

Erasmus+ 2021–2027 in Higher Education: Contributions to the 2030 Agenda and to the Sustainable Development Goals



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Abstract The 2030 Agenda for Sustainable Development, approved by all UN member states in 2015, includes the 17 Sustainable Development Goals (SDGs), which are seen by Boeren (Int Rev Educ 65:277–294, 2019) as a program of actions not only for people but also for the planet and prosperity. These goals are essentially intended to help nations work together to build a cleaner world and a fairer global society while safeguarding the environment and are aligned with those advocated by the Erasmus+ program. Both the program and the SDGs have goals to be achieved and associated indicators that should be used as tools to achieve these goals that corroborate those outlined in the 2030 Agenda. This work aims to find out to which SDGs contribute most the Erasmus+ program. To this end, we used a qualitative analysis of the regulation that led to the creation of the Erasmus+ program for the period 2021–2027 and the 17 SDGs. It was concluded that the most relevant SDGs are 4, 5, 8, 9, 10, 13, 16, and 17 and that the Erasmus+ program seems to have a strong potential to drive and mobilize sustainable development in the world through the participation of people and the projects implemented and developed. It was also concluded that SDG4 contributes directly or indirectly to the other selected SDGs, but no SDG contributes to SDG4.

Keywords Erasmus+ 2021–2027 · Higher education · 2030 agenda · Sustainable Development Goals

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1 Introduction

In 2015, through the approval of the 17 Sustainable Development Goals by UNESCO that define the 2030 Agenda that addresses sustainable development in various dimensions, effective institutions are promoted in addition to peace and justice.

The SDGs are thus a rallying point for all countries—rich, poor, and middle-income—to work together to increase prosperity while safeguarding the environment. They recognize that eradicating poverty requires methods that promote economic growth and meet a variety of social needs, such as education, health, social protection, and employment opportunities, all while combating climate change and protecting the environment.

The specific objectives of the Erasmus+ program are defined in a common way for the various fields. They are to be met through learning mobility (Key Action 1), cooperation between organizations and institutions (Key Action 2), and support for policy development and cooperation (Key Action 3) that have a mainly transnational or international character (EUR-Lex Access to European Union Law. Document 32021R0817, 2021). The program regulation currently in force aims to ensure full respect for the rights to gender equality and nondiscrimination based on sex, racial or ethnic origin, religion or belief, disability, age, or sexual orientation and to promote the application of Articles 21 (nondiscrimination) and 23 (equality between women and men) of the Charter of Fundamental Rights of the European Union (Charter of Fundamental Rights of the European Union, 2012). Academic freedom should be protected by nations receiving funds under the program, in accordance with Article 13 (Freedom of the Arts and Sciences) of the Charter (Charter of Fundamental Rights of the European Union, 2012).

This work aims to find out which SDGs contribute most to the Erasmus+ program. To this end, we used a qualitative analysis of the regulation that led to the creation of the Erasmus+ program for the period 2021–2027 and the 17 SDGs.

This paper presents the following structure: introduction, brief presentation of the themes, methodology, presentation and discussion of the results, conclusions, limitations, and future research proposals.

Next section briefly presents the themes of Erasmus+ program and the Sustainable Development Goals.

2 Brief Presentation of the Themes

The Erasmus+ program builds on over 25 years of experience in European education, training, and youth program, encompassing intra-European and international cooperation. Erasmus+ is the result of the merger of several previous European programs undertaken between 2007 and 2013 by the European Commission. It aims to go beyond these programs by promoting synergies and cross-enrichment

in different fields of education, training, and youth, removing artificial barriers between actions and project formats, fostering new ideas, attracting new actors from the labor market and civil society, and stimulating new forms of cooperation.

The 2021–2027 program aims to be a direct instrument to support sustainable growth, quality jobs, and social cohesion, to boost innovation and strengthen European identity and active citizenship through lifelong learning and educational, professional, and personal development of individuals (Regulation (EU) 2021/817 [18] of the European Parliament and of the Council of 20 May 2021).

Bañón Gomis et al. [1] emphasize that sustainability is not just a “fad or trend” valued by circumstantial conditions. Its importance is linked to the ethics that guide human conduct, reflecting the values of courage, prudence, and hope. The term “sustainability” may even be popular today, but the concept itself has ancient and universal roots.

Feil and Schreiber [10] state that sustainability consists of a goal or parameter defined through scientific criteria, which measures and monitors the results generated by the use of Sustainable Development strategies. Sustainability is a way of being and living that requires aligning human practices with the limited potential of each biome and the needs of today’s and tomorrow’s generations [3].

The SDGs, which represent and define the global priorities for the 2030 Agenda signed by nearly 190 countries, seek to focus global efforts around a set of common goals and targets. The 17 SDGs are defined in areas that impact the quality of life of all citizens of the world, including future generations. According to the United Nations, the 2030 Agenda and the 17 Sustainable Development Goals are the common vision for humanity, a contract between world leaders and people, and a list of actions to be taken on behalf of the people and the planet [27].

In recent decades, a broad spectrum of decision-makers has become interested in the topic of Sustainable Development. People and society can only prosper if all countries and regions experience continuous, inclusive, and sustainable economic progress [11].

Figure 1 presents the 17 SDGs according to social, environmental, economic, and institutional dimensions.

The social dimension includes six SDGs, namely, those that aim to end poverty in all its forms everywhere (SDG1), end hunger, achieve food security and improved nutrition and promote sustainable agriculture (SDG2), ensure healthy lives and promote well-being for all at all ages (SDG3), ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (SDG4), achieve gender equality and empower all women and girls (SDG5), and reduce inequality within and among countries (SDG10). The next step of the pyramid also presents six SDGs for the environmental dimension. These six SDGs are those that intend to ensure availability and sustainable management of water and sanitation for all (SDG6); access to affordable, reliable, sustainable, and modern energy for all (SDG7) and sustainable consumption and production patterns (SDG12); take urgent action to combat climate change and its impacts (SDG13); conserve and sustainably use the oceans, seas, and marine resources for sustainable development (SDG14); and protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably



Fig. 1 SDG dimension pyramid

manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss (SDG15). There are 3 SDGs that integrate the economic dimension of sustainable development. They are SDG 8 related to inclusive and sustainable economic growth, full and productive employment and decent work for all, SDG 9 which aims to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation and, finally, SDG 11 associated with inclusive, safe, resilient and sustainable cities and human settlements. At the top of the pyramid is the institutional dimension with 2 SDGs: SDG16—promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels—and SDG17, strengthen the means of implementation and revitalize the global partnership for sustainable development [27].

According to the United Nations, the 17 SDGs presents 169 targets in total. Under the 17 SDGs and on this date, 3802 events were promoted, 1344 publications were made, and 7376 actions were taken [27].

However, and keeping in mind the Erasmus+ program regulation, it was possible to verify that the program does not contribute to all 17 SDGs. Thus, those to which the program does contribute were identified and are presented in the Presentation and Discussion of the Results section.

3 Methodology

The methodology focused on the qualitative analysis of the SDGs in the context of higher education, as well as the analysis of Regulation (EU) 2021/817 of the European Parliament and Council of May 20, 2021, establishing Erasmus+: the Union program for education and training, youth, and sport.

To perform this analysis, we first defined the keywords that would make the link between the content of Regulation (EU) 817/2021 and the SDGs. Then, based on the description of the goals and indicators of the 17 SDGs, we selected those that were considered relevant and with a clear link to higher education and the Erasmus+ program. We integrated our research findings with a literature review for the discussion. The discussion of the results obtained on the contribution of SDG4 to the other SDGs was based on random bibliography searched in open source. To perform the search, we used as a base word Education and then associated it with words like innovation, decent work, inclusion, and equality, among others. All qualitative analysis was carried out manually by the authors, which means that no qualitative data analysis software was used.

4 Presentation and Discussion of Results

This section presents and discusses the results obtained from this work. Thus, the following table presents a summary of the results.

By defining keywords associated with the SDGs for higher education, it was possible to identify these word(s) in the text of Regulation (EU) 2021/817 [18]. When extracting the expressions associated with these words, it was necessary to somehow correlate them with the selected targets and indicators. Analyzing Table 1, several results are highlighted.

Thus, in social dimension in which SDG4, 5, and 10 are integrated, it was possible to associate the following keywords: Inclusive, Quality, Lifelong learning, Inclusive + lifelong learning, and Equal and Inequalities (inclusion, equality, and nondiscrimination). Regarding the economic dimension, the keywords identified were Employment, Decent work (quality jobs), Economic growth (only expressions associated to sustainable growth), and Innovation (and research). SDG8 and 9 are linked to this dimension. To SDG13, integrated into the environmental dimension, the keyword Climate was associated. Finally, the keywords Peace and Justice (fundamental rights) and Partnerships are associated with SDG16 and 17, which are included in the institutional dimension.

In the context of higher education and the Erasmus+ program, not all indicators are relevant and truly fit these realities. In the scope of this study, it was possible to identify several indicators associated with higher education but not all of them have a direct or indirect relationship with items from the Regulation (EU) 2021/817 of the program. The same happened with the identified SDGs.

It was thus possible, in the framework of SDG4, to associate indicators 4.3.1 (participation rate of youth and adults in formal and nonformal education and training in the previous 12 months, by sex) items 1 and 13; to 4.4.1 (proportion of youth and adults with information and communications technology (ICT) skills, by type of skill) item 11; to 4.5.1 (parity indices (female/male, rural/urban, bottom/top wealth quintile, and others such as disability status, indigenous peoples, and conflict-affected, as data become available) for all education indicators) items 4, 7,

Table 1 Relationship between Sustainable Development Goal targets 4, 5, 8, 9, 10, 13, 16, and 17 and respective indicators and items from Regulation (EU) 2021/817

SUSTAINABLE DEVELOPMENT GOALS 4 (Social Dimension)	
Keywords:	Inclusive, Quality, Lifelong learning, Inclusive + lifelong learning
Target number 4.3—	Equal access to affordable technical, vocational and higher education
4.3.1 is the participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex.	
(1) (. . .)	Investing in learning mobility for all, regardless of background and means, and in cooperation and innovative policy development in the fields of education and training, youth and sport is key to building inclusive, cohesive and resilient societies and sustaining the competitiveness of the Union . . .
(13) (. . .)	The Program should support an inclusive and broad EU Youth Dialogue, the priorities . . .
Target number 4.4—	Increase the number of people with relevant skills for financial success
4.4.1 is the proportion of youth and adults with information and communications technology (ICT) skills, by type of skill.	
(11) (. . .)	A coherent lifelong learning approach is central to managing the different transitions . . .
Target number 4.5—	Eliminate all discrimination in education
4.5.1 is parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators.	
(4) (. . .)	Principle 1 of the European Pillar of Social Rights provides that everyone has the right to quality and inclusive education, training and lifelong learning in order to maintain and acquire skills . . .
(7) (. . .)	confirmed the key findings of the report on the mid-term evaluation of the 2014–2020 Program and emphasised the need to make the future Program more inclusive, to continue to focus priorities . . .
(8) (. . .)	This would allow more people to move to another country to learn or work and would allow the program to focus on inclusiveness and on reaching more people with fewer opportunities . . .
(18) (. . .)	In fulfilling its objectives, the Program should be more inclusive by improving participation among people with fewer opportunities . . .
(29) (. . .)	Implementing bodies should promote measures to ensure that the DiscoverEU initiative is inclusive and geographically balanced with regard to both the travel passes allocated . . .
(30) (. . .)	At the same time, in order to ensure broad and inclusive access to the Program, it is important that multilingualism be a key principle in the implementation of the Program . . .
Target number 4.7—	Education for sustainable development and global citizenship
4.7.1 is the extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment.	
(33) (. . .)	In its communication of 18 July 2017 entitled ‘Strengthening Innovation in Europe’s Regions: Strategies for resilient, inclusive and sustainable growth’, the Commission . . .
(12) (. . .)	The Program is a key component of building a European Education Area. Following on from its communication of 14 November 2017 (. . .) in achieving the objectives of quality and inclusive education, training and lifelong learning, & in preparing the Union to face the digital and green transitions . . .
Target number 4.B—	Expand higher education scholarships for developing countries

(continued)

Table 1 (continued)

4.B.1 is the volume of official development assistance flows for scholarships.
(3) (...) Principle 1 thereof, which relates to education, training and lifelong learning. That communication stressed the need to step up mobility and exchanges, including through a substantially ...
(6) (...) while calling for a number of improvements, such as making the Erasmus+ Program more inclusive, simpler and more manageable for beneficiaries ...
Target number 4.C—Increase the supply of qualified teachers in developing countries
4.C.1 is the proportion of teachers in (a) pre-primary; (b) primary; (c) lower secondary; and (d) upper secondary education who have received at least the minimum organized teacher training (e.g. pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country.
(32) (...) The Program should support those European Universities in developing joint long-term strategies for high-quality education, research and innovation and for service to society (...)
SUSTAINABLE DEVELOPMENT GOALS 5 (Social Dimension)
Keyword: Equal
Target number 5.1—End discrimination against women and girls: End all forms of discrimination against all women and girls everywhere.
5.1.1 is whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex.
(4) (...) The European Pillar of Social Rights also makes clear the importance of good quality early childhood education and care and of ensuring equal opportunities for all ...
(26) (...) The participation of recent graduates in learning mobility should be based on objective criteria, and equal treatment should be ensured ...
(64) (...) In particular, this Regulation seeks to ensure full respect for the right to equality between women and men and the right to non-discrimination based on sex, racial or ethnic origin, religion or belief, disability, ...
Target number 5.C—Adopt and strengthen policies and enforceable legislation for gender equality: Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.
5.C.1 is the Proportion of countries with systems to track and make public allocations for gender equality and women's empowerment.
(43) (...) The principles of transparency, equal treatment and non-discrimination set out in the Financial Regulation should be respected in the implementation of the Program ...
SUSTAINABLE DEVELOPMENT GOALS 8 (Economic Dimension)
Keywords: Employment, Decent work (quality jobs), Economic growth (only expressions associated to sustainable growth),
Target number 8.3—Promote policies to support job creation and growing enterprises
8.3.1 is the proportion of informal employment in non-agriculture employment, by sex.
(59) (...) It is necessary to ensure the complementarity and consistency of the Program actions, (...) relating to education and training, culture and the media, youth and solidarity, employment and social inclusion ...
(Chapter XI, Article 32) (...) The Program shall be implemented so as to ensure its overall consistency and complementarity with other relevant Union policies, Programs and funds, in particular those relating to education and training, culture and the media, youth and solidarity, employment and social inclusion ...
(8) (...) This would allow more people to move to another country to learn or work and would allow the Program to focus on inclusiveness and on reaching more people with fewer opportunities ...

(continued)

Table 1 (continued)

(13) (. . .) a new EU Youth Strategy', the Program should support high-quality youth work, tools and systems for the training of youth workers, the validation of non-formal and informal learning and quality approaches to empower youth organisations . . .
(12) (. . .) The Program should be equipped to contribute to the successor of the strategic framework for European cooperation in education and training and the updated European Skills Agenda for sustainable competitiveness, social fairness and resilience established in the communication of the Commission of 1 July 2020 with a shared commitment to the strategic importance of skills, key competences and knowledge for sustaining jobs and supporting growth, competitiveness, innovation and social cohesion
(33) (. . .) The Bruges Communiqué of 7 December 2010 on enhanced European Cooperation in Vocational Education and Training for the period 2011–2020 called for support of vocational excellence for smart and sustainable growth. In its communication of 18 July 2017 entitled 'Strengthening Innovation in Europe's Regions: Strategies for resilient, inclusive and sustainable growth', the Commission called on Member States to link vocational education and training to innovation systems, as part of smart specialisation strategies at regional level. The Program should provide the means to respond to those calls and support the development of transnational platforms of centres of vocational excellence embedded in local and regional strategies for sustainable growth, innovation and competitiveness . . .
(39) (. . .) In line with the European Green Deal as a blueprint for sustainable growth, the actions under this regulation should respect the 'do no harm' principle without changing the fundamental character of the Program . . .
(Key action 2) (. . .) 2.2.2. partnerships of vocational education and training providers (platforms of centres of vocational excellence) embedded in local and regional strategies for sustainable growth, innovation and competitiveness that jointly work on high-quality transnational vocational Programs focused on meeting current and emerging sectoral skills needs . . .
Target number 8.5—Full employment and decent work with equal pay
8.5.1 is the average hourly earnings of female and male employees, by occupation, age and persons with disabilities.
(Article 3) (. . .) The general objective of the Program is to support, through lifelong learning, the educational, professional and personal development of people in the fields of education and training, youth and sport, in Europe and beyond, thereby contributing to sustainable growth, quality jobs and social cohesion, to driving innovation and to strengthening European identity and active citizenship . . .
(Article 3) (. . .) The general objective of the Program is to support, through lifelong learning, the educational, professional and personal development of people in the fields of education and training, youth and sport, in Europe and beyond, thereby contributing to sustainable growth, quality jobs . . .
SUSTAINABLE DEVELOPMENT GOALS 9 (Economic Dimension)
Keywords: Innovation (and research)
Target number 9.5—Enhance research and upgrade industrial technologies
9.5.1 is research and development expenditure as a proportion of GDP.
(12) (. . .) The Program should be equipped to contribute to the successor of the strategic framework for European cooperation in education and training and the updated European Skills Agenda for sustainable competitiveness, social fairness and resilience established in the communication of the Commission of 1 July 2020 with a shared commitment to the strategic importance of skills, key competences and knowledge for sustaining jobs and supporting growth, competitiveness, innovation and social cohesion, in line with the Council Recommendation of 22 May 2018 . . .

(continued)

Table 1 (continued)

(15) (. . .) The Program should be able to support any field of study and should, in particular, contribute to strengthening the Union’s innovation capacity by supporting activities that help people develop the knowledge, skills, competences and attitudes they need in forward-looking study fields or disciplines such as science, technology, engineering, arts and mathematics (STEAM), climate change, environmental protection, sustainable development, clean energy, artificial intelligence, robotics, data analysis, design and architecture, and digital and media literacy. Innovation can be fostered through all learning mobility and cooperation actions, whether directly or indirectly managed . . .
(16) (. . .) Synergies with the Horizon Europe Program established by Regulation (EU) 2021/695 of the European Parliament and of the Council (10) (‘Horizon Europe’) should ensure that combined resources from the Program and Horizon Europe are used to support activities dedicated to strengthening and modernising European higher education institutions. Horizon Europe will, where appropriate, complement the Program’s support for the European Universities initiative as part of the development of new joint and integrated long-term and sustainable strategies on education, research and innovation. Synergies with Horizon Europe will help to foster the integration of education and research, in particular in higher education institutions . . .
(31) (. . .) thereby recognising the fundamental role of the institutions and organisations in equipping individuals with the knowledge, skills and competences needed in a changing world and helping the institutions and organisations to adequately fulfil their potential for innovation, creativity and entrepreneurship . . .
(32) (. . .) the European Council called for cooperation between research, innovation and education to be encouraged, including through the European Universities initiative. The Program should support those European Universities in developing joint long-term strategies for high-quality education, research and innovation and for service to society . . .
(33) (. . .) The Program should provide the means to respond to those calls and support the development of transnational platforms of centres of vocational excellence embedded in local and regional strategies for sustainable growth, innovation and competitiveness . . .
(59) (. . .) It is necessary to ensure the complementarity and consistency of the Program actions, including those without a transnational or international character, with activities undertaken by the Member States and with other Union activities, in particular those relating to education and training, culture and the media, youth and solidarity, employment and social inclusion, research and innovation, industry and enterprise, digital policy . . .
(Article 3) (. . .) contributing to sustainable growth, quality jobs and social cohesion, to driving innovation and to strengthening European identity and active citizenship. (. . .) the learning mobility of individuals and groups, and cooperation, quality, inclusion and equity, excellence, creativity and innovation at the level of organisations (. . .); non-formal and informal learning mobility and active participation among young people, and cooperation, quality, inclusion, creativity and innovation at the level of organisations (. . .); the learning mobility of sport staff, and cooperation, quality, inclusion, creativity and innovation at the level of sport organisations . . .
(Key action 2) (. . .) partnerships for innovation to strengthen Europe’s innovation capacity . . .
(Article 32) (. . .) in particular those relating to education and training, culture and the media, youth and solidarity, employment and social inclusion, research and innovation, industry and enterprise . . .
(Annex I) (. . .) 2.2.2. partnerships of vocational education and training providers (platforms of centres of vocational excellence) embedded in local and regional strategies for sustainable growth, innovation and competitiveness that jointly work on high-quality . . .
(Key action 2) (. . .) 2.3.1. alliances: strategic cooperation between key players in the field of education and training and in business and research that foster innovation and modernisation of education and training systems;

(continued)

Table 1 (continued)

(Key action 2) 2.3.2. projects that foster innovation, creativity, e-participation, and social entrepreneurship in the fields of education and training and youth . . .
9.5.2 is the number of researchers (in full-time equivalent) per million inhabitants.
SUSTAINABLE DEVELOPMENT GOALS 10 (Social Dimension)
Keyword: Inequalities (inclusion, equality and non-discrimination)
Target number 10.3—Ensure equal opportunities and end discrimination
10.3.1 is the proportion of population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law.
(14) (. . .) There is a need to focus, in particular, on grassroots sport, taking into account the important role that sports play in promoting physical activity and a healthy lifestyle, interpersonal relations, social inclusion and equality (. . .)
(18) (. . .) Therefore, within a Union-wide framework of such measures aimed at increasing participation among people with fewer opportunities, inclusion action plans should be developed and tailored to the target groups and specific circumstances in each Member State (. . .)
(48) (. . .) In addition to assessing the overall effectiveness and performance of the Program, it is of particular importance that the interim evaluation thoroughly assess the implementation of new initiatives and of the inclusion and simplification measures put in place (. . .)
(59) (. . .) It is necessary to ensure the complementarity and consistency of the Program actions, including those without a transnational or international character, with activities undertaken by the Member States and with other Union activities, in particular those relating to education and training, culture and the media, youth and solidarity, employment and social inclusion, research and innovation (. . .)
(Article 3) (. . .) (a) the learning mobility of individuals and groups, and cooperation, quality, inclusion and equity, excellence, creativity and innovation at the level of organisations and policies in the field of education and training; (b) non-formal and informal learning mobility and active participation among young people, and cooperation, quality, inclusion, creativity and innovation at the level of organisations and policies in the field of youth; (c) the learning mobility of sport staff, and cooperation, quality, inclusion, creativity and innovation at the level of sport organisations and sport policies (. . .)
(Article 15) (. . .) The Commission shall, by 29 November 2021, develop a framework of inclusion measures to increase participation rates among people with fewer opportunities, as well as guidance for the implementation of such measures. That guidance shall be updated as necessary over the duration of the Program. Based on the framework of inclusion measures, and with particular attention to the specific Program access challenges within the national contexts, inclusion action plans shall be developed and shall form an integral part of the national agencies' work Programs. The Commission shall monitor the implementation of those inclusion action plans on a regular basis (. . .)
(Article 24) (. . .) The interim evaluation of the Program shall assess the overall effectiveness and performance of the Program, including as regards new initiatives and the delivery of inclusion and simplification measures (. . .)
(Article 32) (. . .) The Program shall be implemented so as to ensure its overall consistency and complementarity with other relevant Union policies, Programs and funds, in particular those relating to education and training, culture and the media, youth and solidarity, employment and social inclusion, research and innovation (. . .)
(Annex I) (. . .) Not-for-profit sport events: events held either in one country or simultaneously in several countries to raise awareness of the role of sport in diverse areas such as social inclusion, equal opportunities and health-enhancing physical activities (. . .)
(Annex II) (. . .) Inclusion: 2.4.1. The number of people with fewer opportunities taking part in activities under key action 1; 2.4.2. The number of newcomer organisations and institutions taking part in the Program under key actions 1 and 2 (. . .)

(continued)

Table 1 (continued)

SUSTAINABLE DEVELOPMENT GOALS 13 (Environmental Dimension)	
Keyword: Climate	
Target number 13.3—Build knowledge and capacity to meet climate change	
13.3.1 is the number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula.	
(59) (. . .) in particular those relating to education and training, culture and the media, youth and solidarity, employment and social inclusion, research and innovation, industry and enterprise, digital policy, agriculture and rural development that have a focus on young farmers, environment and climate, cohesion, regional policy, migration (. . .)	
(Article 32) (. . .) The Program shall be implemented so as to ensure its overall consistency and complementarity with other relevant Union policies, Programs and funds, in particular those relating to education and training, culture and the media, youth and solidarity, employment and social inclusion, research and innovation, industry and enterprise, digital policy, agriculture and rural development, environment and climate, cohesion (. . .)	
(Annex I) (. . .) 1.1. Learning mobility: short-term, long-term, group or individual mobility on diverse thematic areas and study subjects, including forward-looking fields such as the digital field, climate change, clean energy and artificial intelligence (. . .)	
(Annex II) (. . .) 2.6. Climate contribution: 2.6.1. The share of activities addressing climate objectives under key action 1; 2.6.2. The share of projects addressing climate objectives under key action 2 (. . .)	
SUSTAINABLE DEVELOPMENT GOALS 16 (Institutional Dimension)	
Keyword: Peace and justice (fundamental rights)	
Target number 16.a—Strengthen national institutions to prevent violence and combat crime and terrorism	
16.A.1 is the existence of independent national human rights institutions in compliance with the Paris principles.	
(28) (. . .) The Program should encourage the participation of young people in Europe's democratic life, including by supporting activities that contribute to citizenship education and participation projects for young people to engage and learn to participate in civic society, thereby raising awareness of European common values, including fundamental rights, as well as European history and culture (. . .)	
(64) (. . .) This Regulation respects the fundamental rights and observes the principles recognised in particular by the Charter of Fundamental Rights of the European Union (the 'Charter') (. . .)	
SUSTAINABLE DEVELOPMENT GOALS 17 (Institutional Dimension)	
Keyword: Partnerships	
Target number 17.9—Enhanced SDG capacity in developing countries	
17.9.1 is the dollar value of financial and technical assistance committed to developing countries.	
(Key action 2) Cooperation among Organisations and Institutions	

8, 18, 29, and 30; to 4.7.1 (the extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in (a) national education policies, (b) curricula, (c) teacher education, and (d) student assessment) items 12 and 33; to 4.B.1 (the volume of official development assistance flows for scholarships) items 3 and 6; and to 4.C.1 (the proportion of teachers in (a) preprimary, (b) primary, (c) lower secondary, and (d) upper secondary education who have received at least the

minimum organized teacher training (e.g., pedagogical training) preservice or in-service required for teaching at the relevant level in a given country) item 32.

Concerning SDG5, the research led to the identification of indicators 5.1.1 (whether or not legal frameworks are in place to promote, enforce, and monitor equality and nondiscrimination on the basis of sex) with associated items 4, 26, and 64 and 5.C.1 (proportion of countries with systems to track and make public allocations for gender equality and women's empowerment) with related item 43.

Regarding SDG8, the indicators and items identified are 8.3.1 (proportion of informal employment in nonagricultural employment, by sex) with the related items 59, (Chapter XI, Article 32, (8), (12), (13), (33), (39), and (Key action 2) and 8.5.1 (the average hourly earnings of female and male employees, by occupation, age, and persons with disabilities) related to Article 3.

With regard to SDG9, two indicators were identified, specifically 9.5.1 (research and development expenditure as a proportion of GDP) and 9.5.2 (the number of researchers (in full-time equivalent) per million inhabitants). In this case, indicator 9.5.1 was the only one to have items under the Erasmus Regulation, namely, 12, 15, 16, 31, 32, 33, 59, Article 3, Key action 2, Article 32, Annex I, and Key action 2.

Regarding SDG 10, indicator 10.3.1 was selected (proportion of population reporting having felt personally discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited by international human rights law). Thus, associated with this indicator are the following items (14), (18), (48), (59), (Article 3), (Article 15), (Article 24), (Article 32), (Annex I) and (Annex II).

SDG13 also have one indicator identified, namely, 13.3.1 (the number of countries that have integrated mitigation, adaptation, impact reduction, and early warning into primary, secondary, and tertiary curricula) linked to the items 59, Article 32, Annex I, and Annex II.

Associated with SDG16 and 17 are identified indicators for each, specifically 16.A.1 (the existence of independent national human rights institutions in compliance with the Paris Principles) and 17.9.1 (the dollar value of financial and technical assistance committed to developing countries), respectively. For indicator 16.A.1, the items of the Regulation (EU) 2021/817 are 28 and 64, and for indicator 17.9.1, the item is Key action 2.

Being aware of the contribution that the Erasmus+ program can have to the 2030 Agenda, as demonstrated by the identification of the indicators within higher education and their association with Regulation (EU) 2021/817, it is possible to realize that the SDGs do not contribute in an isolated and independent way to the desired sustainability.

Education is the basis for building citizenship and civic participation, for preserving the environment and health, and for financial sustainability, among others [4, 8, 12, 13, 28].

The awareness that systematic knowledge is more than an essential cultural resource is the starting point for the right to education. As a part of the cultural heritage, the citizen gains access to cognitive and formative patterns, increasing his chances of participating in the fate of his society and contributing to its

transformation. Access to education is also a form of openness, providing the person with a key to self-construction and perceiving oneself as capable of choices. In this perspective, the right to education is an opportunity for citizen development, a path to diversified possibilities, and a tool to increase self-esteem. The specification occurs in the struggle for the universalization of schooling when new rights are recognized, such as the right of children under the age of 6 to attend a school appropriate for their age, or when the right of women, young people, and adults to attend schools is acknowledged, even today. This is also true for people with special requirements who, for whatever reason, become disabled in their motility, hearing, or other abilities and begin to demand their own educational model that accommodates their unique demands. Because social actors recognize the value of knowledge in the society in which they live, the right to education becomes a nonviolent weapon of political claim and participation. As a result, education as a right and its implementation in social practices become a tool for reducing inequities and discrimination and enabling peaceful coexistence among people all over the world. The civil presupposition of universal citizenship is the dissemination and universalization of quality school education as a citizenship right, which is part of what Kant once considered one of the conditions “of perpetual peace”: the truly republican character of the States that guarantee this right of freedom and equality for all, among other things [5].

To be addressed in a way that simultaneously promotes the development of knowledge, attitude, and skills required for the preservation and improvement of environmental quality and community quality of life, environmental education must be adapted to contemporary circumstances in the city or the environment in which students live. Consequently, the practice of environmental education within the school requires much encouragement and commitment, because there is a need for immediate awareness about the problem of environmental degradation, assuming the role of social responsibility, beginning with basic actions that will become habits and practices established in society; this is the role of environmental education within the school [6]. Nonetheless, the author believes that the importance of environmental education in the school context is evident in terms of developing students' knowledge, skills, and attitudes toward environmental preservation. Thus, environmental education must be present at all educational levels, with the goal of reaching all students and reinforcing what they learned in the early grades. As a result, instructors can and should create environmental initiatives and engage with concepts and knowledge aimed at environmental preservation and sustainable resource use. Environmental education must be present at all educational levels, with the goal of reaching all students and reinforcing what they learned in the early grades [6]. Only through environmental education can a culturally complete society be achieved, and it is necessary to articulate educational actions, adequate conditions, and educator training so that they can work with environmental education themes and activities in a way that raises students' awareness and develops their criticism, generating new concepts and values about nature and contributing to environmental preservation [4].

According to Pretto [17], if we think of technologies at the service of the production of knowledge and culture, we can think of the insertion of the country in the so-called globalized world market, from another perspective, that is, of effective citizenship. Schools must be stimulating places in which the teaching of mathematics and science implies the potential to alter. Education must prepare young people to work in teams, to study on their own, to solve issues, to believe in their potential, and to have personal integrity, initiative, and the ability to invent. It must inspire innovation and provide opportunities for everyone. In this context, it must be made clear that public policy in the field of science and technology must be wide, encompassing not only innovation but, more fundamentally, scientific progress, with scientific education at all levels as a priority. It is vital to remember that scientific illiteracy will exacerbate disparities by further marginalizing already excluded majorities from the job market. To be successful, educational system reform must originate from the community, involving and valuing teachers, so that we as a society may get some perspective in knowledge society [29].

The valuing of labor is essential for the realization of human dignity, as is the execution and consolidation of decent work as a fundamental right guaranteed to all [14]. Work provides the citizen's right to feel productive, included, appreciated, and independent, which is much more than a financial concern. Adversities resulting from work relationships bring people with disabilities to a level of normalcy; that is, these are situations that any working subject can face, and this, too, provides satisfaction. Work is promoted today as a symbol of the right to citizenship and human dignity from a societal standpoint. The relationship between people with disabilities' education and qualifications has a direct impact on their salary and the employment they hold [16]. The modern world requires more schooling, qualification, up-to-date knowledge, and the learning of new technologies, but placing into the labor market is becoming more difficult every day, not only because of the new labor world demands but also because of the increase in unemployment, among the older people, the less qualified, the younger layers, and especially the young people who have not yet had their first job [9].

Higher education institutions (HEIs) promote lifelong learning, high-quality education, equity, and a variety of resources to assist empower global citizens to face today's and tomorrow's challenges. They play a critical role in ensuring a sustainable future for every citizen, which is a goal shared by all 17 Sustainable Development Goals (SDGs). [7].

Through lifelong learning, the Erasmus+ program aims to support people's educational, professional, and personal development in the fields of education and training, youth, and sport in Europe and beyond, thereby contributing to growth sustainability, quality jobs, social cohesion, driving innovation, and strengthening European identity and active citizenship. Erasmus+ intends to foster individual and group learning mobility, as well as cooperation, quality, inclusion, equity, excellence, creativity, and innovation at the organizational and policy levels in the sphere of education and training; nonformal and informal learning mobility and active participation among young people, as well as cooperation, quality, inclusion, creativity, and innovation at the organizational and policy levels in the field of

youth; and sport staff learning mobility, as well as cooperation, quality, inclusion, creativity, and innovation at the organizational and policy levels in the field of sport [15].

5 Conclusions

This study concluded that SDGs 4, 5, 8, 9, 10, 13, 16, and 17 receive contributions from the Erasmus+ program. Indeed, as can be seen from the analysis of Regulation (EU) 2021/817, there is a very strong relationship between it and the sustainability underlying the SDGs associated with education, inclusion and equality, climate, decent work, innovation, peace and justice, and partnerships. The contribution that the Erasmus+ program can have to the 2030 Agenda is demonstrated by the identification of the indicators within higher education and their association with Regulation (EU) 2021/817. This conclusion allows us to realize that the SDGs do not contribute in an isolated and independent way to the desired sustainability.

In the previous section, it was possible to verify the influence or the contribution that education (SDG4) has in the achievement of other Sustainable Development Goals like the ones studied in this work. As seen, education is the basis for building citizenship and civic participation, for preserving the environment and health, and for financial sustainability, among others. The universal right to education is the guarantee of the opportunity given to citizens to make more informed and sustainable choices in various areas, improving their existence in society. Access to education is also a sort of openness, since it provides a key to self-construction and the perception of oneself as capable of making choices. In this perspective, the right to education is a chance for citizen development, a gateway to new opportunities, and a means of boosting self-esteem. Only through environmental education can a culturally complete society be achieved and generate new concepts and values about nature contributing to environmental preservation. Better education provides better and different skills, giving people the possibility to have more decent works with a better remuneration that will allow a better quality of life. Work gives citizens the right to feel productive, included, valued, and self-sufficient, which is much more than a financial concern. Given this evidence, we can consider education as the pillar of a more sustainable society and world. The Erasmus+ program, being strongly associated with education and training, allows the achievement of such noble goals linked to the 2030 Agenda as inclusion, the right to equality, access to decent work, better quality of life, and social and global peace and justice.

6 Limitations and Future Research Proposals

One limitation to this research paper has to do with the robustness of the choice of keywords that were used to select for each of the SDGs; these keywords should

have been validated by EC and/or UNESCO. Another limitation is the fact that no key actions of the Erasmus+ program were analyzed, which would ensure greater robustness to the results through the treatment of European Commission reports on the program.

As future research projects, we propose the analysis and processing of participant reports to understand the real contribution of the Erasmus+ program to the 2030 Agenda, the analysis of SDGs based on the realities of each key action of the Erasmus+ program, the study of capacity building projects for higher education (CBHE) coordinated by Portuguese institutions and their alignment with Agenda 2030 and the sustainability strategy for Portugal, and a new study with the use of qualitative data analysis software to obtain more robust results and then be able to conclude with some policy recommendations.

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