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Addressing Transformative Education and Governance Through the Sustainable Development Goal 4: A Case Study

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Abstract: The United Nations 2030 Agenda designed the 17 Sustainable Development Goals (SDGs) which were adopted in 2015 with the primary aim of achieving sustainable development by 2030. One of these goals is SDG 4, which aims to 'Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all'. Implementing SDG 4 calls for initiatives that instill knowledge, attitudes and skills as clearly indicated in Target 4.7. This requires a change in mindset, where transformative ideologies fused in both sustainability governance and education are required to encourage behavioural change. This research presents a case study regarding an exhibition, which toured Maltese schools and the community, in the form of a large Rubik's cube possessing 17 cubicles in which an artifact about each SDG is presented. This case study aims to examine how this exhibition contributes to SDG 4, specifically Target 4.7. It also seeks to explore whether the case study contributes towards transformative approaches in tandem with education and governance for sustainable development. The methodological framework presents two innovative approaches – a visual qualitative analysis of each artifact and a matrix that attributes scores reflecting the effectiveness of each exhibit vis-à-vis the main components of Target 4.7. Qualitative and quantitative findings, supported by reflexivity, are garnered to examine the implications of this case study, which acts as a good springboard to emanate the SDGs within the community by creating a link between formal and non-formal learning spaces. Drawing upon such insights, a Transformative Education-Governance model is proposed where a number of action points are delineated. This provides a fertile terrain in reconceptualising education and governance, useful for researchers and practitioners in the fields of sustainability and education.

Keywords: Sustainable development; Sustainable development goals; Education; Governance; Transformative approach

1. Introduction

The Sustainable Development Goals (SDGs) are a set of 17 goals with a total of 169 targets, integral to the 2030 Agenda for Sustainable Development, which build on the Millennium Development Goals (MDGs). These goals are grouped into categories, better known as the 5Ps, which include:

(i) People, focuses on the need of alleviating poverty and hunger, providing quality education and ensuring equality; (ii) Planet, emphasises on the protection of the planet from pollution and degradation; (iii) Prosperity, stresses on human well-being and a good quality of life; (iv) Peace, promotes justice and inclusion within communities; and, (v) Partnership, encourages collaboration and efforts between individuals and entities to implement this Agenda.

The imperativeness of education is embodied in Sustainable Development Goal (SDG) 4, which guarantees quality education through four overarching areas:

I. Providing lifelong learning opportunities for all: Education should be provided to children, youth and adults as a foundation for lifelong learning.

II. Renewed focus on equity, inclusion and gender equality: Individuals, irrespective of their gender, ability, vulnerability and ethnicity, should be given the opportunity to learn at all levels, as indicated in Target 4.5.

III. Renewed focus on effective learning: Learning should be effective by providing the required knowledge, attitudes and skills in primary and secondary schooling, as indicated in Target 4.1, even including youth and adults in Target 4.6.

IV. New focus on the relevance of learning: Learning should prepare individuals by equipping them with skills for the work environment, as indicated in Target 4.4 and how to become better global citizens as postulated in Target 4.7.

As a result, this study will revolve specifically around Target 4.7, which specifies that:

'By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through Education for Sustainable Development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.'

Such an array of concepts demonstrates the vastness of this target, which despite being crucial for the achievement of sustainable development, Moriarty (2019) asserts that it is more of a 'residual target' that lumps together various stakeholder needs and requirements. As a result, it is 'too broad and [contains] too many concepts difficult for people to grasp, especially for politicians' (Moriarty, 2019). This makes such a target disregarded and marginalised by national governments. Sayed & Moriarty (2020) assert that while indicators linked to this goal are still being formulated, policymakers are keener on 'adopting an instrumentalist and narrow view of learning'. According to Wulff (2020), SDG 4 is not supported with the required resources to monitor its implementation and any initiative should not mirror the entirety of this goal but attention should be paid to some of its particularities.

This research is based on a case study from the Maltese islands, which are located in the middle of the Mediterranean Sea, with a population that has surpassed half a million people in an area of 316 km^2 (The Malta Independent, 2020). This case study sheds light on one of the numerous initiatives that have been carried out in the Maltese islands to implement the SDGs by 2030. This research is motivated by the following objectives: (i) to analyse whether this case study, involving an exhibition to schools and the community in the Maltese islands, fulfills this target; and, (ii) to examine the impacts of this exhibition onto the SDGs, education and governance.

Rooted on the foregoing objectives, the following core question is being rolled out:

How does this case study help in achieving Target 4.7 of Sustainable Development Goal (SDG) 4 embedded in principles of transformative education and governance for sustainability?

This study is divided into several sections. The first part focuses on the theoretical underpinnings related to transformative education and governance for sustainable development. Then, the focus will be directed towards the methodological framework which will expose qualitative and quantitative data garnered from visual analysis and the use of a matrix tool. The concluding part is reserved for answering the research question and providing some recommendations.

2. Literature Review

Jeronen et al. (2021) point out the need for transformation in all areas of life to alleviate various global calamities, which is in line with Salovaara et al. (2021) who assert the need for a 'fundamentally new understanding of interconnected existence to better understand and treat these issues.' O'Brien & Sygna (2013) elucidate that transformations need to address the practical, political and personal sphere which, indeed encompass more or less the 'transformation in all areas' including governance and Education for Sustainable Development (ESD) (2009), since these share 'interconnected existence'.

Kooiman (2003) states that governance is the 'purposeful effort to guide, steer, control or manage (sectors or facets of) societies.' Achieving the 17 SDGs requires a transformation in governance and educational structures where their functioning envisions a shift from 'about sustainable development' towards 'for sustainable development'. Such foregoing transformations, often request 'co-ordination and integration across different sectoral agencies and multiple levels of decision-making' (Olsen et al., 2021).

Pickering et al. (2022) assert that changes, especially in the sustainability sector involve many stakeholders who might 'disrupt existing configurations of power and resources' (Patterson, 2020; Pickering et al., 2022; Scoones et al., 2015). That is why, transformative governance stemming from adaptive governance, should be implemented, to keep up with shifting societal contexts, and establish modes that can guarantee such changes. This new culture encapsulates a paradigm shift, which promotes cross-sectoral collaboration where 'the totality of interactions, in which government, other public bodies, private sector and civil society participate, aiming at solving societal problems or creating societal opportunities' (Meuleman, 2008). This paradigm should be (i) inclusive, by addressing people's needs; (ii) adaptive, in encouraging learning experiences that provide reflexivity and feedback; (iii) informed, encompassing scientific and societal knowledge systems; and, (iv) integrative, envisaging other scales, issues, places and sectors in operations (Aguiar et al., 2021). However, SDG implementation is often attributed to a series of opportunities but also challenges which undermine transformative governance, such as entrenched power relations, resilience to change, economic and social pressures on long-term policies and limited budgeting (Chaffin, 2016).

Hence, transformative governance needs 'radical, systemic shifts in deeply held values and beliefs, patterns of social behaviour, and multi-level governance and management regimes' (Olsson et al., 2014). This can be achieved through transformative education, where existing educational practices are re-oriented to be aligned with governance for sustainable development, mirroring the principles from the Bonn Declaration (2009).

The biggest hurdle, as Mezirow (1991) warns, is that while learning should invoke change, not all learning is transformative. He adds that a transformative learner should be 'critically reflective, redefine problematic situations and adopt new forms of evaluation in the light of reflective insights' (Mezirow, 2012). As Sterling (2011) elucidates, a shift from a first-order conformative vision which focuses on 'doing things better' to a third-order transformative vision which focuses on 'seeing things differently' is required. Transformative learning occurs within existing institutions, at all levels (micro, meso and mecro) and spheres (state, civil society and private sector) (Boström et al., 2018) to embrace sustainability as a new paradigm or a lens through which one can view the world and make a change (Burns, 2009).

Re-visioning and re-orienting both governance and education should be done in a concrete manner and symbiotically, despite often being siloed in nature, to bear the fruits in society. As previously pointed out, the need for a strong regulatory context is required to frame sustainability within both domains in a coherent and just way as delineated in the next section.

2.1 The Regulatory Context of Sustainable Development in the Maltese Islands

The regulatory context of sustainable development in the Maltese islands dates back to the early 1990s, coinciding with the outcomes of the Rio Summit in 1992. However, the major milestone is The Sustainable Development Act put into force in 2012. Its main aim is to 'mainstream Sustainable Development across the workings of Government, to raise awareness of sustainable development issues and practices across society' (Government of Malta, 2012). This could be made possible through the role of the Guardian of Future Generations as stipulated in the same Act who is responsible for permeating this notion across society by providing suitable opportunities. The Act also promotes the need for more knowledge and educational opportunities for all members of society. Following this milestone, The Malta Sustainable Development Vision for 2050 was formulated in 2018, framed on the four principles of: long-term vision, integration, participation and reflexivity (Ministry for the Environment, Sustainable Development and Climate Change, 2018). This is done in tandem with the Agenda 2030 and the 17 SDGs. It also revolves around the pillars of sustainable development but also covers other areas such as the circular economy, education, procurement and poverty.

The National Strategy for ESD for Malta, developed in 2016, is aligned with the Mediterranean Strategy on Education for Sustainable Development. It focuses on the need to offer more opportunities where ESD can be implemented as a lifelong process both in formal, informal and non-formal educational settings. Increasing accessibility to all citizens is a must by providing relevant education and training programmes, not only to children, but even adults, teachers and the wider community, supported by adequate policies and structures (Public Consultation Document, 2016).

Once the theoretical foundations of this chapter have been exposed, the next section shall present the methodological framework, followed by a delineation of the case study.

3. Methodology

A case study approach was adopted to generate 'an in-depth multi-faceted understanding of a complex issue in its real-life context' (Crowe et al., 2011) regarding an exhibition about the SDGs, through the utilization of three tools:

(i) A visual qualitative methodology takes into account a variety of sources which range from videos, cartoons, comics and photographs. The latter was utilised as evidence to interpret the educational purpose of the exhibition. By showing 'how things really are' as 'they are documenting reality' (Bogdan & Biklen, 2003), the photographs are representing the exhibits and help to discuss the underlying processes involved in their selection. The main tool to carry out qualitative visual methodology incorporates semiotic analysis (Ortega-Alcázar & Dyck, 2012) grounded on Barthes' line of thought, which builds on de Saussure (1916) 'study of signs.' Further to this, signs can be classified as the signifier and the signified. The signifier represents a particular expression whereas the signified is anything related to the content. According to Barthes, any visual source has a literal meaning which is referred to as the denotative aspect. It is what people see without being linked to their culture, society or ideology (Bouzida, 2014). Connotation focuses on the underlying meaning as the sign is in line with the users' feelings and values of their culture (Fisk, 1990).

(ii) Quantitative data is garnered through the use of a matrix which comprises 'the crossing of two or more main dimensions to see how they interact' (Miles & Huberman, 1994; Martyn, 2021). The two dimensions in this case encompass how each exhibit fulfills Target 4.7 which includes: knowledge, skills, ESD, human rights, gender equality, peace and non-violence, global citizenship and cultural diversity. According to Morse (2001) matrices

serve as a visual template for the 'systematic layering of evidence' that contributes to meaning and knowledge. In this study, it will be further enhanced through the integration of qualitative and quantitative data, which Sandelowski (2000) asserts as being 'method-linked dimensions of a target phenomenon'.

(iii) Reflexivity shall also be employed to support and further complement the aforementioned methods. This can be guaranteed since the author is not only the researcher but even one of the organisers of this initiative. The author's positionality as an insider-researcher is crucial in providing invaluable insights to the study. As Greenbank (2003) adds, such positionality is relevant to scrutinize the self, including any biases, assumptions, expectations, and experiences, thus strengthening research quality (Berger, 2015; Charmaz, 2014; Creswell & Creswell, 2018; Patton, 2002; Secules et al., 2021; Sochacka et al., 2009) which an outsider would find difficulty in carrying out. This, is also confirmed by DeVerteuil (2004) who states that an insider is well-informed and can provide a deeper understanding in reaching adequate conclusions. While a major limitation of these tools is their subjective nature, the findings of this research are reported professionally while steering away from any bias.

3.1 The Case Study

This case study focuses on a travelling exhibition in the form of a portable unit which was transported to various Maltese primary and secondary schools, as part of an educational programme called 'The Sustainable Development Goals – Ours to Score!'. The main aim of this educational programme was to equip young people with the knowledge, attitudes, and skills regarding sustainability to instill more awareness to ultimately initiate change. As seen in Figure 1, a large wooden Rubik's Cube measuring 1.2m x 1.2 m x 1.2 m was assembled with 17 wooden cubicles. In each one of the latter, an artifact or artistic expression related to a particular SDG, accompanied by a thought-provoking slogan was included.

Once the case study has been delineated, the next section presents the findings stemming from this research.

Figure 1. The process involved in preparing the exhibition
Note: This figure was prepared by the author.

4. Results

4.1 Findings from the Visual Analysis

Each artifact relevant to each SDG and its targets, as displayed in Figure 2, was carefully selected. With reference to Barthes' theory, Table 1 explains the denotation of a sign presented in the exhibit (e.g. the 'school bag' denotes a utility for school children). Furthermore, these denotations also portray connotations (e.g. 'the school bag' symbolises education and schools). This table also contains the slogan inserted with each exhibit and the 5Ps which serve as themes, out of which a number of codes have been derived from the underlying meanings of the items.

Figure 2. The different exhibits
Note: This figure was prepared by the author.

Table 1. The visual analysis of the exhibition

SDG	Slogan	Connotation	Denotation	Theme	Codes
SDG 1: No Poverty	The bin has a better diet than most children in the world. Why?	A bin	The exhibit shows a bin, on which a sticker was placed, displaying this slogan: 'I have a better diet than 60% of children in the world'. This means that developed countries are overexploiting their resources and discarding them, while other regions, especially developing countries are experiencing low quality of life.	People	Overexploitation, Development, Low Quality of life, Hunger
SDG 2: Zero Hunger	Think of the hungry people around you. Share your food!	Convenience products	The exhibit displays some convenience goods in two trolleys, implying that whenever one goes shopping, some products could be reserved for people who are in need, through initiatives such as Food Banks.		Planning, consumption, compassion
SDG 3: Good Health and Well-being	A little care goes a long way. Surround yourself with what makes you feel good.	A mental health box	The display demonstrates a mental health box with necessary items that could elevate youngsters' moods such as journaling and music.		Well-being, self-care, mood, mental health
SDG 4: Quality Education	Education is a lifelong investment. Help others invest in it too.	A school bag	The exhibit reveals a school bag that formed part of a campaign. Upon buying this bag, the customer would be contributing towards children's education in poor countries, thus providing them with quality education.		Campaign, inclusion, investment, learning, resources
SDG 5: Gender Equality	Men + Women = Equal Opportunity?	Two piggy banks	The exhibit shows two different piggy banks – a blue one representing men whereas the red one representing women. The coins inside the blue piggy bank are more than those in the red one, hinting at the gender pay gap.		Equity, fairness, gender gap

SDG 6: Clean Water and Sanitation	Avoid the Drip Drop…. Close your tap!	A water tap	The exhibit explicitly conveys the message to conserve water. Since it displays a tap with dripping water, it encourages individuals to be more cautious.	Planet	Conservation, resources, consumption
SDG 7: Affordable and Clean Energy	Energise your power alternatively.	A small photovoltaic panel	The display demonstrates a bright background with an example of a small photovoltaic panel. This indicates that through the slightest act or contribution, one can still make a difference.	Prosperity	Alternative energy, sustainability
SDG 8: Decent Work and Economic Growth	Fairtrade acts justly with people, the economy and the environment. Act fairly as well - be the change!	Fair trade products	The exhibit presents examples of fair trade products which imply that decent work conditions can be provided to employees while still achieving economic growth.		Equity, Fairness, Trade, Consumption
SDG 9: Industry, Innovation and Infrastructure	Innovation is the future.	A 3D printed item	The display consists of a 3D printed item as an example of an innovative product.		Innovation, Futuristic, Technology
SDG 10: Reduced Inequality	Bridge the North-South divide – Everyone is equal.	A globe	The exhibit reveals a globe pinpointing different inequalities between More Economically Developed Countries and Less Economically Developed Countries.		Development, Division, Equity, Fairness
SDG 11: Sustainable Cities and Communities	Make your town a better place.	A sustainable settlement	The display exposes a neighbourhood that presents a safe, inclusive and sustainable way of life through open spaces, sustainable means of transport, renewable sources of energy and afforestation.		Safety, inclusion, sustainability, green, open spaces
SDG 12: Responsible Consumption and Production	Extend the life of an object… find another purpose for it!	An example of tapestry	The exhibit displays a recycled piece of cloth being used to create a new artistic form, which in this case is an example of a tapestry.	Planet	Recycling, circular economy
SDG 13: Climate Action	Global warming makes them disappear. Act now before it's too late!	A thermometor	The exhibit presents a thermometer to show that with increasing temperature the various animals surrounding it will disappear as they will become extinct.		Heat, Stress, ecosystems, organisms, extinction
SDG 14: Life Below Water	Catch of the day 2050. Say NO to Plastic!	Plastic items enclosed in foam plastic	The exhibit shows two containers sealed with many different plastic items. This implies that 'The Catch of the Day' in 2050 will not include fresh fish but plastic. In the future, the ocean will contain more plastic than fish if we do not act now.		Consumption, sustainability, organisms, pollution
SDG 15: Life on Land	Protecting nature, protecting ourselves.	A plant	The exhibit simply portrays a plant to infer that it is central both for natural and human well-being.		Nature, Green spaces,
SDG 16: Peace and Justice Strong Institutions	In case of war, break the glass. Give peace a chance	A dove enclosed in a fire alarm	The exhibit includes a white dove enclosed in an emergency glass. The dove is the symbol of peace, so whenever this is required one should only break the glass to free the dove.	Peace	Peace, equity
SDG 17: Partnerships to achieve the Goal	Do your part…. But together we'll succeed.	A mirror	The display encompasses a mirror so that individuals can see their reflection. This should serve as a reminder that the accomplishment of the SDGs depends on each and every one of us, by reflecting upon our decisions to live a better life.	Partnership	Collaboration, action, pro-activity

4.2 Findings from the Matrix Tool

Table 2. Findings from the matrix tool

	KNOWLEDGE		SKILLS		ESD		HUMAN RIGHTS		GENDER EQUALITY		PEACE AND NON-VIOLENCE		GLOBAL CITIZENSHIP		CULTURAL DIVERSITY		TOTAL
WEIGHT	**5**		**5**		**5**		**4**		**3**		**2**		**3**		**1**		**140**
	Score	Total	Score	Total	Score	Total	Score	Total	Score	Total	Score	Total	Score	Total	Score	Total	
SDG1	4	20	4	20	4	20	5	20	0	0	2	4	3	9	2	2	95
SDG2	4	20	5	25	4	20	5	20	0	0	2	4	4	12	2	2	105
SDG3	4	20	4	20	3	15	4	16	1	3	1	2	2	6	1	1	83
SDG4	2	10	3	15	3	15	5	20	4	12	2	4	3	9	2	2	87
SDG5	4	20	4	20	4	20	5	20	5	15	2	4	2	6	2	2	107
SDG6	4	20	3	15	3	15	2	8	1	3	2	4	3	9	1	1	75
SDG7	3	15	3	15	4	20	2	8	0	0	0	0	3	9	0	0	67
SDG8	3	15	3	15	3	15	4	16	1	3	2	4	4	12	3	3	83
SDG9	2	10	2	10	2	10	0	0	0	0	0	0	1	3	0	0	33
SDG10	5	25	4	20	4	20	4	16	1	3	1	2	4	12	0	0	98
SDG11	3	15	3	15	4	20	3	12	1	3	1	3	4	12	1	1	81
SDG12	2	10	4	20	3	15	2	8	0	0	1	2	3	9	1	1	65
SDG13	4	20	3	15	4	20	3	12	0	0	1	2	4	12	1	1	82
SDG14	4	20	4	20	5	20	3	12	1	3	0	0	5	15	1	1	91
SDG15	3	15	2	10	3	15	4	16	1	3	0	0	3	15	1	1	75
SDG16	4	20	4	20	3	15	5	20	0	0	5	10	5	15	3	3	103
SDG17	4	20	4	20	3	15	4	20	3	9	1	2	2	6	3	3	95

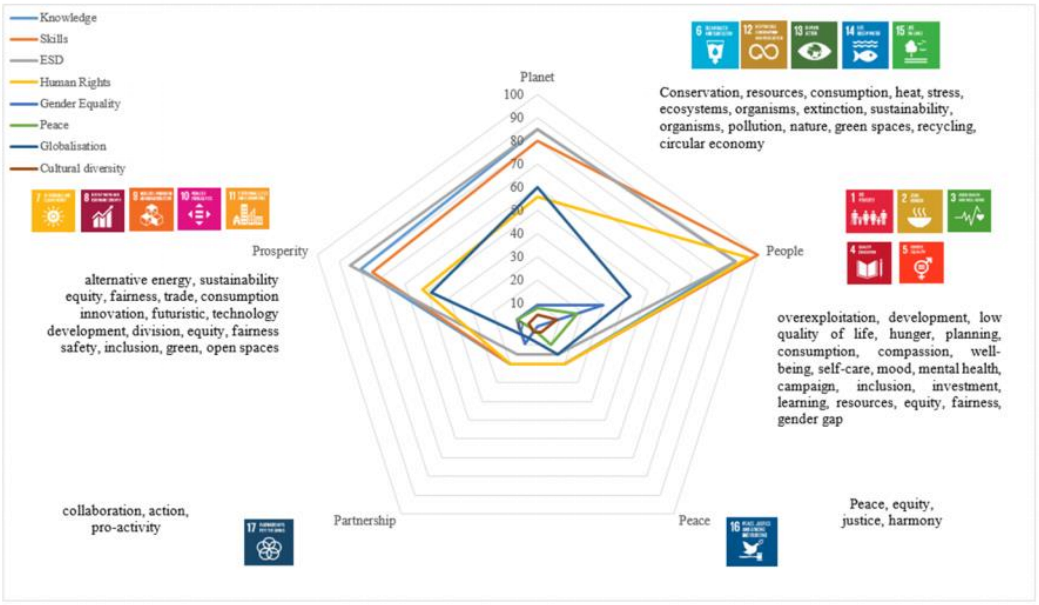

Figure 3. The main findings from the qualitative and quantitative data
Note: This figure was prepared by the author.

The results of the matrix analysis demonstrate the degree to which each artifact fulfills SDG 4, specifically Target 4.7. Table 2 shows the matrix tool where each component was given a weighting from 1 (being the least important) to 5 (being the most important). This weighting was given taking into consideration the importance of these components in relation to the aims of this exhibition. In certain instances, the same weighting was repeated to different components since they share similar importance. Each SDG exhibit was given a score vis-à-vis every

component of this target. This score is then multiplied by each corresponding weighting, obtaining the total as displayed in the shaded columns. Each value in these columns is added to obtain a maximum value of 140 points.

Findings demonstrate that exhibits linked to SDG 2, 5 and 16 garnered the highest scores which were above 100, whereas SDG 7, 9 and 12 scored a result less than 50. This implies that the former offers the best contribution whereas the latter attains the least significance in relation to this target. The other SDGs achieved a moderate score which displays an overall strong fulfillment of this specific target.

Once the qualitative and quantitative results have been rolled out, Figure 3 visually presents and summarises the pertinent findings categorized through the five themes of Planet, People, Prosperity, Partnership and Peace.

As the quantitative and qualitative data have been mapped out, the next part of this study seeks to answer the research question:

Research Question: How does this case study help in achieving Target 4.7 of Sustainable Development Goal (SDG) 4 embedded in principles of transformative education and governance for sustainability?

From the findings obtained, the five categories or 5 Ps of the SDGs were designed as the main themes for this analysis. The total values obtained from all SDGs are categorised into the 5 Ps as displayed in Table 3.

In the total sum of scores, the 'People' category garnered the highest score with a value of 475 points whereas the 'Partnership' category achieved the lowest score with a value of 95 points. On the other hand, as regards the components from Target 4.7, 'Skills' in the 'People' theme obtained the highest score (100). 'Gender Equality' in the 'Peace' theme achieved the lowest score (0).

These findings indicate that the case study has been effective to a great extent in presenting all components of Target 4.7. However, as pointed out in previous sections, due to the variety of aspects it possesses, it is an arduous task to tackle them in the same manner. Moreover, some SDGs lend themselves better to the scope of this exhibition, whereas others were difficult to symbolise through an item or artifact, hence why these garnered a low value in the matrix analysis. Moreover, the codes obtained from the visual qualitative analysis shed light on various underlying motives which link the items to the 5 Ps.

The project promotes elements of transformative education as the main aim of Target 4.7 is to provide effective learning processes. It embodies the words of Mogren (2019) who states that transformative learning aims to introduce new routines and learning processes. In fact, this exhibition fulfills the objectives of the Maltese National Curriculum Framework to permeate ESD as a cross-curricular theme across all subjects. Further to this, the non-formal learning experience was fused into the formal educational aspect, whenever it toured Maltese schools as emphasised in Public Consultation Document (2016) which states that it 'should be seen as an essential component to formal education, particularly in the provision of adult learning schemes and community-based ESD programmes.'

This case study exemplifies a diversion from transmissive to transformative pedagogies. Effective learning has been made possible by leaving students with the possibility to think about the SDGs and act on them. Moreover, the exhibition can be seen as an invaluable resource that initiates interest in further implementing the SDGs through a whole-school approach. This is aligned with the Public Consultation Document (2016). In fact, the latter states that 'for ESD to become part of an agenda for change towards a more sustainable society, education itself must be subject to change'.

The underlying principles of this case study align with the regulatory framework of the Maltese islands. In fact, it has been an ideal example of the entrenchment of sustainable development in society to 'foster a higher level of knowledge and education' as postulated in The Sustainable Development Act (Government of Malta, 2012). This also conforms with The Sustainable Development Vision for 2050, which similarly states that besides knowledge, the need for skills, values and attitudes is paramount to empower individuals. Through this exhibition, students were made aware of the SDGs and as the NSESD (Public Consultation Document, 2016) also states, 'with a wide perspective local, national, regional and global sustainable development issues.' Moreover, many skills such as critical thinking, problem-solving, collaboration and analysis were also promoted.

Table 3. The findings obtained for each theme

	Knowledge	Skills	ESD	Human Rights	Gender Equality	Peace	Globalisation	Culture	
People	90	100	90	96	30	18	42	9	475
Prosperity	80	75	85	52	9	9	48	4	362
Planet	85	80	85	56	9	8	60	5	388
Peace	20	20	15	20	0	10	15	3	103
Partnership	20	20	15	20	9	2	6	3	95

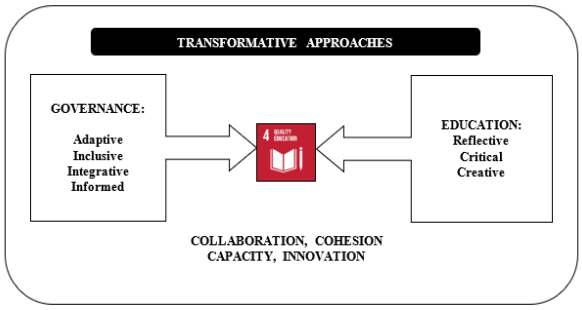

Figure 4. The Transformative Education-Governance model
Note: This figure was prepared by the author.

Furthermore, this project also possesses characteristics central to transformative governance. In fact, it aims to be inclusive and integrative by including a variety of local, regional and international issues. This shows that when implementing SDG governance, one should cater for everyone and rightly so 'leave no one behind'. In this way, this educational experience made students aware of the different issues that inflict our planet, central to both ESD and Global Citizenship Education. The exhibition also promoted pluralist ideas integrating the pillars of sustainable development – the environment, society and economy in a balanced way. This is also a reminder that SDG governance should give equal importance to these pillars and not only to the environment. Finally, this case study has also been adaptive, to incorporate societal changes in the best way possible.

Based on such findings, Figure 4 displays a Transformative Governance-Education model which provides a succinct exposition of the main findings of this research.

It can be deduced that transformative governance needs to be adaptive, inclusive, integrative and informed in its approach whereas education should be reflective, critical and creative. When these principles are considered, Quality Education envisaged in SDG 4 can be achieved, taking into account the four action points listed below:

I. **Collaboration:** Synergies between multi-levels of governance together with cross-sectoral collaboration is required to ensure lifelong learning opportunities – ranging from the early years up to tertiary settings. As indicated in the Public Consultation Document (2016), the Further and Higher Education Strategy 2020 and Framework for the Education Strategy for Malta 2014-2024 do not promote or acknowledge the importance of sustainable development – and consequently ESD – in Higher Education (HE). HE institutions are vital to initiate collaboration with various state and non-state actors, especially as regards sustainability.
II. **Cohesion:** Education has been characterised as 'the golden thread that runs through all 17 Sustainable Development Goals (SDGs)' (Thomson, 2017). It is imperative to encourage educational initiatives that cross-over onto other SDGs and also formal and informal structures to promote cohesion and reduce various existing siloes. Effective communication between different sectors facilitates the process.
III. **Capacity:** It must be ensured that various institutions and resources are available to promote ESD. Moreover, a curriculum on Governance for the SDGs should be envisaged to boost governance capacity within public entities, including educational institutions.
IV. **Innovation:** Highlighting existing best practices in terms of learning-by-doing and implementing adequate programmes can create new pathways for learning.

5. Conclusion

This case study has exemplified that the teaching-learning spaces can go beyond the four walls of a classroom and initiate discovery to form one's own understanding of sustainability issues. Both qualitative and quantitative results yielded a set of results, namely:

I. The case study is a good springboard to emanate SDG issues within the community.
II. Semiotic analysis can be a good visual methodological approach to bring out the educational potential of any resource or exhibition.
III. To ensure successful SDG implementation, the focus should be directed towards specific aspects of the targets.
IV. More creative and critical thinking is required to bring out certain goals which are more difficult to communicate amongst the community.
V. Re-orienting education can happen by linking different forms of education (formal and non-formal learning spaces).
VI. Experiential education can occur through constructivism, even with a lack of adult instruction.

The four action points delineated previously have been vital for this case study and can be transferable to any

other initiative. The implementation of SDG 4 can be successful once efforts are aligned with policy frameworks. The need for collaboration across different levels is key to initiating this paradigm shift and encouraging the required transformation through multi-level governance, including as well different forms and levels of education. Only then, can this change in mindset be encouraged to move from 'about sustainable development' to 'for sustainable development'.

Data Availability

The data used to support the research findings are available from the corresponding author upon request.

Conflicts of Interest

The author declares no conflict of interest.

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