Review Article

Tax education as a key tool to achieve the Sustainable Development Goals (SDG): new challenges after the emergence of AI

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ABSTRACT:

This work shows the growing importance given in recent years to tax education within the " soft law" for its relationship with tax compliance, reduction of tax fraud, and development of more sustainable societies. Hence, its current drive and inclusion in the new challenges and proposals within international taxation.

Based on the compilation and analysis of the most recent studies, reports, and works, with special mention to those prepared within the OECD framework, it is determined which Sustainable Development Goals (SDG) are favoured by promoting policies and programs in the area of tax education.

The implications of the emergence of artificial intelligence (AI) in the design of future measures to promote tax education are then explored, identifying both the opportunities and those aspects that could hinder the achievement of the SDGs. In conclusion, the need to carefully address these aspects in the development of educational programs on taxation is underlined to maximize their benefits and face the new challenges that could lead to harm and regression if they are not taken into consideration in the future.

PALABRAS CLAVES:

Educación fiscal, fiscalidad internacional, ODS, OCDE, fraude fiscal, desigualdad, nuevos desafíos, IA

RESUMEN:

Este trabajo muestra la creciente importancia que se le otorga en los últimos años a la educación fiscal dentro del "soft law" por su relación con el cumplimiento tributario, reducción del fraude fiscal y desarrollo de sociedades más sostenibles. De allí, su actual impulso e inclusión en los nuevos retos y propuestas dentro de la fiscalidad internacional.

A partir de la recopilación y análisis de estudios, informes y obras más recientes con especial mención a los elaborados dentro del marco OCDE, se concretan qué Objetivos de Desarrollo Sostenible (ODS) son favorecidos con en el impulso de políticas y programas en materia de educación fiscal.

Posteriormente, se exploran las implicaciones de la irrupción de la inteligencia artificial (IA) en el diseño de las próximas medidas para promover la educación fiscal, identificando tanto las oportunidades como aquellos aspectos que podrían obstaculizar el logro de los ODS. En conclusión, se subraya la necesidad de abordar cuidadosamente estos aspectos en el desarrollo de programas educativos en fiscalidad, para maximizar sus beneficios y afrontar los nuevos desafíos que podrían derivarse en perjuicios y retroceso si no se llegan a tener en consideración en un futuro.

MOTS CLES :

Éducation fiscale, fiscalité internationale, ODD, OCDE, fraude fiscale, inégalités, nouveaux défis, IA

RESUME :

Ce travail montre l'importance croissante accordée ces dernières années à l'éducation fiscale au sein du « soft law » en raison de ses relations avec la conformité fiscale, la réduction de la fraude fiscale et le développement de sociétés plus durables. D'où sa dynamique actuelle et son inclusion dans les nouveaux défis et propositions en matière de fiscalité internationale.

Sur la base de la compilation et de l'analyse des études, rapports et travaux les plus récents avec une mention spéciale à ceux développés dans le cadre de l'OCDE, nous précisons quels objectifs de développement durable (ODD) sont favorisés dans la promotion des politiques et programmes en matière fiscale.Par la suite, les implications de l'émergence de l'intelligence artificielle (IA) dans la conception des prochaines mesures visant à promouvoir l'éducation fiscale sont explorées, identifiant à la fois les opportunités et les aspects qui pourraient entraver la réalisation des ODD. En conclusion, la nécessité d'aborder soigneusement ces aspects dans l'élaboration de programmes éducatifs en fiscalité est soulignée, afin de maximiser leurs bénéfices et de faire face à de nouveaux défis qui pourraient entraîner des dommages et des revers s'ils ne sont pas pris en compte à l'avenir.

Contents:

1 CONCEPTUAL DELIMITATION OF "TAX EDUCATION" AND ITS RELATIONSHIP WITH TAX COMPLIANCE

In this paper, the concept of "tax education" is understood as one that must jointly encompass the teaching of the tax system, the functionality of taxes, and civic-tax education (Enríquez Rodríguez, 2022), aspects that positively impact the taxpayer's tax morality. See, Figure 1

Figure 1: Components of "tax education"
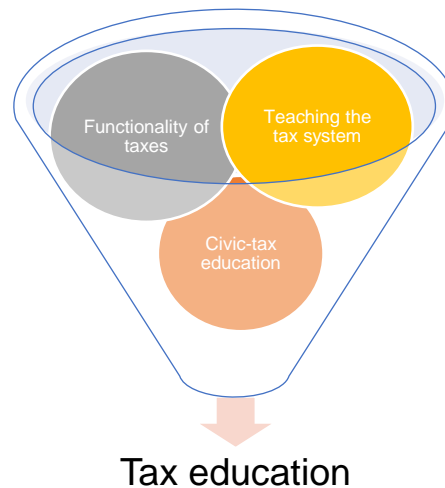
Tax education

Source: Own elaboration

In this regard, the concept of "tax education" cannot be confined to a single aspect among those previously mentioned. For instance, a deeper understanding of tax regulations alone does not guarantee greater collaborative tax compliance for taxpayers (Torgler,2007). Similarly, knowledge of the role of taxes within a democratic legal system is not a singularly sufficient factor to enhance tax compliance (Martín Oviedo, 1973). Finally, if limited without incorporating the aforementioned aspects, civic-tax education will also fall short of achieving its goals.

Currently, studies demonstrate the close interrelation between greater tax education for taxpayers and increased collaborative tax compliance.

To achieve this, tax education must address the three previously mentioned areas. This also involves identifying and proposing measures to reduce the complexity of current tax systems, which would decrease the perception of inequality in their practical application. (James, S., & Alley, C., 2002)

In this sense, we must consider previous studies such as the one carried out in Tanzania where to increase tax compliance of small and medium-sized enterprises (SMEs), the Tanzania Revenue Authority (TRA) promoted tax education programs with very positive results by verifying greater collaborative tax compliance in the recipients. (Njunwa & Batonda, 2023). In this same sense, previous studies, such as the one carried out in Hong Kong on university students, showed a higher degree of tax compliance on sales tax and/or income tax after taking a general tax education course. They increased in those who subsequently took technical tax courses (Wong & Wai-yee, 2015) or the one carried out specifically on VAT, an important source of income in developing countries (Mwakabungu, 2016), among other studies.

2 TAX EDUCATION AND THE SUSTAINABLE DEVELOPMENT GOALS (SDG)

To date, different studies confirm the importance of "tax education" as "the most effective approach to improve the application of tax obligations" (Njunwa & Batonda , 2023) and the "most powerful and effective instrument for the fight against tax fraud" (Siverio Luis, 2021).

Below, we will examine the SDGs that are primarily involved when discussing the implementation of tax education measures. See Figure 2.

Figure 2: "Tax education" and SDGs involved
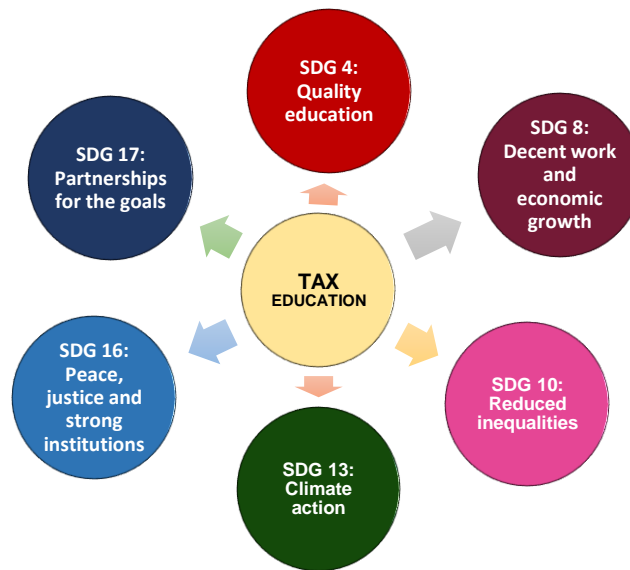
2.1 SDG 4: QUALITY EDUCATION

According to the most recent report on the subject prepared by the OECD (OECD, 2021), current tax education programs are being implemented mainly among students (29%). Still, programs are beginning to be created specifically for companies (9%) and individuals already of tax-paying age (5%). See Figure 3

Figure 3: The eight sub-categories of initiatives
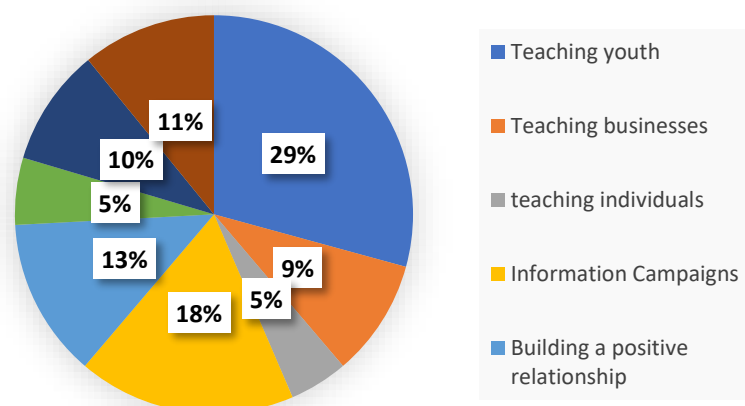
Likewise, within the different tax education programs implemented, concepts related to awareness and civic-tax education are not the only ones being incorporated. Programs have

also been introduced with very good initial results in teaching basic concepts of the tax system and the most common taxes for a great part of the taxpayers. In this sense, there are courses on taxation for companies taught in South Korea or Tanzania, the incorporation into the study plans of teaching basic knowledge on economic policy, the tax system, and the federal budget in educational programs in Germany, or a similar case in Australia. Also, in cases like Canada, the Revenue Agency (CRA) Outreach Program implements actions to raise awareness and educate the most vulnerable population. All these measures help to improve the quality of education and knowledge, particularly in the tax area, providing coverage to all taxpayers with adaptation to their level of expertise and needs.

2.2 SDG 8: DECENT WORK AND ECONOMIC GROWTH

Good tax education positively affects the morale and conduct of taxpayers in compliance with their tax obligations, reducing tax fraud.

From an international perspective, this reduction in fraudulent taxpayer behavior has a positive impact by promoting a better distribution of wealth between rich and developing countries, thus contributing to sustainable development and bringing economic justice closer to a global level (Buffon, 2009).

In this regard, see, for example, the successful case of South Africa. In that country, according to internal reports from the South African Revenue Service (SARS), it was concluded that a great part of taxpayers in more remote and rural areas filed their tax returns through Mobile Tax Units (MTUs). But what is more interesting is that by providing them with the necessary knowledge, many even took advantage of this program to request a tax identification number or register for certain taxes as small business owners. As a result, there was a reduction in the shadow economy in the country.

2.3 SDG 10: REDUCED INEQUALITIES

Having a citizenry with greater tax education would reduce illicit financial flows (IFF), which are of great concern worldwide due to their serious harm, especially for developing countries, which are struggling to mobilize their internal resources to finance their development in a sustainable manner. In this regard, it is worth mentioning a 2020 UNCTAD report that estimated that in Africa alone, annual losses caused by IFFs exceed US$88 billion (UNCTAD, 2020), almost half of the US$200 billion financial gap that the continent needs to close to achieve the Sustainable Development Goals (OECD, 2024).

In the latest work carried out by the OECD on this subject (OECD, 2021), it was observed that both low- and lower-middle-income countries (19 countries - 32%) and high- and upper-middle-income countries participating in the present study (40 countries - 68%) were concerned about implementing educational measures in tax and fiscal matters. See Table 1.

Table 1: Participating countries and percentage comparisons by income classification in OECD publication (2021)

PARTICIPATING COUNTRIES	No. of countries	Representative percentage	Percentage by grouping
HIC (High-income country)	27	46%	68%
UMIC (Upper middle-income country)	13	22%	
LDC (Least developed country)	11	19%	32%
LMIC (Low middle-income country)	8	13%	
TOTALS	59	100%	100%

Source: Own elaboration. Data extracted from https://stat.link/8jgik5

2.4 SDG 13: CLIMATE ACTION

To achieve this goal, it is necessary to improve awareness about the importance of this issue concerning climate change and its consequences. In this sense, thanks to correct tax education, which promotes an understanding of green taxes, promotes initiatives in taxation for emissions or promotes more eco-friendly practices inside the taxation aspect, we can achieve more awareness of citizenship and critical with all practices against this.

2.5 SDG 16: PEACE, JUSTICE, AND STRONG INSTITUTIONS

Tax education fosters cooperation and strengthening capacities such as understanding and criticism, enabling a more equitable approach closer to citizens' needs in tax systems and the regulatory development of tax legislation. Moreover, consequently, a decrease in tax fraud, an increase in tax collection, and a reduction in public costs focused on the implementation of tools or coercive measures for the detection and corresponding sanction of tax evaders under long, costly procedures with no real certainty of achieving the effectiveness of the sought objective. All this considers the sophisticated and increasingly complex tax engineering tax evaders apply. On the contrary, establishing effective measures to promote tax education can promote peace, justice, and solid institutions derived from a more aware citizenry with more active participation. Finally, a citizenry can better ensure transparency and control in the management of public resources.

2.6 SDG 17: PARTNERSHIPS TO ACHIEVE THE GOALS

Before the 2030 Agenda's approval, the Addis Ababa Action Agenda was approved in 2015 as a "historic agreement" that provided "the basis for implementing the sustainable development agenda that world leaders would adopt" (United Nations Department of Economic and Social Affairs DESA, 2015) and that would govern the next fifteen years.

There is no doubt that education in taxation is an essential component of the "soft law" that directly affects the fiscal policies and laws adopted by the states, making it possible to develop a more sustainable society[1].

Hence, it is important to continue to work towards implementing international treaties and collaborative interstate programs on tax education. This is under the understanding that an ethical model must also be introduced in tax laws that go beyond possible continuous legislative changes. (Tipke, 2002). Under this same direction, the new architectural design of global tax cooperation relations is positioned, inspired by human rights and the rest of the social and humanitarian rights of the international community[2]. (Owens et al., 2023). Also, in this same line, the concept current theory of the "fair tax[3]" "suggest a theoretical concept of <u>tax system sustainability (and a model for measurement) in which different tax policies, tools, and legislative measures contribute to sustainable development in its economic dimension</u> (innovation, **knowledge-driven growth**, productivity, sustainable consumption, investment, debt sustainability), <u>social dimension</u> (employment, **social cohesion**, population growth), <u>environmental dimension</u> (greenhouse gas emissions, green innovation, renewable

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[1] This term of sustainability, understood as the protection and preservation of common resources that can satisfy present and future needs in both the environmental, economic and social spheres. (World Commission on Environment and Development, 1987).

[2] Within the framework of the UN, the concept of "tax education" is integrated within the holistic approach shown by the resolution of the Second Committee of the United Nations of November 15, 2023 on effective and inclusive international tax cooperation within the United Nations, when mentioning that: " A *holistic and sustainable perspective of development must be adopted that takes into account interactions with other important areas of economic, social and environmental policy .*" Regarding the above, it should be noted that said resolution A / 78 / / 459 / Add . 8, of December 7, 2023, was the basis for the approval of General Assembly Resolution A / RES / 78/235 of December 28, both on effective and inclusive international tax cooperation within the United Nations. (Aucejo , 2024)

[3] H2020 EU project FairTax No. 649,439, Revisioning the 'Fiscal EU': Fair, Sustainable, and Coordinated Tax and Social Policies.

energy, and waste) <u>and institutional dimension</u> (**effective tax collection, compliance costs, tax morale**).” (Brokelind & Thiel, 2020)

In summary, tax education's importance as a tool to combat tax fraud and its relationship to achieving the SDGs must be considered. (Bird & Davis- Nozemack , 2018)

3 THE APPLICATION OF AI IN FUTURE DESIGNS OF TAX EDUCATION MEASURES TAKING INTO ACCOUNT THE SDGS

From the 140 initiatives applied in all participating countries (OECD, 2021), the OECD found a series of main features to consider in the design of measures in favour of tax education, the general outline of which would be as follows:

1.   Ensure that initiatives are adapted to local needs and circumstances
   a.   Consider the relationship with other initiatives
   b.   Identify the collaborators suitable
   c.   Guarantee management effective
2.   Manage features specific to the initiative chosen
   a.   Identify the public goal and reach it
   b.   Consider the duration for the initiative and the moment suitable for implementation
   c.   Guarantee the resources (and how to expand them over time)
   d.   Monitoring and evaluation processes

However, with the emergence of Artificial Intelligence (AI), the following challenges must also be considered, which can lead to positive or counterproductive results if not addressed effectively. See Table 2.

Table 2: Advantages and challenges in new designs in Tax Education after the emergence of AI

	SDG 4 : Quality education	SDG 10: Reduced inequalities	SDG 16: Peace, justice and institutions solid	SDG 17: Partnerships to achieve the Goals
ADVANTAGES	Adaptability, customization and interactivity	Greater reach even to people with less knowledge due to its adaptability	Automation of greater precision in administrative and educational procedures.	Improving the capacity for predictive analysis and gaps. Optimization of national and international adopted programs
CHALLENGES	Dependence on the use of tools provided by AI	Technological gap in the countries further disadvantaged	Slowing down critical thinking that serves as a control for public management and institutions	Transfer the need for collaborative work to a second level

ODS 8: Decent work and economic growth

On the one hand, AI can provide positive effects such as adaptability, personalization, and interactivity with the recipient. On the other hand, it can lead to the dehumanization of learning, algorithmic bias (for example, cultural) if these are not designed correctly, and a clear limitation for those who do not have easy access to digital tools. Therefore, we would reduce the quality of teaching for the most vulnerable sector (SDG 4) and accentuate said inequality in the subject (SDG 10).

Another important challenge is to establish measures that avoid promoting the false idea that taxpayers can fully depend on AI tax programs developed solely as a means of support. In this regard, it cannot be allowed to accept a citizenry without critical thinking incapable of supervising, giving opinions, or proposing effective measures for the improvement and management of public institutions (SDG 16).

Likewise, in terms of international treaties and programs on tax education, collaboration between states is necessary, which cannot remain at a secondary level, as justified by the implementation and benefits of AI. Those that would be most harmed would be developing countries. This is contrary to the search for alliances to achieve the SDGs (SDG 17).

Finally, it should not be forgotten that tax education seeks tax compliance and "generalized tax obligations will enable countries to collect the revenues needed to achieve the Sustainable Development Goals." (OECD, 2021) And, among them, a growing economy and decent work. (SDG 8)

4 CONCLUSIONS

From all of the above, it is possible to see the importance of tax education in the context of socioeconomic growth at a personal, regional, state, or supranational level and its impact on the fulfilment of the SDGs. Likewise, its growing importance is seen when its inclusion in reports, resolutions, or projects prepared by international organizations such as the UN or the OECD is valued.

The following are some of the benefits of AI: adaptability or customization to the user's level of knowledge, the interactivity of the tools, giving a more practical approach to learning, the ability to analyze and predict the latest trends and shortcomings to optimize the adopted programs, and efficiency through the automation of both administrative and educational processes, allowing more time to be spent analysing and promoting new areas or improvements in the field.

However, points that could be detrimental if not taken into consideration in the new training designs would be the inequality of access to digital platforms in certain sectors or low-income countries. Likewise, not adjusting the next plans in fiscal education to encourage non-technological dependence on new AI tools and promoting self-understanding and criticism would be a serious mistake.

Therefore, in order to enhance the benefits of AI, it should be taken into account the development of programs using algorithms correctly designed to adapt to the recipient with active learning methods and avoid, for example, cultural or racial biases. And, in any case, provide the information from the most objective point of view possible that allows the taxpayer to formulate their own criticism and opinion. Likewise, the tools for analyzing results, proposals, or automatable procedures that AI can optimally provide in the search to provide a more efficient and effective service should be promoted.

In summary, we have already seen the new challenges that new tax education programs must consider. Now, it will be up to each state or tax administration to consider, moderate, and convert these new challenges into advantages, bringing us even closer to achieving the SDGs of the 2030 Agenda.

At this point, it is worth recalling UNESCO's position on AI: "Although technology is not neutral, as already mentioned, decision-making is and will remain our responsibility as human beings. We can decide that type of future we want, and this requires a radical change in our relationships with nature, technology and each other themselves. When it comes to technology, including generative AI, we can decide release he potential, taking us further seriously ethics, safety and inclusion or trying protect us and our future of technology, banning and trying gain time. AI certainly provides opportunities innovative that allow enrich and transform experiences educational. But as we do so, it will be crucial to prioritize considerations ethics and the preservation of education as a social and focused effort in the human being ." (UNESCO, nd)

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