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Infusing Sustainability in Secondary School Economics Education

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This research article discusses the theme of the infusion of sustainability in school economics. It stems from the researcher's study that explores teaching and learning in secondary school economics in Malta. The underlying conceptual framework for this study is critical realism, which offers an understanding of the world that is real, but which may be differently experienced and interpreted by different observers (Alderson, 2021; Bhaskar, 1979; Fletcher, 2017). This paper draws upon observation sessions and interviews with fourteen economics teachers. The researcher used thematic analysis to analyze data (Braun & Clarke, 2006) with the help of Nvivo software. The participants regarded education for sustainable development as a prominent theme. Furthermore, they educated their students to reflect on how their choices affected not only themselves but also others and cultivated an awareness of social justice in them. The considerations raised by this paper can assist teachers, teacher educators, and researchers in their reflections and efforts relating to enhancing the sustainability dimension in school economics education and other subjects.

Keywords: secondary school economics, economics education, education for sustainable development, sustainability

This paper discusses the attempts of Maltese teachers at infusing sustainability in secondary school economics. Economics education tends to be dominated by the neoclassical economics orthodoxy (Chang, 2014; Lawson, 1997; Skidelsky, 2020). This ideological preference for neoclassical theory also permeates the Maltese secondary school economics curriculum (Mizzi, 2022).

School Economics Education

Marshall (1920) defined economics as “a study of mankind in the ordinary business of life”, exploring “that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of well-being” (p.1). Subsequently, Robbins (1984) defined economics as “the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses” (p.16). This definition, or variations of it, has become a norm worldwide and a starting point for learning economics at school throughout the world (Brant, 2011, 2015).

Learning economics develops a deeper understanding of the world that enables students to make informed choices as consumers, citizens, and workers (Brant, 2011, 2015; Davies and Brant, 2006; Grant, 2006; Jephcote, 2005; Jephcote and Abbott, 2005; Krueger, 2019; Lipsey, 1989; Mizzi, 2021, 2022; Skidelsky, 2020; Walstad and Soper, 1991). Young learners have an urge to understand the changing world in which they live and make it better (Brant, 2011, 2015; Brant and Cullimore, 2012; Brant and

Panjwani, 2015; Grant, 2006; Mizzi, 2022; Skidelsky, 2020). Evidence of this is the increasing number of students around the world who are opting to study economics (Brant, 2015, 2018). The discipline has much to offer them, such as assisting students to 'think as an economist' (Arnold, 2005; Grant, 2006). Lawson (1997) argued that "there can be no denying that, whatever its longevity, orthodox economics is a project that is currently real and highly efficacious" (p.197). It is a teacher's responsibility to enact economics teaching and learning in such manner as to make the subject relevant, alive and worth studying. Students may then experience that "95 per cent of economics is common sense – made to look difficult, with the use of jargons and mathematics" (Chang, 2014, p.3).

There are numerous ways of conceptualizing the economy or 'doing' economics. These include the classical, neoclassical, Marxist, developmental, Austrian, Schumpeterian, Keynesian, institutionalist and behaviouralist schools of economic thought. These different approaches to economics support different methodologies and ideologies. Each possesses strengths and weaknesses, depending on how it conceptualizes aspects of the economy and the relationships among them. Although no one school should claim superiority over others, the neoclassical school has established itself as the dominant one (Chang, 2014; Lawson, 1997; Noguera-Méndez and Cifuentes-Faura, 2022; Skidelsky, 2020).

Values such as love, justice, pity, courage, honour, loyalty, ambition, sustainability, and public service are not considered in the hypothesis of neoclassical economists (Aldred, 2009, 2019; Brant, 2011; Chang, 2014; Fine, 2010). These economists argued that moral questions "are above their pay grade ... but this is only because they have defined their subject in a way that deliberately excludes them" (Skidelsky, 2020, pp.13-14). Chang (2014) contended that one "should never believe any economist who claims to offer 'scientific', value-free analysis" (p.452). Economists ignore, for instance, the reality of firms who use their resources to support social causes or avoid using production processes that might generate negative societal and/or environmental consequences (Chang, 2014; Krueger, 2019; Noguera-Méndez and Cifuentes-Faura, 2022).

The underlying motivation of economic life tends to be equated with greed and the blind pursuit of money (Brant, 2011, 2015; Skidelsky, 2020). Early great economists such as Smith and Keynes would despise the opinion that economics deals solely with material wealth and prosperity. Economics, which was once rooted in moral philosophy, gradually detached itself from moral concerns in the twentieth century as it aspired to become a pure science. This tendency was part of a more general movement whereby different traditions of studying society sought to emulate the natural sciences. Neoclassical economics became individualistic, shorn of political, environmental, and ethical dimensions that involved subjective value judgements. Homo economicus started to be envisaged as pursuing solely self-interest and abstaining from social relations. He is a "rather one-dimensional being – a 'pleasure machine', as he was called, devoted to the maximization of pleasure (utility) and the minimization of pain (disutility), usually in narrowly defined material terms" (Chang, 2014, p.121).

Economists stopped considering questions such as, "What is the purpose of profit maximization and efficiency of the market? Who is benefiting from economic growth? What is the goal of the growth in wealth? How to evaluate a balance between economic growth and sustainable development?" They assumed, for instance, that the market effectively coordinates complex economic activities. They tended

to forget that “it is no more than that – a mechanism, a machine. And like all machines, it needs careful regulation and steering” (Chang, 2011, p.253).

A school economics curriculum tends to implicitly accept neoclassical theory (Brant, 2011, 2015; Mizzi, 2022; Noguera-Méndez and Cifuentes-Faura, 2022). It would include neoclassical content such as scarcity, choice, opportunity cost, wage determination, inflation, and circular flow of income. This economics content offers “a simpler version of university economics” (Brant and Panjwani, 2015, p.320), predominantly embracing a positivistic methodology (Brant, 2011, 2015; Brant and Panjwani, 2015; Chang, 2011; Livesey, 1986; Spotton Visano, 2018, 2019) and reinforcing a paradigm which tends to assume the status of being ‘natural’ and value-free.

Within a context of a global drive to promote an education that prepares students to tackle global challenges such as climate change, environmental degradation, poverty, injustice, inequality and conflict, the researcher argues that economics needs to strengthen its moral, social, and environmental dimensions (Mizzi, 2022). It needs to consider more the idea of a compassionate human being who cares about other persons, human justice, and the environment. Otherwise, economics education would run the risk of becoming irrelevant to the development of young learners. This research article explores how and in what ways Maltese school teachers attempted to promote Education for Sustainable Development (ESD) in their economics teaching and learning. This contribution acquires relevance within the context of the efforts of the United Nations to achieve a more sustainable future for all people and the world by 2030 as spelled out through the Sustainable Development Goals (SDGs). Besides stimulating reflection about infusing ESD in other subjects, this paper contributes to the research evidence in secondary school economics education, of which there is a paucity (Davies and Brant, 2006; Mizzi, 2022; Shanks, 2020).

Methodology

The researcher used a qualitative research approach in this study aimed at developing an understanding of teaching and learning in the secondary school economics class. Qualitative research allows in-depth analysis, the investigation of highly sensitive issues and the making of comprehensive subject evaluation together with keen insight (Charmaz, 2014; Clough and Nutbrown, 2012; Cohen et al., 2011, 2018; Grbich, 2013; Punch, 2014; Trafford and Leshem, 2008). Such an approach employing interviews and lesson observations enabled face-to-face interaction with the participants and allowed for in-depth data together with detailed insights and experiences to be gathered.

The research is rooted in the belief that there exists a reality, and that the participants and the researcher bring their own beliefs, values, and experiences to the study. The conceptual framework adopted is critical realism. It offers an understanding of the world that is real, but which may be differently experienced and interpreted by different observers (Bhaskar, 1979; Fletcher, 2017). To capture aspects of the reality of the teaching and learning of school economics in Malta, the researcher explored the views and perspectives of teachers and observed actual lessons. Besides complementing each other, it was intended that these methods provoked different insights and perspectives. For instance, observations might shed light on the meaning that interviews might not fully capture, and vice

versa (Phoenix and Brannen, 2013). Semi-structured interviews were chosen as they enabled the researcher to flexibly address the research aim of exploring secondary school economics education and probe deeper, thus allowing the participants to express their understanding of their perceived reality of teaching and learning economics.

The Maltese educational system has three main educational providers: the State, the Catholic Church and the Independent sector. Economics is taught from Year 9 to Year 11 (students between the ages of 13 and 16) in the Church and Independent schools but not in the State schools. Since the population of the economics secondary school teachers was relatively small, consisting of twenty-four teachers, the aim of the researcher was to recruit as many as possible of these teachers; each teacher would be bringing into the research an understanding of the economics teaching and learning process. Fourteen participants were recruited: eleven teachers from Church schools and three from Independent schools. Teachers were asked permission to observe one of their lessons; ten teachers consented. The researcher observed two experienced participants twice and two student teachers who were in their final year of their teacher education course. In total, 14 lessons were observed. Table 1 provides further information about the participants. All names are anonymised.

Table 1

Characteristics of the teacher participants and class during observation

	Pseudonym	Teaching experience in economics (years)	Year and class size during lesson observation
1	Stephen	10	No observation
2	Susan	8	Year 9: 5 boys
3	Franky	36	Year 9: 4 boys
4	Mary	20	Year 11: 11 boys
5	Grace	24	Year 9: 10 boys, 6 girls
6	Debbie	2	Year 9: 6 boys, 4 girls
7	Robert	2	No observation
8	Liberata	18	Year 10: 8 boys
9	Monica	22	Year 10: 8 girls
10	Claire	11	Year 10: 13 girls
11	Christy	8	Year 10: 16 girls
12	Carmen	20	No observation
13	Antonia	21	No observation
14	Ian	1	Year 9: 7 boys, 9 girls

The interview data was transcribed, and lesson observations written. Analysis was completed using Nvivo software for the qualitative and thematic analysis of the resulting data. The use of thematic analysis is advocated as a flexible method of data analysis capable of dealing with complex qualitative data which can provide a rich account of the data concerned (Braun and Clarke, 2006, 2013). Initially, each text was read repeatedly. Textual passages were then categorised in themes relating to economics education. The length of the passages varied from a few words to a whole paragraph. The software was useful in capturing all data relevant to the categories. Finally, the results were written from the information, once again allowing for further modifications within and among the themes. Pseudonyms were used for all participants. Education for sustainable development emerged as a theme.

Attempts were made to ensure that the data and its analysis reflected as truthfully as possible what was going on in these classes. Using more than one method of data collection helped to capture the teaching and learning process in these classes in a rigorous and valid manner (Cohen et al., 2011, 2018; Robson and McCartan, 2016). By piloting the interview questions and observation guidelines and being open to feedback from an unbiased individual, an attempt was made to avoid bias during the questioning and the writing up of the observation notes. Furthermore, notes were taken of all data including deviant cases (negative case analysis). This search for negative cases was an important means of countering researcher bias (Silverman, 2014).

Findings and Discussion

Since the teachers had little or no influence over the course syllabus, the approach they adopted to contribute to their students' learning for sustainability was to embed sustainability issues into curriculum topics, enabling the widening of their students' perspectives relating to the sustainability dimension. This concurs with the literature exploring the infusion of sustainability in the discipline of economics (e.g., Molera et al., 2021; Noguera-Méndez and Cifuentes-Faura, 2022; Sidiropoulos, 2014).

Education for sustainable development was regarded by these participants as a prominent theme. Teacher Ian emphasized that "it's our responsibility to address this important aspect." Grace referred to sustainability as "a core area" in economics, "especially when a compromise needed to be reached between profit-making and caring for the environment." Susan argued that this aspect of infusing sustainability in economics was important because the subject might be perceived as encouraging consumption at the expense of environmental degradation. Ian maintained that it was important that teachers owned this mission, because it "ultimately boils down to the teacher's beliefs about what he is teaching and how passionate he is about making a change in the world." The enhancement of the sustainability dimension in Maltese school economics education is in line with the efforts within the Maltese educational setting to encourage the acquisition of values and skills necessary to develop the students into lifelong learners and responsible citizens. ESD is one of the cross-curricular themes established by the Maltese National Curriculum (Ministry of Education and Employment, n.d, 2012).

Teachers discussed the relevance of sustainability in economics towards building a better society. Grace argued how the notion of sustainability of resources was absent in the economics that she studied when

she was a school student. She was glad that some United Nations SDGs were going to be introduced in the proposed secondary school economics syllabus. She contended that one could not decide on the allocation of resources without considering such factors as the effects on society, environmental issues, climate change, and the effects of production methods: "You cannot discuss, for instance, market failure without delving into issues of sustainable development."

Teachers invested efforts towards educating their students about the sustainable use of resources in their everyday life. They discussed how they did this "in a subtle way. Just a two-minute thing. But it makes a difference" (Ian). For example, Claire was observed cultivating the habit of writing a sentence on her handouts that fostered reflection about an aspect relating to sustainability that was linked to the topic at hand. While referring to the availability of water as one of the SDGs, Antonia argued how while remembering that there were children who had to carry home their water reserve for the day, she recycled her water: "My second and third hand water I simply don't flush it away. I turn it from the washing machine to the toilet. We need to avoid wasting water." She claimed that this is "pure economics. I have a resource, which is scarce, I'm paying a price for it and I'm re-using it." It was in this sense that she remarked that she could not teach economics well unless she realized and felt that she was living it. She felt that it would be "stupid and incongruent to preach theory and not put it into practice myself. That's pure hypocrisy. I have to be an example of what I am teaching." Similarly, Susan emphasized with her students that making maximum use of resources implied "a moral obligation to avoid waste." She used the notion of 'free' and 'economic goods' to clarify this: "I can open the window to let in fresh air or put on the air conditioning. One is a free good while the other is an economic good. I want to convey the message that the more free goods we use, the less waste we generate."

Teacher Stephen maintained that the idea of sustainability needed to be linked to the students' everyday knowledge and experiences; they would have heard about it – "what a lay person would usually know." But through their economics education, they would have reflected more upon certain issues, such as the economic and social factors involved and their effects. While discussing aspects of renewable and non-renewable resources, Liberata invited her students to reflect on how these notions applied to their lives, especially when deciding which of their needs and wants to satisfy. By bringing examples from their daily life, she contended that sustainability did not remain a "buzzword but students are empowered to discuss it in more detail and contextualize it in their own life." This approach is in line with Sidiropoulos (2014) who argued that attention needs to be drawn to teachers with little or no control over the course curriculum to enhance ESD with class discussions of sustainability topics throughout the curriculum.

Teachers educated their students about the sustainable use of the firm's human resources. Liberata emphasized that the workers of an enterprise were "its most important asset." When discussing how adding more workers to a fixed factor of production eventually reduced the marginal product, I observed Ian educating about the need of respecting human resources. He asked his students: "Is profit before people or persons before profit?" He referred to the immorality of cheap labour and to the need to treat immigrants with respect. In a similar vein, two other teachers referred to the importance that employees were not perceived as numbers but as human beings. Monica enriched the notion of diseconomies of scale by eliciting that employees feel alienated when they sense that they are not

valued as persons. These teachers' approaches contributed towards bringing back into economics its moral purpose (Brant, 2015; Brant and Panjwani, 2015; Chang, 2014; Mizzi, 2022; Ranson and Baird, 2009; Sober-Giecek, 2000).

Class observations also shed light on how easy it was to present economics as an amoral subject. Monica unconsciously referred to human beings as a resource of production. When discussing the graph depicting the average revenue product (ARP) and the marginal revenue product (MRP), she explained that the firm stopped employing workers up to the point where marginal cost (MC) was equal to MRP. This example is in line with the literature discussing how easy it is to present economics content as void of values and respect for resources (Brant, 2011; Noguera-Méndez & Cifuentes-Faura, 2022; Mizzi, 2022; Spotton Visano, 2018). In this case, Monica was projecting human resources as something that can be disposed of, and that the firm lacked a long-term perspective towards valuing its labour force such as failing to provide good working conditions including long term job security, training and health facilities. The researcher's argument is that the infusion of values and the steering of the learning process in economics towards sustainability need to be brought more to the awareness of teachers as it enlivens the subject while educating for a more sustainable future. This is also an argument in favour of encouraging teachers to explore their own values, since "there is a strong link between the values you espouse as a teacher and the values that you promote to pupils" (Abbott, 2019, p.19). The more teachers become aware of their own values and the values they need to infuse in their teaching and learning, the more a school subject is brought to life and can contribute to the achievement of the SDGs.

The notion of externalities was emphasized during lessons; this refers to the effects on society generated by production. For example, teacher Susan discussed with her students that while increasing production to improve the standard of living, society needs to be sensitive about caring for the environment. She attempted to instigate her students' thinking by asking: "What if we achieve an increase in gross domestic product at the expense of environmental degradation, more stressed people, increased pollution and traffic congestion? Is an increase in national income a good measure of the standard of living?" She was observed involving her students into considering whether excessive materialism and consumption meant that persons were more fulfilled. This approach was powerful for her students in that they were empowered to think in other directions other than that suggested by neoclassical economics.

Teacher Ian argued that "when we're studying economics, we should include in our line of thought externalities and how each decision affects others." He claimed that teachers needed to devote more time to externalities, "because we would become critical thinkers in certain ways. We would look at our decisions and ask ourselves: 'How are our ways of making money affecting others?'" He argued that if we could get the students to think in that manner, the world could become a much better place. It depended, however, on "how much the teacher believes in what he or she is teaching." If a teacher does not believe, for instance, in global warming and sustainable development, how is s/he going to pass these concerns and values to the students? An implication for teacher education arising from Ian's argument is that student teachers need to be encouraged to explore their values and beliefs and be sensitized to educate the young generation in the sustainability dimension. This is in line with Molera et al. (2021) who maintained that the professional development of teachers in ESD needs to be considered

as ‘the priority of priorities’. UNESCO has insisted in recent years on the need to reorient teacher education towards sustainability and empower teachers to become facilitators of ESD (Molera et al., 2021; Noguera-Méndez and Cifuentes-Faura, 2022).

Teachers explained the notion of externalities with reference to sustainability by discussing local examples. For instance, while referring to the potential construction of the tunnel between the islands of Malta and Gozo, Franky was observed asking his students: “What are the positive externalities involved? What are the negative ones? What alternative uses are there for the waste generated?” He assisted his students to embark on a cost-benefit analysis by encouraging them to think about the social costs and benefits involved, while being attentive not to get much involved in partisan politics. Similarly, while discussing land reclamation as a means of achieving economic growth, teacher Susan was observed discussing that reclamation in Malta tended to create commercial and residential areas. “Why not generating more parks and open spaces instead of building all over the Island,” she emphasized. The case study approach that makes use of content that is culturally appropriate and locally relevant tends to be particularly useful to analyze sustainability issues as it promotes the skills of critical analysis and thinking (Mizzi, 2022; Sidiropoulos, 2014).

A common finding emerging from the teachers’ voices is the effort towards educating the students into reflecting how their choices affected others. Liberata narrated how she educated them to grow out of their “I don’t care about what’s happening around me” attitude into an awareness that “anything that happens affects all of us”. She discussed, for instance, that if there was a market failure, it affected all the members of society. On another note, Franky emphasized that if someone enjoyed a resource, s/he was making it not available to another. Therefore, there existed the responsibility not to waste that resource. He educated his students that “each resource is a value in itself”, such as the value of money and of human resources. He helped them reflect, for instance, that when they started working, they needed “to realize their value in terms of labour; they needed to value themselves and others and demand adequate pay.”

Four teachers mentioned how they educated their students into aspects of social justice. Franky and Liberata discussed how during their lessons they referred to issues relating to development, poverty, fair distribution of income, and fair competition between market structures. Liberata contended that these were aspects which she would not consider excluding from the secondary school economics syllabus. Franky maintained that since he taught at a Church school, it was appropriate that he referred to Catholic social teaching about these issues. This input was however limited due to time and syllabus constraints.

These findings indicate how Maltese secondary school teachers attempted to infuse ESD in their economics teaching and learning. The infusion of values such as love, honour, justice and sustainability bring the subject to life, particularly because the subject is inherently about values. There were instances when economics was taught independently of any particular ethical position, such as when communicating with students that a particular model advises a firm to lay off workers to maximize profit. The notion of homo economicus, however, was often challenged, and the students tended to be invited to reflect upon the idea of humans embracing moral, social and environmental values. After all,

these were the sentiments of the early great economists. Adam Smith, for instance, claimed that human nature is simultaneously self-regarding and other regarding. He maintained that persons are endowed with a natural tendency to care about the well-being of others, which he calls 'sympathy', defining it as "our fellow-feeling for the misery of others" (Smith, 1976, p.10). He contended that a society cannot prosper if it includes a large number of persons who are poor and suffering.

Conclusion

Awareness of sustainability is rather low in the teenage years; students tend to have little knowledge and concern for this issue (Molera et al., 2021). Hence the important role of schoolteachers in educating their young learners in the sustainability dimension. It is crucial that students reflect that sustainability is a paradigm in which environmental, social, and economic aspects need to be balanced in order to achieve a development that allows a better quality of life without putting future generations at risk.

When young people study economics, they can avail themselves of the opportunity to reflect and be critical about what is happening around them, such as how society is organized and the political agenda of politicians (Mizzi, 2022), and about core issues relating to sustainable development truly relevant to society, such as growth, consumption or wellbeing. It is important that economics education promotes sustainable development (Mizzi, 2022; Noguera-Méndez and Cifuentes-Faura, 2022).

The enhancement of the sustainability dimension in Maltese school economics education fits in with the approach suggested by the literature that when teachers have little or no influence over the course syllabus, they embed sustainability issues into curriculum topics (e.g., Molera et al., 2021; Noguera-Méndez and Cifuentes-Faura, 2022; Sidiropoulos, 2014). The results discussed in the previous section can provoke insights about how to foster values for sustainability. Future research relating to ESD in school economics can explore the students' perspectives about their learning experiences in economics. There exists the need for research that focuses on teaching and learning as experienced by school students themselves (Lambert, 2018; Land et al., 2016; White et al., 2016). Including the students as co-enquirers into the nature of ESD in relation to their own learning experiences provides valuable insights into the teaching and learning process. Another line of research would be to analyse how to further encourage teachers to engage in embedding sustainability issues not just into the secondary school economics curriculum but also in other school subjects.

Both teachers and students bring along with them value positions to the economics lesson. This is also the case in the lessons of other subjects. Value positions need to be acknowledged and made explicit so that everyone can reflect upon them. It is therefore "intellectually dishonest" to hide "behind the pretext of neutrality and propagate economics as a value-free discipline" (Brant, 2011, p.125).

Economics education is about empowering students to think critically about their position and that of others and make good decisions to safeguard the environment around them. This implies an ethical or moral perspective (Aldred, 2019; Brant, 2011; Mizzi, 2022). Students can then start perceiving homo economicus as conducting his/her economic choices whilst embracing and fostering values, being compassionate towards other human beings, and practising sustainability in daily life. This perspective

nourishes economics teaching and learning and provides a holistic view of economics enriched with values.

Economics teachers need to continue sensitizing their students about their responsibility of caring for the planet's resources. Economics should serve the needs of the people (Sober-Giecek, 2000), and sustainability is an important aspect of the discipline, especially in the light of the UN SDGs. This argument ties in with the economics education literature that ethics and values do creep into economic arguments (Aldred, 2009, 2019; Brant, 2011, 2015; Chang, 2011, 2014; Fine, 2010; Krueger, 2019; Mizzi, 2022; Noguera-Méndez and Cifuentes-Faura, 2022; Sober-Giecek, 2000). A teacher does a disservice to young learners if s/he teaches economics as if void of values, as neoclassical economics claims it to be.

The argument of infusing ESD during lessons to enhance the students' sustainability consciousness is also pertinent to the other subjects. In view of the SDGs, there is an urgent need for teachers to invest efforts at enhancing the sustainability dimension of their respective subjects. This need should be raised more explicitly during teacher education courses and professional development sessions. Teachers need also to be aware and explore the dominant school of thought in their respective discipline and consider how and in what ways they can infuse sustainability in the knowledge that students need to grasp. The findings suggest that this could be done in a subtle manner, during brief moments when teachers provide their students with the opportunity to discuss examples when sustainability could be practised in their daily life. Teachers would then be providing a valid contribution towards educating the young generation in the sustainable use of resources to achieve a better and more sustainable future for all people and the world.

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