612	0.000	Reliable	

Table 7. Normality test Kolmogorov-Smirnov

Plot	Number of samples (N)	Kolmogorov-Smirnov Z	Probability
Respondents who received tax learning	377	0.932	0.351
Respondents who did not receive tax learning	342	1.202	0.111



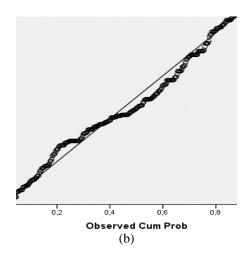
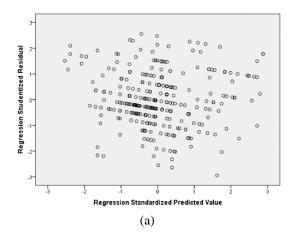


Figure 2. Probability plot normality test diagram shows respondents who (a) received tax learning and (b) did not receive tax learning

Scatter plot diagram and the Spearman correlation test were used for the heteroscedasticity test for both groups of respondents. The scatter plot diagram test shows that the residual plot of the two groups of respondents spread randomly and did not form a certain pattern (Figure 3). The Spearman correlation test also proved that both groups of respondents have probability values above the significant alpha of 0.05 or 5%; therefore, the assumption of heteroscedasticity is fulfilled as shown in Table 8 and Figure 3.

Table 8. Heteroscedasticity assumption test with spearman correlation

Independent variable	Probability of respondent who received tax learning	Probability of respondent who did not receive tax learning
Early tax education (X1)	0.359	0.295
Understanding of tax knowledge (X2)	0.595	0.649



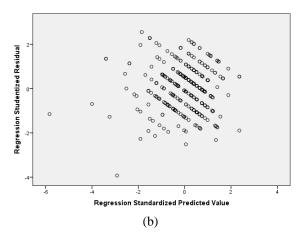


Figure 3. Scatter plot heteroscedasticity test diagram for respondents who (a) received tax learning and (b) did not receive tax learning.

A multicollinearity test is performed by finding the value of the variance inflation factor (VIF) of each independent variable in both groups of respondents. Results show that the two groups of respondents revealed VIF scores below the cut-off value of 10. It was proved that there were no multicollinearity symptoms in both models, and the assumption of multicollinearity was fulfilled as shown in Table 9.

Table 9. Multicollinearity assumption test

Independent variable	VIP of respondent who received tax learning	VIP of respondent who did not receive tax learning
Early tax education (X1)	1.114	1.010
Understanding of tax knowledge (X2)	1.114	1.010

Hypothesis tests consisted of coefficient determination test (Goodness of fit test), partial significance test, and also using two independent sample T-test (comparison test) to strengthen the hypothesis test results. The coefficient determination test uses a "goodness-of-fit" compatibility assessment to two respondent models shown an R² value of 0.364 and an adjusted R² of 0.361 for respondents who received tax learning, and R² of 0.054 and an adjusted R² of 0.048 for respondents who did not receive tax learning. These results indicate that the influence of early tax education and understanding of tax knowledge on respondents who received tax learning will affect 36.1% on the tendency of changes in tax compliance behavior, and there is around 63.9% affected by other variables. Meanwhile, for those respondents who did not receive tax learning, the effect of variable early tax education and understanding of tax knowledge was only 4.8%. as detailed in Table 10.

Table 10. Coefficient determination test (Goodness of fit)

Model Respondent	\mathbb{R}^2	Adjusted R ²
Respondents who received tax learning	0.364	0.361
Respondents who did not receive tax learning	0.054	0.048

A partial significance test (t-test) is done by determining the probability value and compared with the level of significance of 0.05 (5%). The result of the significance test revealed that early tax education variable (X1) has a p-value of 0.002, and p-value 0.001 for variable of understanding of tax knowledge (X2). This result shows that both variables have probability values below the significance level of 0.05 (5%). The t-statistic value of variable X1 is 7.370 and 9.626 for variable X2; that greater than the value of t-table 1.967.

This means that both early tax education (X1) and the understanding of tax knowledge (X2) have a strong implication toward the changes of taxpayers' compliance behavior as dependent variable (Y), with coefficient values 0.399 for the X1 and 0.424 for the X2 and a constant value of 0.738. This result is shown in Table 11. The multiple regression equation based on the result of partial significance test is as (1):

$$Y = 0.738 + 0.399X1 + 0.424X2 \tag{1}$$

Table 11. T-test result on respondents who received tax learning

Variable	Coef	t-statistics	t-table	Prob (p-value)
Constanta	0.738	2.889		0.004
Early tax education (X1)	0.399	7.370	1.967	0.002
Understanding of tax knowledge (X2)	0.424	9.626	1.967	0.001

Refers to the results, it can be concluded that there are significant and positive implications from early tax education on the tendency of changes in tax compliance behavior and H1 is proved and accepted. Results also show that there are significant and positive implications of understanding tax knowledge on the tendency of changes in tax compliance behavior and H2 is proved and accepted.

An independent two-sample t-test was placed to strengthen the evidence of differences in the average behavioral change of the groups of respondents from the variable early tax education and the variable understanding of tax knowledge. The test is done by calculating and comparing the t-statistic value with the t-table value. The test results on the early tax education variable were proven that in the group of respondents who received tax learning tended better behavioral change in tax compliance rather than the group of respondents who did not receive tax learning. This was shown by the t-statistic value on "Equal variances not assumed" 27.482 higher than the t-table value of 1.964 with a significance value of 0.000 that is smaller than the significance alpha level of 0.05 as presented in Table 12. Likewise, the test results of the variable of understanding of tax knowledge were proven that the group of respondents who received tax learning had a better tendency of change in tax compliance behavior, rather than the group of respondents who did not get tax learning. This is indicated by the t-statistic value on "Equal variances not assumed" 30.961 higher than the t-table value of 1.964, with a significance value of 0.000 that is smaller than the significance alpha level value of 0.05 in Table 13.

Table 12. Two independent sample t-test for early tax education variable

Early tax education			Change in tax compliance behavior			
			Equal variances assumed	Equal variances not assumed		
Levene's test for	F		122.341			
equality of variances	Sig.		0.000			
t-test for equality of	T		28.223	27.482		
means	df		717	514.176		
	Sig. (2 tailed)		0.000	0.000		
	Mean difference		0.860	0.860		
	Std. Error difference		0.305	0.313		
	95% confidence interval	Lower	0.800	0.798		
	of the difference	Upper	0.920	0.922		

Table 13. Two independent sample t-test for understanding tax knowledge variable

Understanding of tax knowledge			Change in tax compliance behavior	
			Equal variances	Equal variances
			assumed	not assumed
Levene's test for equality of variances	F		57.498	
	Sig.		0.000	
t-test for equality of means	T		31.610	30.961
	df		717	567.077
	Sig. (2 tailed)		0.000	0.000
	Mean difference		1.058	1.058
	Std. Error difference		0.335	0.342
	95% confidence interval	Lower	0.993	0.991
	of the difference	Upper	1.124	1.126

Based on the hypothesis test, early tax education has significant and positive implications on the changes of future taxpayers' compliance behavior. Education is one of the factors that shape a person's character and build positive ways of thinking about a condition that occurs or will occur. Education is also a factor that influences one's scientific level, and it is expected that the higher of their education, the degree of knowledge become higher, and at the end will build a mindset and attitude based on what they have learned, which can then be applied in daily life [31]. Morgan and Castelyn [32] explained that early tax education as something important for future taxpayers and useful to meet their tax obligation; therefore, it is important to teach the basic concept of taxation at an early age, as early as in secondary schools, of which students can not only receive information as to why they must pay taxes but also emphasize it as part of norms and beliefs, and this compliance behavior must be implanted in their minds. Another thing is that early tax education, starting from the secondary school level, is expected to have a positive mindset and attitude effect on the importance of taxation obligations. Therefore, someone with tax education will voluntarily comply with all tax rights and obligations when the person concerned becomes a taxpayer.

The behavioral education theory stated that behavior change is the result of experiences gained from the learning process. This theory looks at how a person's behavior is controlled by environmental changes, and learning is a permanent environment that shapes individual behavior based on training and experience [17]. In this case, the formation of tax compliance behavior is triggered by the provision of tax education material since a person is still sitting in junior and senior high school. The provision of tax curriculum at schools is part of the education system and character building, which must be carried out continuously, so that it will become a habit, which in turn builds awareness that a person must pay taxes voluntarily and according to ability. Early tax education is also an educational concept that must be given in the early days of a child to be able to receive material prepared in accordance with the power of thought and reasoning power, and its nature is relatively high dependent on the material and the purpose of the education.

Koster [14] stated that school children are future taxpayers, which affects educating the ability to pay taxes in the future. Some suggest introducing formal tax education very early, such as in schools, because tax education significantly influences the attitude of tax compliance behavior [13], [33]. Ugwu [34] concluded that tax education has a close relationship with the level of tax compliance. The goal is to change obedience behavior among high school students, and the main target is tax compliance in the future. The results of the researchers are in line with the presentation from the Ministry of Finance of the Republic of Indonesia, Mulyani [11] argued that taxation education must begin early and those tax understanding and knowledge, were expected to increase awareness to pay taxes in the future.

The hypothesis test also proves that there is a significant and positive implication of understanding of tax knowledge on changes in future taxpayers' compliance behavior. Indonesian taxation, which adopts the self-assessment system, requires each taxpayer to determine, calculate, pay, and report their tax obligations in a correct and timely manner. This condition can only be achieved if the taxpayer has sufficient knowledge about tax. Tax knowledge is also an important element in the voluntary tax compliance system, especially in determining tax obligations accurately. Without tax knowledge, the possibility of noncompliance of taxpayers to tax law becomes higher [35]. Taxation knowledge contains all material regarding various tax regulations, both in the form of laws, government regulations, and decisions of the finance minister, to the circular of the director-general of taxes, including therein tax sanctions. An understanding of tax knowledge can be given when the prospective taxpayer is still a student in secondary school, through continuous learning and practice mechanisms [33].

Tax knowledge is not just about having a deep understanding of the aspects of taxation, such as taxation laws, various tax regulations, and types of taxes that must be applied and paid; it also includes the procedures for filing tax reports and understanding the reasons why someone must pay taxes and what rights will be accepted and enjoyed after all tax obligations are fulfilled. If someone consciously understands the reason why they must pay taxes, it will automatically form tax compliance behavior voluntarily, as desired. This result of the study was justifying the Planned Behavior Theory, of which behavior can be formed with the intention and belief in what it does according to need. Another theory that supports this is Tax Morale, which is defined as an "intrinsic motivation" to pay tax rather than a legal obligation, which means it is a moral obligation to pay tax and to contribute to the general welfare of society. It is said that a high level of tax morale will result in relatively high tax compliance [36].

Olladipupo and Obazee [37] concluded that tax knowledge has a significant positive impact on tax compliance. Another researcher, also concluded that the taxpayer's tax compliance behavior is significantly influenced by the taxpayer's tax knowledge [21], [38], [39]. Research related to tax knowledge, also carried out by Abay [40], showed that tax knowledge has a significant impact on tax compliance, although the level of tax knowledge varies greatly among respondents.

4. CONCLUSION

Refers to phenomena, it was difficult to change the mature taxpayer's behavior to obey their tax obligation. One of the possibilities is to apply tax penalties to increase their tax compliance. On the other hand, it can be concluded that by providing tax education and tax knowledge from an early age to junior and senior high school students as future taxpayers, compliance character will be formed, and they can be determined to fulfill their tax obligations. The faster and more sustainable an individual receives tax education, the stronger of changes in tax compliance behavior, and the higher an individual's tax knowledge competency, it will raise the better tax obligation compliance.

Based on the conclusion, there are some suggestions needed to be submitted by researchers. First, the competent authorities like The Ministry of Education and Culture, the Ministry of Religion, and the Ministry of Finance should immediately revise the curriculum and force tax education and tax knowledge as basic learning at all schools in Indonesia. Tax training has to be provided continuously to teachers who will teach tax knowledge. Second, the Ministry of Education and Culture together with the Indonesian Tax Consultants Association should compile taxation material books that can be used as textbooks for junior and senior high school students. Last but not least, it is recommended to create educational curriculums that will construct "critical thinking," such as the provision of assignment material in the form of case studies to build a smart and critical future generation.

ACKNOWLEDGEMENTS

The authors would like to thank the Department of Accounting, Universitas Mercu Buana, Jakarta, Indonesia for supporting this research.

REFERENCES

- [1] C. Daude, H. Gutiérrez, and Á. Melguizo, "What drives tax morale?" OECD Development Centre Working Papers, No. 315, OECD Publishing, Paris, 2012, doi: 10.1787/5k8zk8m61kzq-en.
- [2] J. Ma, "Taxpayers' attitudes toward tax compliance in developed and developing countries: a critical review of the literature," Auckland University of Technology, 2017.
- [3] M. R. Palil, "Factors affecting tax compliance behaviour in self assessment system," *African Journal of Business Management*, vol. 5, no. 33 pp. 118–129, 2011, doi: 10.5897/AJBM11.1742.
- [4] N. Wadesango, A. Mutena, C. Mhaka, and V. O. Wadesango, "Tax compliance of SMEs through self-assessment system: Issues and challenges," *Academy of Accounting and Financial Studies Journal*, vol. 22, no. 3, pp. 1–15, 2018.
- [5] Organisation for Economic Co-operation and Development (OECD), Revenue statistics in Asian and pacific economics 1990-2018. Organisation for Economic Co-operation and Development, 2020.
- [6] International Monetary Fund (IMF), "Operationalizing a medium-term revenue strategy in Indonesia," IMF Country Report no. 19/251, 2017, [Online]. Available: https://www.imf.org/~/media/Files/Publications/CR/2019/1IDNEA2019002.ashx.
- [7] Ministry of Finance of the Republic of Indonesia, "The level of tax compliance is still low," (in Indonesian), 2018. [Online]. Available: https://www.kemenkeu.go.id/ (accessed: Oct. 12, 2018).
- [8] J.K. Olowookere, H.T. Fasina, "Taxpayers' education: a key strategy in achieving voluntary compliance in Lagos State, Nigeria," European Journal of Business and Management, vol. 5, no. 10, pp. 146–155, 2013.
- [9] N. Hassan, A. Nawawi, and A.S.A.P. Salin, "Improving tax compliance via tax education-Malaysian experience," *Malaysian Accounting Review*, vol. 15, no. 2, pp. 243–262, 2016.
- [10] C. Aragonés-Jericó, A. Lópaz- Pérez, C. Campos-Aparicio, "Tax awareness from school? The teachers approach," in International Conference of Education Research and Innovation (ICERI), 2015, pp. 3146–3153.
- [11] Ministry of Finance of the Republic of Indonesia, "Instilling tax awareness from an early ages through Pajak Bertutur," (in Indonesian), 2017. [Online]. Available: https://www.kemenkeu.go.id/publikasi/berita/menanamkan-kesadaran-pajak-sejak-dinimelalui-pajak-bertutur (accessed: Feb. 19, 2019).
- [12] R. Othman, Z. Ismail, and N. Nawawi, "Introducing formal tax education in secondary school: a survey on Malaysian public's perception," Proceedings of the 1st International Conference on Applied Social Sciences, Business, and Humanity, 2020, doi: 10.4108/eai.1-11-2019.2293991.
- [13] M. R. Palil, M. R. Akir, and W. F. Ahmad, "The perception of tax payers on tax knowledge and tax education with level of tax compliance: a study the influences of religiosity," *ASEAN Journal of Economics, Management and Accounting*, vol. 1, no. 1, pp. 118–129, 2013.
- [14] L. Koster, "The incorporating of basic tax education in the secondary school curriculum," Thesis, University of Pretoria, 2012
- [15] R. J. Hill, M. Fishbein, and I. Ajzen, "Belief, attitude, intention and behavior: an introduction to theory and research," Contemporary Sociology, vol. 6, no. 2, pp. 244-245, 1977, doi: 10.2307/2065853.
- [16] I. Ajzen, "The theory of planned behavior," Organizational Behavior and Human Decision Processes, vol. 50, no. 2, pp. 179–211, 1991, doi: 10.1016/0749-5978(91)90020-T.
- [17] N. L. Gage and D. Berliner, Educational psychology, 3rd ed. Boston, Houghton-Mifflin, 1984.
- [18] O. Richard, A. A. Michael, and T. George, "Determinants of tax evasion in the developing economies: A structural equation model approach of the case of Ghana," *Journal of Accounting and Taxation*, vol. 10, no. 4, pp. 37–47, 2018, doi: 10.5897/JAT2017.0275.
- [19] D. Kurniawan, "The influence of tax education on tax knowledge and its effect on personal tax complaince," *Journal of Indonesian Economy and Business*, vol. 35, no. 1, 2020, doi:10.22146/jieb.54292.
- [20] D. Purnamasari and Y. Sudaryo, "The effect of knowledge taxpayer, moral Taypayer and tax sanctions on taxpayers compulsory," *International Journal of Trade, Economics and Finance*, vol. 9, no. 5, pp. 214–219, 2018, doi: 10.18178/ijtef.2018.9.5.618.

[21] O. M. Bernard, D. F. S. Memba, and D. O. Oluoch, "Influence of tax knowledge and awareness on tax compliance among investors in the export processing zones in Kenya," *International Journal of Scientific Research and Management*, vol. 6, no. 10, pp. 728–733, 2018, doi: 10.18535/ijsrm/v6i10.em01.

- [22] M. Bornman and P. Ramutumbu, "Taxation: a conceptual framework of tax knowledge," *Meditari Accountancy Research*, vol. 27, no. 6, pp. 823–839, 2019.
- [23] A. Basit and W. Wirawan, "The effect of perceived behavioral control, tax knowledge and perceptions of tax justice on taxpayer compliance," (in Indonesian), TEKUN: Jurnal Telaah Akuntansi dan Bisnis, vol. 8, no. 1, 2019, doi: 10.22441/tekun.v8i1.5520.
- [24] R. Moenek, "The effect of awareness of tax laws, understanding of tax laws and tax compliance behaviour on supply chain management," *International Journal of Supply Chain Management*, vol. 9, no. 1, pp. 718–726, 2020.
- [25] N. Saad, "Tax Knowledge, Tax Complexity and Tax Compliance: Taxpayers' View," Procedia Social and Behavioral Sciences, vol. 109, pp. 1069–1075, 2014, doi: 10.1016/j.sbspro.2013.12.590.
- [26] M. Clifford and A. Jairus, "The effect of Taxpayer education on voluntary tax compliance, among SMEs in Mwanza City -Tanzania," International Journal of Marketing, Financial Services and Management Research, vol. 2, no. 8, pp. 12–23, 2013.
- [27] Andreas and E. Savitri, "The effect of tax socialization, tax knowledge, expediency of tax ID number and service quality on taxpayers compliance with taxpayers Awareness as Mediating Variables," *Procedia Social and Behavioral Sciences*, vol. 211, pp. 163–169, 2015, doi: 10.1016/j.sbspro.2015.11.024.
- [28] I. Mukhlis, S. H. Utomo, and Y. Soesetio, "The role of taxation education on Taxation Knowledge and Its Effect on Tax Fairness as well as Tax Compliance on Handicraft SMEs Sectors in Indonesia," *International Journal of Financial Research*, vol. 6, no. 4, 2015, doi: 10.5430/ijfr.v6n4p161.
- [29] J. W. Creswell and V. L. P. Clark, Designing and conducting mixed methods research. Sage Publication, California, 2018, doi: 10.1111/j.1753-6405.2007.00096.x.
- [30] T. Yamane, Statistics and Introductory Analysis, 2nd Ed. New York, Harper and Row, 1967.
- [31] B.Y.S. Kwok and R.W.Y. Yip, "Is tax education good or evil for boosting tax compliance? evidence from Hong Kong," *Asian Economic Journal*, vol. 32, no. 4, pp. 359–386, 2018, doi: 10.1111/asej.12163.
- [32] A. Morgan and D. Castelyn, "Taxation education in secondary schools," *Journal of the Australasian Tax Teachers Association*, vol. 13, no. 1, pp. 307–335, 2018.
- [33] K. M. Osaki, S. Augustine, and E. Swai, "Integrating Tax Education in the Primary and Ordinary Level Secondary Education Curriculum in Tanzania," Research Report: Action Aid Tanzania and Tanzania Education Network 2016.
- [34] J. S. Ugwu, "The association of tax education and tax compliance: A case of accounting students," Thesis, Universiti Utara Malaysia, 2014.
- [35] V. Manual and A.Z. Xin, "Impact of tax knowledge, tax compliance cost, tax deterrent tax measures towards tax compliance behavior: a survey on self-employed taxpayers in West Malaysia," *Electronic Journal of Business and Management*, vol. 1, no. 1, pp. 56–70, 2016.
- [36] P. Vythelingum, H. Soondram, and B. Jugurnath, "An assessment of tax morale among Mauritian taxpayers," *Journal of Accounting and Taxation*, vol. 9, no. 1, pp. 1–10, 2017, doi: 10.5897/jat2016.0224.
- [37] A.O. Oladipupo and U. Obazee, "Tax knowledge, penalties and tax compliance in small and medium scale enterprises in Nigeria," *IBusiness*, vol. 08, no. 01, pp.1–9, 2016, doi: 10.4236/ib.2016.81001.
- [38] R. Berhe and S. Sekhon, "Taxpayers' knowledge and tax compliance behavior in Ethiopia: a study of Tigray State," *International Journal of Management and Commerce Innovation*, vol. 3, no. 2, pp. 1090–1102, 2016.
- [39] P. Fauziati, A.F. Minovia, R.Y. Muslim, and R. Nasrah, "The impact of tax knowledge on tax compliance case study in Kota Padang, Indonesia," *Journal of Advanced Research in Business and Management Studies*, vol. 2, no. 1, pp. 22–30, 2016.
- [40] Z. B. Abay, The Influence of Tax Education on Tax Compliance Attitude. LAP LAMBERT Academic Publishing, 2012.

BIOGRAPHIES OF AUTHORS



Albert D 🖾 🖾 P has a master degree in accounting from Universitas Mercu Buana, Jakarta, Indonesia. He works as partner of a tax consultant firm in Jakarta, Indonesia. His areas of specialty are Tax Accounting, Management Accounting, and Auditing. He can be contacted at email: albert.kamadjaya@gmail.com.



Rien Agustin Fadjarenie D S S D is an Assistant Professor at Universitas Mercu Buana, Jakarta, Indonesia. She graduated with her Doctoral at Universitas Padjadjaran, and her areas of interest are Management Accounting, Auditing, Tax, and Fraud Audit. She can be contacted at email: agustin.fadjarenie@mercubuana.ac.id.