Tax education and self-employed compliance in Nigeria: Evidence from Imo state

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Abstract

Nigeria's desired economic growth and infrastructural development may not be ensured through continued dependence on fossil fuels. Diversifying revenue sources away from oil is now crucial. Taxation is a crucial revenue source, but effective tax systems depend on high voluntary compliance levels. This study focused on how tax education affects returns filing compliance among self-employed taxpayers in Nigeria's informal sector. This research, conducted in Owerri Municipality, Imo State, adopted a cross-sectional survey design. The population was 1,005 self-employed personal income taxpayers/potential taxpayers who participated in personal income tax education programmes. A sample of 237 respondents was selected through convenience and purposive sampling methods. Data collection was through structured questionnaire. Descriptive, inferential and causal analyses were conducted using Pearson's correlation and simple linear regression. Findings indicated that targeted tax education dimensions - legal tax education [LTE ($r=.493$, $P<0.05$); ($\beta_0=0.444, \beta_1=0.317, t=6.889, p=0.000$)], procedural tax education [PTE ($r=.286$, $P<0.05$); ($\beta_0=0.136, \beta_1=0.102, t=1.675, p=0.015$)], and electronic tax education [ETE ($r=.322$, $P<0.05$); ($\beta_0=0.009, \beta_1=0.007, t=0.103, p=0.018$)]— positively and significantly affected returns filing compliance (RFC), whereas general tax education [GTE ($r = -.045$, $P> 0.05$); ($\beta_0=-0.031, \beta_1=-0.002, t=-0.542, p=0.588$)] had a negative and non-significant effect. Findings further showed that GTE, LTE, PTE and ETE accounted for 0.2%, 24.4%, 26.2% and 26.2% respectively. This study concludes that general tax education does not support self-employed taxpayers to comply, whereas a targeted tax education is more effective. This study recommends that targeted tax education, such as legal, procedural, and electronic tax education programmes, be provided and tailored to the specific characteristics and tax needs of self-employed taxpayers in both existing and prospective business communities to enhance compliance and increase revenue generation.

Keywords: Tax education, Tax compliance, Self-employed taxpayers, Informal sector.

Introduction

Before the global initiative against climate change gained momentum, the Nigerian government heavily relied on oil revenue to fund public expenditures, neglecting efforts to bolster tax revenue. With the current global push for climate action and the goal of achieving net-zero emissions by 2050, it has become evident that Nigeria's desired economic growth and infrastructural development may not be ensured through continued dependence on fossil fuels. Diversifying revenue sources becomes imperative. Taxation emerges as a dependable, consistent, and foreseeable revenue stream essential for sustaining global economies and financing national development priorities (Ndukwe, 2023; Ovenseri-Ogbomo & Erhi, 2020; Omoigui-Okauru, 2009).

However, one sector of the Nigerian economy that is under-performed is taxation (Punch Editorial, 2022). This is evident in Nigeria's tax-to-GDP ratio when compared with other countries. In 2021, France had tax-to-GDP ratio of 45.1%, Sweden 42.6%, UK 33.5%, US 26.6%, and Nigeria 6.7% (OECD, 2022). In Africa, Nigeria's tax-to-GDP ratio at 6.7% compared to 15.6%, the average for 33 African countries was significantly lower than Kenya at 15.2%, South Africa at 27.0%, Ghana at 14.1%, Rwanda at 17.0%, Burkina Faso at 15.6% and Tunisia at 32.5% and the "Giant of Africa" ranked 32nd out of 33 and was only ahead of Equatorial Guinea (OECD, 2023).

At the sub-national level, in overall fiscal performance ranking; in the ability of states to meet their operating expenses with only internally generated revenue; on the ability of states to grow their internally generated revenue year-on-year and progressively reduce their over reliance on federal transfers ranking, Imo State came 26 out of the 36 states in the year 2021 while in Debt Sustainability Ranking, Imo State came 34 out of the 36 states. Imo State's total debt increased by 28.3% from N186.72bn in 2020 to N239.74bn (Naira) in 2021; and the State became the 6th most indebted state among the 36 states and the highest indebted state in the South East (State of States Report, 2022).

More so, Imo State, (the Eastern Heart Land)'s IGR per capita stood at N 3,227 which was below the sub-national average of #5,924 in 2021; capital spending per capita of N6,299 which was slightly over half the sub-national average at N12,145.49 was recorded in 2021; the education spending per capita stood at N381 which made Imo State to rank second to the last on the education spending per capita index in the year 2021 while in terms of health, the state performed abysmally poor on the health spending per capita of N581 which was the lowest spending among the 36 states on health spending per capita index in 2021 (State of States Report, 2022). Imo State and indeed Nigeria is in dire need of improved tax revenue performance to be able to settle her local, and national debts, provide education, health and infrastructural services as stipulated in the United Nations' Sustainable Development Goals (SDGs).

Nigerian Governments (federal, state and local councils) cannot make much impressive achievement in Sustainable Development Goals (SDGs) if tangible efforts are not made to improve public revenue through tax compliance (Md Rejab & Lateh, 2022; Halim & Rahman, 2022). Efficient tax systems depend on a high degree of voluntary compliance (OECD, 2021). Tax compliance as applied in this paper is voluntary personal income tax returns filing compliance in which taxpayers are not forced to file their tax returns but willingly do so as part of their civic duty. Compliance decreases when taxpayers fail in their obligations of timely filing of tax returns, incorrect filing of their tax returns or late filing of their tax returns (Persian et al., 2022). In Nigeria, only about 5% of registered businesses filed their VAT returns, 5.6 % filed company income tax returns while for personal income tax, only 2% filed returns in 2016 (Amaeshi et al., 2019).

Literature Review

When compared with other types of taxes, income tax has the lowest tax returns filing compliance (Isioma, 2021) while personal income tax is the most evaded, avoided, and non-performing (Zainab et al., 2019; Alabede et al., 2011; Awake, 2033; Watchtower, 2011), mostly in the informal sector which has been associated with names such as shadow, black, grey, underground, hidden, illegal, clandestine, non-cash, unreported and parallel economy (Okoroama, 2018). The informal sector, as applied in this study, refers to the sector of the economy that is characterized with commercial and legal production of goods and services that are intentionally hidden from government to avoid compliance with established procedures and tax payment (Padmavathi & Aruna, 2022; Turner, 2020; Aguilar & Lopez-Guerrero, 2020; Monye & Abang, 2020; Torgler & Schneider, 2007). Nigeria's informal sector is made up of self-employed operators who engage in unincorporated personal businesses such as artisans, builders, traders, contractors, professionals, landlords, architects etc., whose incomes are subjected to personal income tax act in a direct assessment scheme. The sector contributes 38.83% - 57.55% of Nigeria's GDP (Dell' Anno & Adu, 2020) consequence of a large informal sector is loss of tax revenues (Schneider & Enste [26]) as self-employed individuals avoid filing of taxes (Yerima et al., 2022; Schneider & Enste, 2002; Okoroama, 2018; Maiye & Isiadinso, 2018; Oyedele, 2014). Even the 2% of self-employed taxpayers who voluntarily file a tax return, file at the last minute which leads to significant costs such as administrative cost, errors, frustration, low tax morale and other compliance costs (Persian et al., 2022). The self-employed subset owes the highest amounts of tax debts compared to other businesses among the SMEs (Yong & Freudenberg, 2020). Non-compliance with tax laws among the self-employed stems from their inability to understand why they need to comply with their tax obligations including returns filing (Monye & Abang, 2020), due to inadequate orientation and enlightenment of taxpayers in the sector (Abdu & Adem, 2023), wide- spread illiteracy among taxpayers (Bekana, 2024), poor tax knowledge and mentality (Osemeke et al., 2020), ignorance of tax laws and procedures (Ogaluzor & Edori, 2023; African Centre for Energy Policy, 2022) and lack of technical experience on tax matters (Sani et al., 2021).

It is evident from tax compliance literature that one of the reasons for the negative attitude to tax filing is inadequate provision of tax education to the tax- paying public. Most of the taxpayers do not have the requisite tax education/ knowledge to be able to navigate the returns filing compliance and make payment. The inability to understand tax returns filing requirements, caused by the complexities with the meaning of existing tax laws and the changes brought about by new tax laws can frustrate ignorant taxpayers and make them non-compliant. Making economic choices without a sufficient, current, and precise knowledge- base can lead to immediate and future impacts on both the individuals and the society (Nichita et al., 2019). The instrumentality of tax education ensures that nil-filers, loss-filers and non-filers (Kassaw, 2023; Mascagni et al., 2022) rise to the occasion of returns filing compliance and encourage filers to do more, especially in the informal sector.

In many low-income countries, including Nigeria, tax authorities have been called upon to use tax education as a tool to improve communication and understanding between taxpayers and the government or tax authorities (Kassaw, 2023; Aremu & Siyanbola, 2021; Yong & Freudenberg, 2020; Ligomeka, 2019). The integration of tax technology, such as tax automation in Nigerian tax system, has further emphasized the need for tax education (Irefe-Esema & Akinmade, 2020), thus, it enhances the understanding of how taxpayer education tools directly influence taxpayers' willingness to comply accordingly (OECD, 2021). The Nigerian government instituted tax enlightenment and awareness day every Thursday to foster better tax habits among its citizens (Omesi & Ogbolu, 2021). In Imo State, the State Internal Revenue Service (IIRS) conducts extensive public awareness campaigns using media, seminars, and workshops to educate citizens about tax matters (IIRS, 2024). These campaigns highlight the social contract between the state and taxpayers, stressing the necessity of tax compliance for accessing government services and discouraging tax evasion

Empirical Review

Most of the studies on tax education for compliance and revenue generation in Nigeria (Azaka & Balogun, 2022; Omesi & Ogbolu, 2021; Ishola et al., 2020; Onuoha et al., 2019; Adekoya, 2019), focused only on aggregate tax education and compliance without recourse to the parts of the variables to better understand the intricacies. Some other scholars that studied the parts only ventured into print media education , electronic media education, public information programme, tax education measured by general tax knowledge, and stakeholders' sensitization (Aremu & Syanbola, 2021; Amaning et al., 2021; Usang & Etim, 2021) which mainly highlighted channels of tax education but failed to delve into dimensions of tax education proper such as general tax education (GTE) and targeted tax education which includes legal tax education (LTE), procedural tax education (PTE) and electronic tax education (ETE) as they relate to returns filing compliance (RFC) especially among the self-employed in the Nigerian informal sector. Others theoretically dealt on conceptual framework of tax knowledge, touching on "general tax knowledge, legal tax knowledge and procedural tax knowledge" (Bornman & Ramutumbu, 2019) without empiricism in ascertaining the strength and actual effect size of the tax education variables on tax compliance. Also, electronic tax education/knowledge which is vital in today's modern world of taxation was not that incorporated in the study. Tax education as applied in this study refers to educational programmes/initiatives aimed at building tax compliance behaviour by explaining taxation, its laws, processes, importance and e- tax services to self-employed individual taxpayers/potential taxpayers in the informal sector as they apply to personal income tax. It has four dimensions – general tax education (GTE) and targeted tax education, such as legal tax education (LTE), procedural tax education (PTE), and electronic tax education (ETE).

General tax education generates basic tax knowledge in the society. It involves communicating tax to raise awareness (OECD, 2021). This fiscal awareness measures the taxpayer's behaviour towards tax compliance. A taxpayer is tax-aware when he is conscious of his civic duty (Hartikayanti & Siregar, 2019). General ax education (GTE) as applied in this study has to do with educational programmes/initiatives that generate fiscal or tax awareness in the society. Taxpayers' awareness or tax consciousness can meaningfully curtail tax non-compliance in the informal sector (Ogungbade et al., 2021). Legal tax education (LTE) aims to improve taxpayers' understanding of tax laws and regulations, which is crucial for fostering compliant behaviour. It promotes taxpayers' ability to employ specific tax rules and legislations to taxable income, correctly file tax returns and make payment.

Legal tax education (LTE) as applied in this study refers to programmes/ initiatives that teach taxpayers about legal requirements, rights, and responsibilities and generate knowledge and understanding of legal aspects of taxation system. It is expected that this type of tax education should enable self-employed individual taxpayers and potential taxpayers in the informal sector to have good knowledge of tax rules/ laws governing their tax class and be compliant with returns filing and tax payment. Procedural tax education (PTE) provides taxpayers with the practical knowledge and skills to navigate tax processes, such as registering in the tax system, filing returns, and making payments (Airth, 2022). This form of education is essential for ensuring that taxpayers, especially in the informal sector, understand how to comply with tax laws. It answers the question of how do taxpayers register in the tax system, how do they file tax returns, how do taxpayers make payment of taxes, how to declare or report their taxable income etc (Brebeanu, 2022; Airth, 2022). Procedural tax education also involves training on maintaining financial records for tax purposes and interacting with tax authorities (Bornman & Ramutumbu, 2019). Procedural tax education (PTE) as applied in this study refers to programmes/ initiatives that teach taxpayers about the step-by-step processes of taxation system and generate practical knowledge, skills and understanding needed to navigate tax compliance procedures. Electronic tax education (ETE) involves training taxpayers to use digital tools for tax obligations, including e-registration, e-filing, e-payment, and obtaining e-receipts and tax clearance certificates. This education is crucial for promoting the use of electronic services, which can streamline tax processes (Olafaju & Olayinka, 2022; Obal & Udofia, 2022; Bornman & Ramutumbu, 2019; Bornman & Wassermann, 2020; Irefe-Esema & Akinmade, 2020). Electronic tax education (ETE) as applied in this study refers to programmes/initiatives that teach taxpayers about the use of digital tools and platforms, and generate the knowledge, skills and understanding of e-tax registration, e- tax reporting, e-tax filing and e-tax payment.

Such dimensions of tax education are necessary especially in a self-assessment scheme. And would lead to tax literacy which is taxpayers' ability to understand their rights and obligations, effectively apply their tax knowledge and skills to file their tax returns, and fulfill their tax payment responsibilities (Nichita et al., 2019). When such education is lacking or inadequate, voluntary tax compliance faces a significant challenge (OECD, 2021; Moore, 2019). This is as researchers have observed that self-employed taxpayers who had general tax knowledge but at the same time exhibited inadequate technical tax knowledge and lacked deeper understanding of other tax issues had their compliance decision negatively affected (Abubaker, 2021; Ndubula & Matiku, 2021; Wadesango et al., 2018; Saad, 2014). However, Mascagni and Santoro (2018) claimed that a major challenge of tax education programmes in many low-income countries is that they are more likely to influence tax knowledge rather than actual tax behavior. This implies that increased general, legal, procedural and electronic tax education in Nigeria and at sub-national levels may not automatically translate into better tax compliance behaviour.

Reviews show that researchers hold different opinions on how tax education affects tax compliance behaviour. For example, some studies have revealed that general tax education/knowledge has no significant effect on tax compliance (Nasution et al., 2020; Dewi, 2020; Tilahun, 2018; Rahaya et al., 2017) while some other studies found general tax education/ knowledge having significant effect on/ or positively linked to tax compliance (Trawule et al., 2022; Anggraeni et al., 2021; Bornman & Ramutumbu, 2019; Cechovsky, 2018; Wong & Lo, 015; Agusti & Rahman, 2023; Wogo et al., 2023; Tantriangela & Setyowati, 2023; Adu & Amponsah, 2020; Arifin & Sriyono, 2022; Suhono et al., 2022; Intansari & Supramono, 2022). An increased knowledge of tax rules and regulations can significantly enhance tax compliance behaviour, as demonstrated by studies in other regions (Asmahani, 2022; Adaletey et al., 2022]; Kitula-Mende, 2021; Twum et al., 2022; Susyanti & Askander, 2019). However, Rendy (2019) opined that such knowledge has no significant effect on compliance behaviour. Studies have shown that procedural tax education/ knowledge promote compliance outcomes (Amin et al., 2022; Bornman &

Wassermann, 2020; Damajanti & Abdulkarim, 2017). Studies also indicate that taxpayers' education/ knowledge of electronic tax systems is a significant factor in their compliance behavior (Mohammed et al., 2022; Mugabe, 2021; Mbilla et al., 2020; Akpubi & Igbekoyi, 2019). Some other studies opined that tax education has no significant effect on tax compliance (Hama, 2021; Fauziati et al., 2020; Lestari & Daito, 2020).

These divergent and inconsistent views on the subject matter justify this current study. Irrespective of these, specific variables, timing, methodology, socio-cultural environment and the respondents used in those previous studies differ from the current study. Currently and to the best of the authors' knowledge, there is no existing study that has empirically evaluated the effect of these tax education dimensions such as GTE, LTE, PTE and ETE on returns filing compliance (RFC) among self-employed individual taxpayers in the informal sector in Owerri Municipality, Imo State, Nigeria.

The existing knowledge gaps hinder self-employed individuals in the informal sector from pinpointing their tax compliance issues, posing a potential compliance risk. These gaps also prevent tax authorities from tailoring educational content to meet the sector's specific needs, further increasing compliance risks. Additionally, the gaps limit policymakers' ability to optimize personal income tax policies and education to promote voluntary compliance, crucial for generating government revenue for societal development and citizen well-being.

This paper therefore, aims to address the identified knowledge gaps by providing new evidence on how various dimensions of tax education - targeted tax education (legal, procedural, and electronic tax education) and general tax education – affect returns filing compliance of self-employed taxpayers in the informal sector of Owerri Municipality, Imo State, Nigeria. It uniquely generates policy-relevant tax knowledge to help tax authorities and policymakers develop effective, inclusive, and targeted tax education policies. These policies encourage voluntary tax returns filing compliance, addressing specific compliance difficulties and positively impacting revenue generation and economic growth.

The following four null hypotheses were tested:

(HO_1): General tax education (GTE) does not have a significant effect on returns filing compliance (RFC) among self-employed individual taxpayers in the informal sector in Owerri Municipality, Imo State.

(HO_2): Legal tax education (LTE) does not have a significant effect on returns filing compliance (RFC) among self-employed individual taxpayers in the informal sector in Owerri Municipality, Imo State.

(HO_3): Procedural tax education (PTE) does not have a significant effect on returns filing compliance (RFC) among self-employed individual taxpayers in the informal sector in Owerri Municipality, Imo State.

(HO_4): Electronic tax education (ETE) does not have a significant effect on returns filing compliance (RFC) among self-employed individual taxpayers in the informal sector in Owerri Municipality, Imo State.

Methodology

This study is grounded in two theoretical frameworks: Social Reconstructionism and Transformative Learning. Social Reconstructionism, introduced by Theodore Brameld in 1928 at the University of Chicago, emphasizes the incorporation of education with broader social institutions like the economy, culture, governance, public finance, and taxation. It asserts that education serves to reform and positively influence individuals' knowledge, attitudes, and behaviors. Applied to this paper, the theory suggests that tax education to self-employed individuals in the informal sector can shift their tax mentality, attitude, and behavior towards compliance. When adequately provided, tax education is expected to significantly enhance personal income tax filing compliance among this group, reducing non-compliance behaviours (Agusti & Rahman, 2023).

Transformative Learning Theory, introduced by Jack Mezirow in 1978, describes "perspective transformation" as involving psychological, convictional, and behavioral dimensions. It focuses on how learners' worldviews can change through critical reflection triggered by disorienting dilemmas, such as crises or new information challenging their beliefs and assumptions (Mezirow, 1978; De Angelis, 2022). This theory suggests that tax issues such as tax education, the reasons people pay taxes, and the factors influencing tax compliance present dilemmas that can shift taxpayers' perspectives. The paper argues that tax education plays a crucial role in facilitating such transformation by encouraging reflection on taxpayers' beliefs, attitudes, and mentalities towards compliance. Specifically, education in legal, procedural, electronic, and general aspects of personal income tax can support self-employed taxpayers in reassessing and improving their compliance perceptions and behaviours (Archer-Kuhn et al., 2022; Fleming, 2022). Transformative tax education aims to alter taxpayers' psychology, fostering a positive self-concept and clarifying their obligations, particularly those currently non-compliant (Oloyede & Nwachukwu, 2021). By prompting a reconsideration of their beliefs and attitudes towards taxes, such education seeks to shift taxpayers' behavior from negative to positive, promoting voluntary tax compliance (Ebong, 2021).

A cross-sectional survey design was adopted, as it is appropriate for efficient data collection (Morgan & Castelyn, 2018). The methods employed, including a quantitative approach and structured questionnaire, are in tandem with the prior literature reviewed, as they allow the researchers to collect relevant data from participants at a single point in time. The design was causal and explanatory, aimed at explaining how variations in the dependent variable (Returns Filing Compliance) are influenced by the independent variable (Tax Education).

The population of the study is made up of all self-employed personal income taxpayers/potential personal income taxpayers operating in the informal sector of Owerri Municipality, Imo State, who had undertaken personal income tax education programmes and were registered with different associations whose incomes were taxable under the provisions of personal income Tax (Amendment) Act CAP P8 LFN 2011. In all, one thousand and five (1005) self-employed individuals from various business undertakings consisting of professionals, contractors, traders, landlords and others (which represented occupations not listed above) formed the target population. Constraints such as time, geographical distances and budget made it impossible for the authors to conduct a census study. A sample of self-employed taxpayers/potential taxpayers in Imo State was selected from Owerri Municipality. The reason for choosing this target area was not only because of convenience and cost but also for its capacity as a metropolitan city with a heterogeneous population – having concentration of self-employed individuals from different local government areas with diverse demographics and business undertakings.

Convenient and purposive sampling techniques were employed to select the research respondents. Convenient and purposive sampling procedures enabled the researchers to access self-employed personal income taxpayers/potential taxpayers who had undertaken personal income tax education programmes through various means and were easily accessible and ready to participate in the study, as a result, two hundred and thirty-seven (237) formed the sample size of the study.

With Personal Income Tax Education and Compliance (PITEC) questionnaire which was adapted from literature and modified to fit this current study, the authors asked permission from the association leaders of various business undertakings before administering the instrument for data collection. The PITEC questionnaire was divided into three parts. Part A collected data regarding demographics of self-employed personal income taxpayers such as age, sex, marital status, educational qualifications, class of business, channels of acquiring personal income tax education, race, and religion. Part B collected data on Personal Income Tax Education (PITE). Part B was divided into four sections: Section 1 of this part collected data on General Tax Education (GTE) of respondents. Section 2 collected data on Legal Tax Education (LTE) of respondents. Section 3 collected data on Procedural Tax Education (PTE) of respondents and the last section in this part which is Section 4 collected data on Electronic Tax Education (ETE) of respondents.

Five items were used to measure each of the four dimensions of personal income tax education of the respondents. A five-point Likert scale was adopted in designing the questionnaire. There were five response categories for each question. The response categories and weight assigned were: To a Very Large Extent (5points), To Some Extent (4points), Moderately Extent (3points), To a Small Extent (2points) and Not at All (1point). Part C collected data on Returns Filing Compliance (RFC) from respondents. Four items were used to assess returns filing compliance of the respondents. A five-point Likert scale was employed in designing the questionnaire. There were five response categories for each question. The response categories and weight assigned were: Strongly Disagree (1 point), Disagree (2 points), Neutral (3 points), Agree (4 points) and Strongly Agree (5 points).

The validity of a research instrument is the degree to which it measures all is designed to measure and nothing else. To determine the content validity of the instrument employed in the study, expert opinions were sought as the questionnaire was submitted to experts in Taxation, Accounting, Research, Measurement and Evaluation for useful and constructive criticisms. Hence, validity test was done and the instrument was valid.

Reliability coefficient was determined for the data collection instrument (PITEC). Twenty (20) copies of the instrument were administered to 20 respondents (self-employed in Aba urban) who were not part of the sample for the study, to respond to. Estimate of the reliability was obtained using the Cronbach Alpha method. The reliability coefficient of 0.84 was obtained, showing that the PITEC instrument was reliable and suitable for the study.

The PITEC questionnaire was administered to the 246 respondents for data collection. Out of which 237 copies were retrieved (96.34%) and 9 copies (3.66%) were missing during distribution and collation. The study had two constructs, predictor and criterion variables. Tax education as the predictor variable was measured by general tax education, legal tax education, procedural tax education and electronic tax education. Tax Compliance was measured by returns filing compliance. The data analyses were conducted using the Statistical Package for Social Sciences (SPSS) version 20.0. Descriptive statistics, such as frequencies and percentages were used to present the research participants' demographic information. Mean, standard deviation, Pearsons' correlation and linear regression were employed. The mean and standard deviation were used in univariate analysis. Correlation analysis was used to conduct an initial examination of the relationships among the research variables. The linear regression model sought to establish the causal effect of tax education on tax compliance among self-employed individual taxpayers in the informal sector. The Linear regression model for the variables is denoted in the equations as under:

Y = f(X)

Where Y = Returns Filing Compliance (RFC)

X = Tax Education (TE)

X = (x_1, x_2, x_3, x_4) where

x_1 = General Tax Education (GTE)

x_2 = Legal Tax Education (LTE)

x_3 = Procedural Tax Education (PTE)

x_4 = Electronic Tax Education (ETE)

Hypothesis One

$Y = f(x_1)$

$Y = \beta_0 + \beta_1 x_1 + E_i$

$RFC = \beta_0 + \beta_1 GTE + E_i$………… Equation 1

Hypothesis Two

$Y = f(x_2)$

$Y = \beta_0 + \beta_2 x_2 + E_i$

$RFC = \beta_0 + \beta_2 LTE + E_i$………… Equation 2

Hypothesis Three

$Y = f(x_3)$

$Y = \beta_0 + \beta_3 x_3 + E_i$

$RFC = \beta_0 + \beta_3 PTE + E_i$………… Equation 3

Hypothesis Four

$Y = f(x_4)$

$Y = \beta_0 + \beta_4 x_4 + E_i$

$RFC = \beta_0 + \beta_4 ETE + E_i$……….Equation 4

Where β_0 = the constant of the equation

$\beta_1 - \beta_4$ = the coefficient of variables in the equations;

E_i = the error term of the equation

Results

Demographic Analysis

Table 1: Demographic characteristics of the respondents

Variables	Characteristics	Frequency	Percent (%)
Gender	Male	181	76.4
	Female	56	23.6
	Total	**237**	**100.0**
Age	20-29 years	11	4.6
	30-39 years	64	27.0
	40-49 years	78	32.9
	50-59years	73	30.8
	60 years and above	11	4.6
	Total	**237**	**100.0**
Educational Level	Non-formal	5	2.1
	Primary	5	2.1
	Secondary	35	14.8
	Polytechnic	75	31.6
	University	117	49.4
	Total	**237**	**100.0**
Marital Status	Married	193	81.4
	Single	28	11.8
	Others	16	6.8
	Total	**237**	**100.0**
Business Undertaking	Professional	23	9.7
	Contractor	55	23.2
	Trader	31	13.1
	Landlord	80	33.8
	Others	48	20.3
	Total	**237**	**100.0**
Means of acquiring Tax Education (TE)	Radio	170	71.7
	Newspaper	5	2.1
	Television	16	6.8
	Banners	13	5.5
	Seminars/workshops	5	2.1
	Others	28	11.8
	Total	**237**	**100.0**

Race	Igbo	143	60.3
	Hausa	47	19.8
	Yoruba	47	19.8
	Total	**237**	**100.0**
Religion	Christianity	190	80.2
	Islam	34	14.3
	Traditional	13	5.5
	Total	**237**	**100.0**

Source: Field Survey Result, 2024

Table 1 displays the demographic characteristics of the respondents. It indicates that 181 (76.4%) respondents were males while 56 (23.6%) were females. In terms of age, 11 (4.6%) of the respondents fell within the age range of 20-29 years, 64 (27%) were between 30-39 years, 78 (32.9%) were between 40-49 years , 73 (30.8%) were between 50-59years while 11 (4.6%) were between 60 years and above. Considering educational level, 5 (2.1%) of the respondents attained only non-formal, 5 (2.1%) attained primary, 35 (14.8%) attained secondary, 75 (31.6%) attained polytechnic, while 117 (49.4%) attained university education. In terms of marital status, 193 (81.4%) of the respondents were married, 28 (11.8%) were single while 16 (6.8%) were categorized others. In terms of business undertaking, 23 (9.7%) of the respondents were professionals, 55 (23.2%) were contractors, 31 (13.1%) were traders, 80 (33.8%) were landlords and 48 (20.3%), were categorized as others. For means of acquiring tax education, 170 (71.7%) of the respondents acquired tax education through Radio, 5 (2.1%) through Newspaper, 16 (6.8%), Television, 13 (5.5%) through Banners, 5 (2.1%) through Seminars/workshops and 28 (11.8%) through other means. Pertaining to race, 143 (60.3%) of the respondents were Igbo, 47 (19.8%) each were Hausa and Yoruba. Finally, based on religion, 190 (80.2%) of the respondents were Christianity, 34 (14.3%) were Islam while 13 (5.5%) practice Traditional religion.

Descriptive Analysis

Table 2: Mean responses on General Tax Education

S/N	Items	Mean	SD	Remarks
1	Do you know the importance of paying personal income tax?	3.18	0.93	Large Extent
2	Do you know about the existence of tax authorities?	3.13	0.993	Large Extent
3	Do you have understanding of registration in the personal income tax system?	3.18	1.261	Large Extent
4	Have you been educated on whether or not your business activity is taxable?	2.94	1.361	Small Extent
5	Do you know that tax adds value to the Nigerian economy?	2.94	1.174	Small Extent
	Grand Mean	**3.08**	**1.145**	**Large Extent**

Source: Field Survey Result, 2024

Table 2 shows the mean responses on the responses on general tax education. It revealed that the respondents know the importance of paying personal income tax, know about the existence of tax authorities and have understanding of registration in the personal income tax system to a large extent. This is because their criteria mean values fall within the range of large extent. However, they have been educated on taxable business activity knowing that tax adds values to the Nigerian economy to a small extent. This is because their criteria mean values fall within the range of small extent. The grand mean value of 3.08 indicates that the respondents have general tax education to a large extent. The standard deviation shows that the respondents are homogenous in their responses

Table 3: **Mean responses on Legal Tax Education**

S/N	Items	MEAN	SD	Remarks
1	Do you have knowledge of your right and obligations to personal income taxation?	3.55	0.953	Large Extent
2	Do you understand legal terminologies in personal income tax matters?	2.54	1.354	Small Extent
3	Do you know that claiming relief and exemptions not applicable to you is illegal?	2.81	1.242	Small Extent
4	Do you know personal income tax rules?	2.46	1.260	Small Extent
5	Are you aware that failure to pay tax is illegal?	2.83	1.022	Small Extent
	Grand Mean	**2.84**	**1.166**	**Small Extent**

Source: Field Survey Result, 2024

Table 3 shows the mean responses on the responses on legal tax education. It revealed that the respondents understand legal terminologies in personal income tax matters, know that claiming relief and exemptions not applicable to you is illegal, know personal income tax rules, and aware that failure to pay tax is illegal to a small extent. This is because their criteria mean values fall within the range of small extent. However, they have knowledge of their right and obligations to personal income taxation. The grand mean value of 2.84 shows that the respondents have legal tax education to a small extent. The standard deviation shows that the respondents are homogenous in their responses.

Table 4: Mean responses on Procedural Tax Education

S/N	Items	MEAN	SD	Remarks
1	Do you understand how, when and where to pay personal income tax?	3.35	1.176	Large Extent
2	Do you have knowledge of personal income tax returns filing?	2.64	1.432	Small Extent

3	Do you know the relief and exemptions granted to an individual taxpayer?	3.24	1.150	Large Extent
4	Are you always accurate in determining personal income tax liability?	2.42	1.440	Small Extent
5	Do you know the applicable personal income tax rates?	2.53	1.184	Small Extent
	Grand Mean	**2.84**	**1.276**	Small Extent

Source: Field Survey Result, 2024

Table 4 shows the mean responses on the responses on procedural tax education. It revealed that the respondents understand how, when and where to pay personal income tax and know the relief and exemptions granted to an individual taxpayer to a large extent. This is because their criteria mean values fall within the range of large extent. However, they know personal income tax returns filing, are always accurate in determining personal income tax liability and know the applicable personal income tax rates to a small extent. This is because their criteria mean values fall within the range of small extent. The grand mean value of 2.84 indicates that the respondents have procedural tax education to a small extent. The standard deviation shows that the respondents are homogenous in their responses.

Table 5: Mean responses on Electronic Tax Education

S/N	Items	MEAN	SD	Remarks
1	Are you aware of online payment of personal income tax?	3.23	1.108	Large Extent
2	Do you have understanding of electronic tax filing system?	2.33	1.335	Small Extent
3	Do you know how to process personal income tax clearance certificate online?	2.57	1.343	Small Extent
4	Do you have access to the website of your tax authority?	2.56	1.282	Small Extent
5	Do you know the benefits of using electronic tax system?	3.21	0.807	Large Extent
	Grand Mean	**2.78**	**1.175**	Small Extent

Source: Field Survey Result, 2024

Table 5 shows the mean responses on the responses on electronic tax education. It revealed that the respondents are aware of online payment of personal income tax and know the benefits of using electronic tax system to a large extent. This is because their criteria mean values fall within the range of large extent. However, they comprehend electronic tax filing system, know how to process personal income tax clearance certificate online and have access to the website of their tax authority to a small extent. This is because their criteria mean values fall within the range of small extent. The grand mean value of 2.78 indicates that the respondents have electronic tax education to a small extent. The standard deviation shows that the respondents are homogenous in their responses.

Table 6: Mean responses on Returns Filing Compliance

S/N	Items	MEAN	SD	Remarks
1	Not filing tax returns applicable to us is a serious illegality	3.80	1.138	Large Extent
2	Tax returns filing must comply with laid down regulations	4.31	0.703	Large Extent
3	We have never delayed in filing our tax returns	3.67	1.009	Large Extent
4	One can criticize a person who is not maintaining a high level of tax returns filing compliance	3.48	1.320	Large Extent
	Grand Mean	**3.82**	**1.042**	Large Extent

Source: Field Survey Result, 2024

Table 6 shows the mean responses on the responses on returns filing compliance. It revealed that not filing tax returns applicable to us is a serious illegally, tax returns filing must comply with laid down regulations, never delayed in filing our tax returns, and criticizing a person who is not maintaining a high level of tax returns filing compliance to a large extent. This is because their criteria mean values fall within the range of large extent. The grand mean value of 3.82 indicates that the respondents complied with returns filing to a large extent. The standard deviation shows that the respondents are homogenous in their responses.

Correlation Analysis

The authors carried out an initial examination on the hypotheses. The Pearson product moment correlation coefficient (r) was used to establish the strength and direction of the association between the variables.

Table 7: Correlation Matrix betweenTax educationand Returns filing compliance

	GTE	LTE	PTE	ETE	RFC
GTE Pearson correlation Sig.(2-tailed)	1	-.030 .649	-.003 .959	-.065 .320	-.045 .491
LTE Pearson correlation Sig.(2-tailed)	-.030 .649	1	.324** .000	.483** .000	.493** .000
PTE Pearson correlation Sig.(2-tailed)	-.003 .959	324** .000	1	.715** .000	.286** .000
ETE Pearson correlation Sig.(2-tailed)	-.065 .320	.483** .000	.715** .000	1	.322** .000
RFC Pearson correlation Sig.(2-tailed)	-.045 .491	.493** .000	.286** .000	.322** .000	1
N	**237**	**237**	**237**	**237**	**237**

**. Correlation is significant at the 0.05 level (2-tailed).

Results from Table 7 reveals a positive moderate and significant relationship among tax education dimensions such as LTE (r=.493, P<0.05), PTE (r=.286, P<0.05), ETE (r=.322, P<0.05) and returns filing compliance in the study area. While a weak, negative and non-significant relationship exists between general tax education and returns filing compliance (r = -.045, P> 0.05). This implies that improvement in any of the LTE, PTE and ETE would increase returns filing compliance (RFC) of self-employed taxpayers in the informal sector, while improvement in GTE would lead to a slight decrease in RFC.

Regression Analysis

The hypotheses were tested through linear regression to determine the causal effect of tax education on tax compliance in the informal sector among self-employed individual taxpayers. Tables 8 and 9 below show the results of the linear regression analysis.

Table 8: Simple linear regression result on the effect of Tax Education Dimensions on Returns Filling Compliance

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	9.294	.764		12.161	.000
	GTE	-.002	.004	-.031	-.542	.588
	LTE	.317	.046	.444	6.889	.000
	PTE	.102	.061	.136	1.675	.015
	ETE	.007	.066	.009	.103	.018

Table 8 shows simple linear regression result on the effect of tax education dimensions on returns filling compliance. The result shows GTE beta ($\beta_0 = -0.031, \beta_1 = -0.002, t = -0.542, p = 0.588$), LTE beta ($\beta_0 = 0.444, \beta_1 = 0.317, t = 6.889, p = 0.000$), PTE beta ($\beta_0 = 0.136, \beta_1 = 0.102, t = 1.675, p = 0.015$) and ETE beta ($\beta_0 = 0.009, \beta_1 = 0.007, t = 0.103, p = 0.018$).

This implies that LTE, PTE and ETE have significant effects on returns filling compliance in the informal sector of Owerri Municipality, Imo State. Therefore, hypothesis 2 (HO2), hypothesis 3 (HO3) and hypothesis 4 (HO4) are rejected. GTE is not significant, therefore, hypothesis 1 (HO1) is accepted.

Table 9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.045[a]	.002	-.002	2.508
2	.494[b]	.244	.238	2.187
3	.512[c]	.262	.252	2.166
4	.512[d]	.262	.249	2.170

The result in Table 9 further showed that GTE, LTE, PTE, and ETE only accounted for 0.2%, 24.4%, 26.2% and 26.2%respectively, to the variations in returns filling compliance and the rest are explained by other factors not included in this study.

Table 10: Summary Table of Hypotheses Tested

S/N	Statement of Hypothesis	Decisions
1	HO_1: General tax education (GTE) does not have significant effect on returns filling compliance (RFC).	Accepted
2	HO_2: Legal tax education (LTE) does not have significant effect on returns filling compliance (RFC).	Rejected
3	HO_3: Procedural tax education (PTE) does not have significant effect on returns filling compliance (RFC).	Rejected
4	HO_4: Electronic tax education (ETE) does not have significant effect on returns filling compliance (RFC).	Rejected

Source: Field Survey Result, 2024

Discussions

The first finding of the study, which showed that general tax education (GTE) has a non-significant effect on RFC among self-employed individual taxpayers in the informal sector in Owerri Municipality, Imo State [GTE ($r = -.045$, $P > 0.05$); GTE beta ($\beta\_0=-0.031,\beta\_1=-0.002,t=-0.542,p=0.588$)], implies that an increase in general tax education would lead to a non-significant decrease in returns filing compliance. GTE only accounted for 0.2% to the variations in RFC, while the rest are explained by other factors not included in this study. This implies that a 1% increase in GTE would lead to a 0.2% decrease in returns filing compliance (RFC) of the self-employed taxpayers. This finding does not support theories of social reconstructionism and transformative learning used in the study.

Tax non-compliance is a social problem and the theory of social reconstructionism suggests that education should address real social problems. In the light of this finding, if general tax education provided was not designed to address specific social and economic issues faced by the self-employed taxpayers, its negative effect although not significant, could stem from a lack of relevance. The content and learning experiences may not have resonated with their unique or specific challenges, leading to a negative perception of the general tax education received.

On the other hand, transformative learning emphasizes the need for critical reflection to shift perspectives. The finding could mean that general tax education did not encourage deep reflection on the role and impact of taxes as it might have failed to trigger the transformative learning process necessary for changing attitudes and behaviours towards compliance due to being too general and not able to address practical areas specific to the needs, beliefs and assumptions held by the self-employed in the informal sector. However, this finding aligns with the view of Tilahun (2018), who opined that tax awareness has a negative, non-significant effect on tax compliance; Fauziati et al. (2020), Nasution et al. (2020), Dewi (2019) and Rahaya et al. (2017), who found that tax education has no significant effect on compliance behaviour. This finding is at variance with the works of Adu and Amponsah (2020), Arifin and Sriyono (2022), Suhono et al. (2022) and Intansari and Supramono (2022), who found tax education a significant factor in determining tax compliance. Also inconsistent with this current finding are the works of Ogungbade et al. (2021), who sees tax education as tax consciousness that has the potential to meaningfully curtail tax non-compliance in the informal sector; and Borman and Ramutumbu (2019), who positively linked general tax knowledge to tax compliance.

This outcome implies that for any tax education to meaningfully take place, such tax education must be relevant to the taxpayers. Tax education becomes a herculean task to taxpayers when the content and learning experiences presented are abstract, irrelevant and cannot solve their problems. General tax education may fail to address the specific tax needs and challenges faced by self-employed taxpayers in the informal sector, leading to their confusion and frustration and hence exert a negative influence on their returns filling compliance. It seems the respondents of this study believe that for taxpayers to comply with the obligation of returns filing as part of the tax compliance cycle/ process, the instrumentality of tax education that must be presented to self-employed taxpayers to reinforce their compliance behaviour in the informal sector should be related to the specific needs and characteristics of the taxpayers. Another possible reason for this finding could be linked to challenges of life faced by self-employed taxpayers. If self-employed taxpayers in the informal sector are struggling to meet up with their challenges – limited resources, unstable and meager income, poverty, insecurity, food insecurity, inflation etc, there is this possibility that they might be tempted to prioritize their immediate socio-economic and financial needs / concerns over returns filing compliance, their general tax education notwithstanding.

The second finding of the study, which showed that legal tax education (LTE) has a positive and significant effect on returns filing compliance (RFC) among self-employed individual taxpayers in the informal sector in Owerri Municipality, Imo State [LTE ($r=.493$, $P<0.05$); LTE beta ($\beta_0=0.444, \beta_1=0.317, t=6.889, p=0.000$)], suggests that an increase in LTE would lead to a significant increase in returns filling compliance behaviour. LTE only accounted for 24.4% to the variations in RFC, while the rest are explained by other factors not included in this study. This implies that a 1% increase in LTE would lead to a 24.4% increase in returns filing compliance (RFC) of the self-employed taxpayers. This finding supports both theories of social reconstructionism and transformative learning adopted in the study as both link tax education to returns filing compliance behaviour of self-employed taxpayers in the informal sector. This finding of the study is in tandem with the work of Ndubula and Matiku

(2021), who found that tax returns filing was at low level as a result of inadequate tax education to the taxpayers. Other previous studies that are in agreement with this particular finding of the current study are: Agusti and Rahman (2023), Wogo et al. (2023), Tantriangela and Setyowati (2023), Asmahani (2022), Adaletey et al. (2022), Bhalla et al. (2022), Kitula-Mende (2021), Twum et al. (2020), Susyanti and Askander (2019), and Bornman and Ramutumbu (2019). Their works lend credence to the finding that legal tax education (LTE) has a positive and significant effect on returns filing compliance (RFC). However, this finding is at variance with Tilahun (2022) and Rendy (2019), who found that such knowledge/ education has no significant effect on compliance behaviour. This finding suggests that when self-employed individual taxpayers in Imo State are educated about the legal requirements for filing returns and the consequences of non-compliance, they are more likely to comply because they understand that failure to do so may lead to sanctions or penalties.

The third finding of the study, which showed that procedural tax education (PTE) has a positive and significant effect on returns filing compliance (RFC) among self-employed individual taxpayers in the informal sector in Owerri Municipality, Imo State [PTE ($r=.286$, $P<0.05$); PTE beta ($\beta_0=0.136,\beta_1=0.102,t=1.675,p=0.015$)], implies that an increase in PTE would lead to a significant increase in returns filling compliance behaviour . PTE only accounted for 26.2% to the variations in RFC, while the rest are explained by other factors not included in this study. This implies that a 1% increase in PTE would lead to a 26.2% increase in returns filing compliance (RFC) of self-employed taxpayers. This finding supports both theories of social reconstructionism and transformative learning adopted in the study as both link tax education to returns filing compliance behaviour of self-employed taxpayers in the informal sector. This finding is consistent with Amin et al. (2022), Azaka and Balogun (2022), Adhkara et al. (2022), Abu-Hassan et al. (2022), Bornman and Wassermann (2020) and Damajanti and Abdulkarim (2017), as their works give credence to the finding that procedural tax education (PTE) has a positive and significant effect on returns filing compliance (RFC). However, this finding contradicts Fauziati et al. (2020) and Lestari and Daito (2020) who found that tax education has no significant effect on tax compliance. These finding suggests that self-employed taxpayers benefit greatly from understanding the specific procedures involved in tax filing. It could be that when they are familiar with the practical aspects of the filing process, they are more likely to complete their returns filing accurately and on time.

The fourth finding of the study, which showed that electronic tax education (ETE) has a positive and significant effect on returns filing compliance (RFC) among self-employed individual taxpayers in the informal sector in Owerri Municipality, Imo State [ETE ($r=.322$, $P<0.05$); ETE beta ($\beta_0=0.009,\beta_1=0.007,t=0.103,p=0.018$)], suggests that an increase in ETE would lead to a significant increase in returns filling compliance behaviour. ETE only accounted for 26.2% to the variations in RFC, while the rest are explained by other factors not included in this study. This implies that a 1% increase in ETE would lead to a 26.2% increase in returns filing compliance (RFC) of self-employed taxpayers. This finding supports both theories of social reconstructionism and transformative learning adopted in the study as both link tax education to returns filing compliance behaviour of self-employed taxpayers in the informal sector. This finding of the study aligns with Mohammed et al. (2022), Alshirah et al. (2022), Mugabe (2021), Amaning et al. (2021), Mbilla et al. (2020), and Akpubi and Igbekoyi (2019). Their studies opined that electronic tax education has positive significant effect on tax compliance.

However, the finding contrasts with those of Hama (2021) and Nasution et al. (2020). The positive significant effect suggests that when taxpayers are trained in using these electronic systems and digital tools, they are more likely to comply with tax filing requirements. This may be because electronic tax system can streamline the tax process, making it easier and fast to track and submit tax returns, and provide instant confirmation and records of submission, thus encouraging timely and accurate compliance

Conclusion

This study demonstrates that general tax education (GTE) is insignificant and negatively impacts returns filing compliance (RFC) of self-employed individual taxpayers in the informal sector. In contrast, targeted tax education (LTE, PTE, and ETE) significantly and positively enhances returns filing compliance. While the finding on GTE supports the assertion of Mascagni and Santoro (2018) that tax education programmes are more likely to influence tax knowledge rather than actual tax behaviour, the findings on targeted tax education, such as LTE, PTE, and ETE proved otherwise. By dissecting taxpayer education into specific components, this research provides a clearer understanding of their interactive effects, unlike previous studies that only examined aggregate measures.

The findings underscore the necessity for tax authorities and policymakers to develop targeted tax education policies that cater for the specific needs and interests of informal sector taxpayers especially the self-employed. Making tax education targeted, relevant, understandable, and applicable is crucial for improving compliance. The study concludes that general tax education (GTE) does not support self-employed taxpayers to comply, whereas a targeted tax education, such as LTE, PTE, and ETE is more effective and highly essential for fostering significant improvements in returns filing behaviour.

Recommendations

From the findings and conclusions, we recommend that:

1) General tax education should be enhanced. Policymakers should reassess and improve general tax education programmes/initiatives in the informal sector by focusing on designing more relevant content and learning experiences that resonate with self-employed taxpayers' specific tax needs and

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characteristics, not only to the present self-employed taxpayers but more importantly to the potential self-employed taxpayers to make returns filing compliance a culture.

2) Tax education programmes/initiatives should be adequately provided and expanded by making them available and accessible, specifically focusing on legal requirements, rights and responsibilities. These efforts should start at early stages of schooling to equip future generations of self-employed taxpayers with the necessary knowledge and readiness needed to understand and fulfill their tax filing obligations.

3) Procedural tax education should be strengthened as its positive impact on compliance suggests that more emphasis should be placed on educating taxpayers, and more importantly on educating potential taxpayers about procedural aspects of tax filing at all levels of education (Primary, Secondary and Tertiary). This should include detailed guidance on the steps involved in filing tax returns, deadlines, and required documentation, probably through radio, workshop, seminars, television, edutainment etc.

4) Government/tax authorities or policymakers should promote electronic tax education by investing in user-friendly online tax education modules, digital tools and platforms that provide step-by-step support and assistance, thereby ensuring their accessibility and convenience for self-employed taxpayers.

5) In planning tax education programmes, the government / tax authority should create tax education component to be known as the Department of Tax Education and Training (to replace communication unit while communication unit becomes a unit under the department) whose duties should include to disaggregate tax education into specific areas such as general tax education, legal tax education, procedural tax education and electronic tax education. The department should collaborate with other relevant agencies to create tax education initiatives that will foster voluntary tax compliance in society

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