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UNO's Sustainable Development Goals in academic courses: a pilot analysis on the programs of an Italian university

A. Saramin[1], M. Del Pin[1], E. Miotto[1], C. Smaniotto[2], L. Cadez[3], R. Kodilja[4], F. Marangon[5], M. Parpinel[1], L. Brunelli[1,6]

Key words: SDGs, sustainability, academia, tertiary education, curricula
Parole chiave: Obiettivi di Sviluppo Sostenibile, sostenibilità, università, educazione terziaria, curricula

Abstract

Background. *Universities are critical in educating tomorrow's citizens and achieving the Sustainable Development Goals of the United Nations Organization. The aim of this study was to investigate the integration of these goals in the curricula of an Italian university.*
Study design. *Cross-sectional study.*
Methods. *In February 2021, as part of the annual Syllabus preparation for each course, the teaching staffs at the University of Udine (Italy) were asked to complete an additional section in which they could indicate up to three Sustainable Development Goals for their courses. Descriptive statistics, Chi-square test and logistic regression were performed to determine whether the professors' sex, age, or department affected the likelihood of mentioning Sustainable Development Goals.*
Results. *In 723 courses, 360/1040 professors 59% male, mean age 53 years (range 30-73), mentioned one (29%), two (23%), or three (31%) Sustainable Development Goals. No Sustainable Development Goals were mentioned in 16% of courses, the majority of which were from the Mathematical, Computer and Physical Sciences Department (58%). The top six Sustainable Development Goals quoted were: Good health and well-being (35%), Responsible consumption and production (22%), Quality education (17%), Industry, innovation and infrastructure (13%), Gender equality (13%), Decent work and economic growth (13%). The least frequently mentioned Goal was Life below water (1%). Women ($p<0.0001$) and senior professors ($p=0.0148$) were more likely to consider at least one of the Sustainable Development Goals, while Mathematical, Computer and Physical Sciences Department showed a negative correlation ($p<0.0001$).*

[1] *Department of Medicine, University of Udine, Italy*
[2] *Department of Prevention, Western Friuli Healthcare Trust, Pordenone Udine, Italy*
[3] *Department of Agrifood, Environmental and Animal Sciences, University of Udine, Italy*
[4] *Department of Languages, Literatures, Communication, Education and Society, University of Udine, Italy*
[5] *Department of Economics and Statistics, University of Udine, Italy*
[6] *Accreditation, Quality and Clinical Risk Unit, Central Friuli Healthcare University Trust, Udine, Italy*

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Conclusions. *Gaps were identified with respect to specific Sustainable Development Goals, but discrepancies between departments may indicate deficits in respondent awareness. A transparent description of the Sustainable Development Goals in courses is recommended, to increase students' and university's engagement in sustainability.*

Background

In 2015, the United Nations Organization (UNO) unanimously adopted the 2030 Agenda for Sustainable Development, a set of 17 ambitious goals and 169 targets that span the three dimensions of sustainable development: social, environmental and economic. People, Planet, Prosperity, Peace, and Partnership are the five essential pillars of the Sustainable Development Goals (SDGs) of this Agenda, which aim to end poverty and hunger, address inequalities, tackle climate change and strengthen cooperation among countries to ensure that "no one is left behind" (1). In this context, SDG #4 - Quality education, defined as education that ensures the development of appropriate skills, gender equality, provision of appropriate school infrastructure, equipment, teaching materials and resources, scholarships, or teachers - has a dual importance, as it is itself a Sustainable Development Goal, but also a key tool for achieving the other goals. As reflected in the specific target 4.7, everyone should have the opportunity to acquire the knowledge and skills needed to live sustainably and promote sustainable development. Progress toward SDG#4 will be measured by a number of indicators, including the extent to which sustainability is incorporated into national education policies, instructional programs, teacher training and student assessment (2).

In line with this goal, education already refers to the concept of education for sustainable development (ESD), which once again emphasizes the importance of respecting human rights, gender equality, peace between people, valuing multiculturalism, and protecting the environment (3). This approach has been prioritized by the UNO since the launch of the ESD Decade in 2005 and mentioned in the final report "Shaping the future we want" published in 2014, which mentions the successful expansion of ESD (4-7). Some international initiatives have focused specifically on higher education, recognizing it as an important means to implement sustainable development worldwide. These include the Global Portal on Higher Education and Research and Sustainable Development (HESD) of the International Association of Universities (IAU) and the Higher Education Sustainability Initiative (HESI) which grew out of a partnership between UNESCO (United Nations Educational, Scientific and Cultural Organization) and other UNO higher education institutions (8) and brings together more than 300 higher education institutions worldwide to create interfaces between higher education, research, and policymaking (9).

In order to achieve the 2030 Agenda goals, it is crucial that the SDGs also find their place in national policies and strategies that can promote the implementation of sustainability initiatives in education. In the Italian context, the establishment of the partnership between the Ministry of University and Research, the National

Institute for Documentation, Innovation and Educational Research and the Italian Alliance for Sustainable Development in 2016 was of particular importance. Within this partnership, a national interactive platform "Scuola2030" was developed: a tool that provides publicly searchable resources and self-learning materials for teachers under the slogan "Education for Value Creation" (10). As far as higher education institutions are concerned, the Italian University Network for Sustainable Development (Rete delle Università per lo Sviluppo Sostenibile, RUSS), established in 2016 by the Conference of Italian University Rectors, is a good example of commitment to sustainability in order to share competences, experiences and best practices related to the promotion and support of sustainable development culture among all Italian universities committed to achieving the SDGs (11). Universities indeed play a crucial role in spreading the culture of sustainability, as they are known as incubators of innovation and change, where tomorrow's professionals, politicians, leaders, scientists, educators, and responsible citizens are trained. This engagement should be supported by universities, which should provide both a sustainability-oriented environment and professors whose role in passing on knowledge, skills, and role models to their students has been reported to have a strong influence on the cultural baggage of youth (12).

To determine the extent to which sustainability issues are addressed in Italian educational programs, we collected data on knowledge, awareness and attitudes about the SDGs and sustainability among first-year university students in 2019. Results revealed widespread knowledge gaps on these topics but a high student interest in sustainability, both in terms of personal culture and professional preparation (13). To understand the causes of these knowledge gaps and to identify possible targeted interventions, in 2021 we collected data from teachers in Italian mandatory public schools to determine their knowledge and attitudes toward sustainability. We found that knowledge levels are low and that education for sustainability is not yet seen as a shared responsibility, while the engagement of Italian teachers and schools needs to be improved (14).

To get a picture of what Italian universities can offer to their students through ESD, we decided to investigate quantitatively and qualitatively the level of inclusion of sustainability in academic curricula, with reference to each SDG.

Methods

The study was conducted at the University of Udine, an Italian university offering 103 undergraduate and postgraduate courses to its more than 17,000 students in the academic year 2020/21 (15). According to the official data from the Italian Ministry of University and Research, the total number of teaching and research staff at the University of Udine in 2021 was 1,211, including 580 full-time professors, 71 permanent researchers, 379 contract lecturers, and 181 research fellows (16). Already a member of IAU and HESI, Udine University has joined the Italian University Network for Sustainable Development from the beginning, sharing the commitment to sustainability and social responsibility. Over the years, the University has proposed research and teaching initiatives related to environmental protection, for example in the field of green energy and the optimal use of energy sources, as well as the promotion of concrete best practices such as separate waste collection and, finally, in the social field, the improvement of professional well-being against discrimination. In addition, the University offers a special eight-hour online course on sustainable development

to all students and technical-administrative-librarian staff. In 2019, the University also hosted the Magnificent Meeting of the Italian Rectors' Conference, where the Manifesto for University Sustainability was signed (17, 18).

In February 2021, as every year, all Udine University teaching staff (i.e., full-time professors, permanent researchers, and contract lecturers) were asked to fill in the online information about their courses on the official syllabus (i.e., a mandatory activity). At the same time, they were invited by the academic offices to indicate up to three SDGs included in each of their academic courses by compiling a specific additional section in the online syllabus (i.e., not mandatory). All academic courses, including individual modules of integrated courses, were included. This initiative was part of one of the first projects undertaken by the University as part of its collaboration with RUSS. On this occasion, professors were invited to visit the dedicated "Sustainable Uniud" section of the university website to learn more about the university's sustainability activities (18).

Gender, age, and department were collected as demographic data for all participants. Data were stored in aggregate form after respondents were anonymized. Descriptive statistics were used to describe respondent characteristics. Measures of central tendency (mean, median, mode) and measures of variability (standard deviation-SD, minimum and maximum) were calculated. Chi-square and logistic regression tests were used to understand the interactions between variables. Data analyses were performed using Epi Info™7.2.5.0 (Atlanta, Georgia, US).

Results

A total of 360 professors completed the additional section of the syllabus dedicated to the SDGs, representing 35% of all teaching staff of the University of Udine that year (i.e., 1,040). Of these, 59% were male (n=213; mean age 54; range of 30-71 years) and 41% were female (n=147; mean age 52; range of 32-73 years). Overall, the average age of respondents was 53 years (range of 30-73 years). Responses were obtained for all 729 courses, but six were excluded from the analysis due to missing data. The majority of courses reported addressing at least one SDG (84%, n=605), 31% addressed three SDGs, 23% addressed two SDGs, and 29% addressed a single SDG. No SDGs were mentioned in 16% of the courses, with the highest number of courses being in Mathematical, Computer and Physical Sciences (58%). In general, the six most frequently mentioned SDGs were, in this order: Good health and well-being (35%), Responsible consumption and production (22%), Quality education (17%), Industry, innovation and infrastructure (13%), Gender equality (13%), and Decent work and economic growth (13%). The goal of <Life below water> was mentioned least often, with only eight courses (1%). In terms of university departments, most courses included at least one SDG, with the exception of the Mathematical, Computer and Physical Sciences Department where 73% of courses did not include an SDG as part of the program. See Table 1 for more details on SDGs in courses by department.

In analyzing the characteristics of courses with associated SDGs, we found that the majority of Departments (78%) reported an average of two SDGs, with the exception of the Medical Area and the Mathematical, Computer and Physical Sciences Departments, where the average number was lower. In terms of professor demographics, there was a significant correlation between gender and identification of at least one SDG in courses: women were more likely to report one or more SDGs in their courses (χ^2=22.8461 $p<0.001$). We

Table 1 - SDGs included in academic courses at Udine University, broken down by university department.

Sustainable Development Goal	University Departments									Total
	Medical Area	Agrifood, Environmental and Animal Sciences	Economics and Statistics	Languages, Literatures, Communication, Education and Society	School for Advanced Studies	Juridical Sciences	Humanities and Cultural Heritage	Mathematical, Computer and Physical Sciences	Engineering and Architecture	
	256 (35%)	128 (18%)	39 (5%)	46 (6%)	9 (1%)	23 (3%)	20 (3%)	95 (13%)	107 (15%)	723 (100%)
SDG1 - No poverty	28 (11%)	1 (1%)	0 (%)	1 (2%)	0 (%)	1 (4%)	3 (15%)	0 (%)	0 (%)	34 (5%)
SDG2 - Zero hunger	17 (7%)	51 (40%)	2 (5%)	0 (%)	0 (%)	0 (%)	0 (%)	0 (%)	0 (%)	70 (10%)
SDG3 - Good health and well-being	198 (77%)	49 (38%)	2 (5%)	2 (4%)	1 (11%)	3 (13%)	0 (%)	2 (2%)	5 (5%)	262 (35%)
SDG4 - Quality education	16 (6%)	24 (19%)	9 (23%)	29 (63%)	1 (11%)	2 (9%)	11 (55%)	13 (14%)	22 (21%)	127 (17%)
SDG5 - Gender equality	38 (15%)	1 (1%)	6 (15%)	24 (52%)	4 (44%)	4 (17%)	6 (30%)	3 (3%)	6 (6%)	92 (13%)
SDG6 - Clean water and sanitation	4 (2%)	8 (6%)	0 (%)	2 (4%)	0 (%)	0 (%)	0 (%)	1 (1%)	4 (4%)	19 (3%)
SDG7 - Affordable and clean energy	0 (%)	1 (1%)	0 (%)	3 (7%)	1 (11%)	0 (%)	1 (5%)	4 (4%)	37 (35%)	47 (6%)
SDG8 - Decent work and economic growth	24 (9%)	12 (9%)	21 (54%)	3 (7%)	1 (11%)	11 (48%)	0 (%)	3 (3%)	17 (16%)	92 (13%)
SDG9 - Industry, innovation and infrastructure	4 (2%)	3 (2%)	15 (38%)	1 (2%)	1 (11%)	7 (30%)	6 (30%)	8 (8%)	50 (47%)	95 (13%)
SDG10 - Reduced inequalities	11 (4%)	0 (%)	3 (8%)	8 (17%)	5 (56%)	6 (26%)	5 (25%)	0 (%)	0 (%)	38 (5%)
SDG11 - Sustainable cities and communities	1 (0,4%)	6 (5%)	2 (5%)	2 (4%)	0 (%)	3 (13%)	5 (25%)	3 (3%)	26 (24%)	48 (7%)
SDG12 - Responsible consumption and production	12 (5%)	72 (56%)	10 (26%)	7 (15%)	2 (22%)	5 (22%)	2 (10%)	8 (8%)	41 (38%)	159 (22%)
SDG13 - Climate action	0 (%)	17 (13%)	3 (8%)	5 (11%)	0 (%)	0 (%)	2 (10%)	2 (2%)	5 (5%)	34 (5%)
SDG14 - Life below water	0 (%)	7 (5%)	0 (%)	0 (%)	0 (%)	0 (%)	0 (%)	1 (1%)	0 (%)	8 (1%)
SDG15 - Life on land	1 (0,4%)	26 (20%)	1 (3%)	1 (2%)	0 (%)	0 (%)	0 (%)	0 (%)	0 (%)	29 (4%)
SDG16 - Peace, justice and strong institutions	14 (5%)	1 (1%)	3 (8%)	12 (26%)	3 (33%)	12 (52%)	8 (40%)	0 (%)	4 (4%)	57 (8%)
SDG17 - Partnerships for the Goals	10 (4%)	0 (%)	2 (5%)	3 (7%)	0 (%)	1 (4%)	0 (%)	0 (%)	2 (2%)	18 (2%)
Total courses	256	128	39	46	9	23	20	95	107	723
Courses with 0 SDG	23 (9%)	11 (9%)	4 (10%)	0 (%)	1 (11%)	1 (4%)	1 (5%)	69 (73%)	8 (8%)	118 (16%)
Courses with 1 SDG	128 (50%)	22 (17%)	10 (26%)	10 (22%)	2 (22%)	3 (13%)	1 (5%)	11 (12%)	25 (23%)	212 (29%)
Courses with 2 SDGs	71 (28%)	28 (22%)	6 (15%)	15 (33%)	1 (11%)	5 (22%)	6 (30%)	8 (8%)	28 (26%)	168 (23%)
Courses with 3 SDGs	34 (13%)	67 (52%)	19 (49%)	21 (46%)	5 (56%)	14 (61%)	12 (60%)	7 (7%)	46 (43%)	225 (31%)

Table 2 - Logistic regression between department, demographic characteristics of professors, and number of SDGs identified.

Term	Odds Ratio	95% C.I.	p-Value
Age	1,0363	1,0070-1,0664	0,0148
Sex (M/F)	0,8236	0,4695-1,4448	0,4985
Department (Economics and Statistics/Agrifood, Environmental and Animal Sciences)	1,0329	0,3026-3,5259	0,9588
Department (Engineering and Architecture/Agrifood, Environmental and Animal Sciences)	1,3611	0,5206-3,5588	0,5295
Department (Humanities and Cultural Heritage/Agrifood, Environmental and Animal Sciences)	2,1990	0,2643-18,2963	0,4660
Department (Juridical Sciences/Agrifood, Environmental and Animal Sciences)	2,9019	0,3488-24,1392	0,3243
Department (Languages, Literatures, Communication, Education, Society/Agrifood, Environmental and Animal Sciences)	287966,2725	0,0000->1.0E12	0,9605
Department (Mathematical, Computer and Physical Sciences/Agrifood, Environmental and Animal Sciences)	0,0384	0,0177-0,0832	0,0000
Department (Medical Area/Agrifood, Environmental and Animal Sciences)	1,1349	0,5189-2,4823	0,7513
Department (School for Advanced Studies/Agrifood, Environmental and Animal Sciences)	0,9510	0,1069-8,4609	0,9641
CONSTANT	*	* *	0,6058

also found a correlation with the age of the professor reporting this information (p=0.0148).

Detailed information about the correlation between department, professor characteristics, and the number of SDGs identified can be found in Table 2.

Discussion

To our knowledge, this is one of the first studies to examine the inclusion of the SDGs into academic curricula. The population that participated in our study included more than one third of the total teaching staff of the University of Udine, and its characteristics were similar to those of the referring population in terms of sex and age distribution (16). The differences found in the inclusion of SDGs in academic curricula were related to the academic department, age, and sex of the professor. In general, the SDGs most frequently mentioned by Udine professors can be traced back to the People, Planet, and Prosperity pillars of the 2030 Agenda. This raises questions about the extent to which Peace and Partnerships are actually addressed in academic curricula, and seems to contradict the findings of Poza-Vilches et al.'s study of the inclusion of the SDGs in education, humanities, and environmental science curricula at nine different Spanish universities. In their study, SDG#16 – Peace, Justice and Strong Institutions - and SDG#17 - Partnerships for the Goals - were among the most frequently mentioned goals (19). Interestingly, in our case, SDG#16 was mentioned mostly by professors of medical programs rather than professors of law programs, which ranked second, on par with programs in Languages, Literatures, Communication, Education and Society. For SDG#17, it was again professors of medical programs who mentioned this issue most often in their programs, providing

nearly half of the responses. Surprisingly, departments that deal with business or law seem to only marginally address this topic, although it would be important to communicate to future leaders and stakeholders the importance of strengthening global partnerships to achieve sustainable development. This is especially true given that a 2018 report from UNO shows that the achievement of SDG#17 is threatened by a variety of health, social, environmental, peace and security crises, although their value is widely recognized (20, 21), and that strengthening international cooperation is urgently needed (20). Moreover, Eurostat's 2022 report on the European Union's overall progress on the SDGs shows that Italy's progress on this specific goal is slow and worse than the EU average (22, 23). Quality education (SDG#4) plays a critical role in upholding the values of cooperation and civic participation and in fostering global partnerships through initiatives that allow students to collaborate with organizations and individuals working on various issues related to global challenges (24).

In terms of quantitative differences between departments in terms of reported coverage of the SDGs in this study, the low inclusion of sustainability topics in the curricula of courses in the Mathematical, Computer and Physical Sciences, as well as the lower average number of SDGs mentioned in the courses in the Department of Medicine compared to the averages of the other departments, are striking. In addition, the fact that SDG#3 - Good health and well-being – was not listed in the syllabuses of one-third of the medical school courses is surprising, as we would have expected all courses in this area to focus on human health and well-being. Indeed, the incomplete inclusion of SDG#3 in medical school curricula does not seem plausible and raises doubts about the accuracy of the compilation of the SDG-specific curriculum section or perhaps the actual knowledge and awareness of professors about the content of the SDGs. Indeed, this heterogeneity may be due in part to the individually low knowledge, awareness, and sensitivity of participating professors in 2021, which would be consistent with Smaniotto et al.'s observations for high school faculty and with the existing literature on the relationship between sustainability and higher education (14). Nonetheless, the lower representation of sustainable development issues in Mathematical, Computer and Physical Sciences and Medicine departments seems to worsen the perspective that emerges from the results of another study in which first-year health and science students had the lowest percentage of positive learning attitudes toward the SDGs (13), as also reported by Villalba-Arias et al. for Paraguayan medical students (25). Combining the results and observations, one could hypothesize that in these two fields of study there is a general misperception of the SDGs as something unrelated to the field of study, both on the part of the students (13) and on the part of the teaching staff.

Despite the fact that poverty is one of the greatest challenges facing humanity and that hard-earned gains in this area are suffering a setback worldwide due to the global climate and health crisis (26), SDG#1 - No poverty - was not mentioned in any course taught by the Department of Economics and Statistics. In addition, SDG#13 - Climate action, SDG#14 - Life below water, and SDG#15 - Life on land - were mentioned in only a few courses, suggesting that environmental sustainability may not be fully represented in academic offering. This seems consistent with the literature, as many authors have already analyzed these issues in the context of higher education and concluded that although climate change and environmental issues are a growing concern, higher education institutions are struggling to integrate these issues into their educational programs and practices (27, 28).

Several Authors have addressed the difficulties of implementing sustainability in higher education institutions and explored the barriers they face (29-31), including lack of awareness and interest. However, the reasons for this heterogeneity may also lie in the lack of knowledge due to the lack of training of teaching staff on the subject (32-36), although the first proposals for sustainability-specific training of teaching staff date back to the early 1990s (4, 37). The lack of specific training pathways that provide teachers with knowledge, skills, and pedagogical methods for teaching sustainability may have actually impacted their engagement and missed the opportunity to teach the 'big picture' of sustainable development as it relates to social responsibility and environmental education (31, 34). Although a lack of knowledge or awareness of the content of the SDGs cannot be ruled out, another possible explanation could be a 'silo view' of teaching, as previously reported by Leal Filho et al. (31), whereby members of different departments tend to focus on their own disciplinary area, thus lacking a holistic, transdisciplinary approach (38). Despite all these observations, the findings of the University of Udine represent a good starting point for attempting to structure university engagement and commitment to sustainability. First, it led to professors gaining a better knowledge of sustainability, which was reflected both in the recognition of the SDGs and in their inclusion in the curricula according to the principles of ESD (39, 40). Second, looking at the big picture helped both students and faculty understand that climate change is not a purely environmental problem, as it complicates addressing other problems such as poverty and hunger and threatens human health and well-being. Environmental sustainability is a global concern, and universities need to make students aware that each field of research can apply its knowledge and skills to address sustainability challenges. Science, for example, is undeniably crucial to achieving all the SDGs, as it is able to provide powerful tools such as mathematical models to understand, predict, and manage all phenomena on Earth, such as climate change, pollution, and demographic problems (41-43). In addition, scientific and technological innovations can play a fundamental role in addressing social problems such as inequalities in education, health, and access to public services worldwide by fostering a participatory, scientifically literate citizenry that is ready to take on the challenge of sustainable development (44). Third, this experience has inspired us to use the holistic iceberg model to interpret these human-designed complex systems (45), considered by several Authors as a key to achieving sustainability in different contexts (46-48) According to this emblematic model, the events we observed (gaps in the SDGs, identified by professors in the curricula) represent the tip of the iceberg - the emergent part - below which lie the patterns that emerge over time (other gaps not yet identified), which in turn are influenced by the underlying structures (administrative commitment, policies, and standards that influence the content of the curricula); finally, the deepest part of the iceberg represents the mental paradigms (values, mindset, awareness of sustainability issues) that shape the system. Accordingly, change must begin at the deepest level and build a transdisciplinary culture of sustainability in higher education.

Strengths and limitations of this study

As far as we are aware, this study represents one of the first attempts to assess the integration of sustainable development issues into higher education programs, in response to the UNO and UNESCO indicator on SDG #4: the integration of the goals into curricula. This was done with the

direct involvement of professors from the University of Udine, which at the time was taking its first concrete step as part of its membership in RUSS. By asking professors to self-assess the SDGs incorporated into their courses, we were able to gain some information about what they thought their courses could be useful for in terms of sustainability, and at the same time the university was able to engage academics in the conversation about sustainability. However, since the creation of the SDG section of the syllabus was new at the time of data collection and its filling was not mandatory, this may have led to some bias in the responses. In fact, the response rate of professors reached the 35% of the total faculty which, even though being a good result, may have prevented us from correctly interpreting the data on the entire target population, whose representativeness may have been affected by selection bias unknown to the authors. In addition, for those courses where SDGs were not identified as part of the program, we are unable to distinguish whether this is a lack of commitment to the topic by professors or an actual gap in the inclusion of SDGs in the academic program. To address this ambiguity, subsequent studies should consider supplementing the professors' self-assessment with an external and more objective assessment of the topics covered in the course to determine the SDGs included in the program. Since we only considered the University of Udine in our data collection, our results should be considered with caution and as a kind of first pilot experience with such an assessment, and their generalizability to the regional or national academic situation cannot be guaranteed. In order to obtain more meaningful data on the actual inclusion of the SDGs into academic programs and courses, the same assessment experience should be replicated at several universities at the regional and national levels to also allow benchmarking and stimulate continuous improvement. Finally, students' opinions on this topic were not solicited, which may have prevented us from considering the primary user perspective of the topic.

Conclusions

Given the widespread and recognized importance of university teaching in developing critical thinking, awareness, and engagement among citizens and professionals, we believe that the practice of describing the SDGs in academic courses should be expanded to all universities. This initiative could help make the sustainability topics covered in lectures transparent to students and, in turn, promote the university's commitment to environmental, economic, and social responsibility in the context of the 2030 Agenda, ultimately engaging the entire academic and student community in sustainability.

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List of abbreviations
UNO: United Nations Organization
SDG(s): Sustainable Development Goal(s)
ESD: Education for Sustainable Development
HESD: Higher Education and Research and Sustainable Development
IAU: International Association of Universities
HESI: Higher Education Sustainability Initiative
UNESCO: United Nations Educational, Scientific and Cultural Organization
RUSS: Rete delle Università per lo Sviluppo Sostenibile

Riassunto

Gli obiettivi di sviluppo sostenibile dell'ONU nei corsi accademici: analisi pilota dei programmi di insegnamento in un'università italiana

Premessa. L'università è fondamentale per la formazione dei cittadini di domani e per il raggiungimento degli Obiettivi di Sviluppo Sostenibile dell'Organizzazione delle Nazioni Unite. Lo scopo di questo studio è stato quello di indagare l'inclusione di tali Obiettivi di Sviluppo Sostenibile nei curricula di una università italiana.

Disegno dello studio. Studio trasversale.

Metodi. Nel febbraio 2021, in concomitanza alla compilazione annuale dei Syllabus per ciascun corso, ai docenti universitari dell'Università di Udine (Italia) è stato richiesto di compilare una sezione aggiuntiva in cui potevano indicare fino a tre Obiettivi di Sviluppo Sostenibile trattati nei loro corsi. Sono state eseguite statistiche descrittive, test Chi-quadro e regressione logistica per determinare se il sesso, l'età o il dipartimento di appartenenza dei professori influissero sulla probabilità di aver riportato gli Obiettivi di Sviluppo Sostenibile.

Risultati. All'interno di 723 corsi, 360 professori (59% uomini/41% donne) con età media 53 anni (range 30-73) hanno identificato uno (29%), due (23%) o tre (31%) Obiettivi di Sviluppo Sostenibile. Per il 16% dei corsi non è stato citato alcun Obiettivi di Sviluppo Sostenibile, la maggior parte di questi apparteneva al Dipartimento di Scienze Matematiche, Informatiche e Fisiche (58%). I sei più citati Obiettivi di Sviluppo Sostenibile sono stati: Buona salute e benessere (35%), Consumo e produzione responsabili (22%), Istruzione di qualità (17%), Industria, innovazione e infrastrutture (13%), Uguaglianza di genere (13%), Lavoro dignitoso e crescita economica (13%). L'obiettivo meno citato è la vita sotto l'acqua (1%). Le donne ($p<0,0001$) e i professori più anziani ($p=0,0148$) avevano maggiori probabilità di identificare almeno un Obiettivo di Sviluppo Sostenibile, mentre il Dipartimento di Scienze Matematiche, Informatiche e Fisiche riportava una correlazione negativa ($p<0,0001$).

Conclusioni. Sono state riscontrate lacune per specifici Obiettivi di Sviluppo Sostenibile, ma le discrepanze esistenti tra dipartimenti possono anche suggerire deficit nella consapevolezza degli intervistati. Si auspica una descrizione trasparente degli Obiettivi di Sviluppo Sostenibile trattati nei corsi universitari per favorire il coinvolgimento degli studenti e dell'università verso la sostenibilità.

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Corresponding author: Laura Brunelli, Department of Medicine, University of Udine, Via Colugna 50, 33100 Udine, Italy
e-mail: laura.brunelli@uniud.it