

University Food Policies

DESIGNING SUSTAINABLE FOOD SYSTEMS ON CAMPUS

Edited by
Davide Fassi

Design International series

DIRECTION

Silvia Piardi

SCIENTIFIC BOARD

Alessandro Biamonti, Alba Cappellieri, Mauro Ceconello, Claudio Germak, Elisa Giaccardi, Ezio Manzini, Carlo Martino, Promil Pande, Mario Piazza, Angelica Ponzio, Francesco Scullica, Francesca Tosi, Yingchun Zang

EDITORIAL BOARD

Alessia Brischetto, Alessio Caccamo, Barbara Camocini, Giuseppe Carmosino, Eugenia Chiara, Mariana Ciancia, Chiara Di Lodovico, Andrea Di Salvo, Elena Elgani, Silvia Gramegna, Marco Quaggiotto, Gustavo Alfonso Rincon, Fabiano Scherer, Daniela Selloni, Davide Spallazzo, Livia Tenuta

The Design International series was launched in 2017 as a place for cultural exchange between the different design souls. Over the years, the series has consolidated its position as a point of reference for international research, outlining a continuously updated research map. The Scientific Committee, consisting of experts in fashion, interiors, graphics, communication, product, service, social interaction, innovation and emotional design guarantees the level of the accepted texts. The Editorial Board, consisting of young experts in the different branches of design, supports the work of the scientific committee. After an initial evaluation by the two committees, the texts undergo international double revision.

FrancoAngeli

SERIES - OPEN ACCESS CATALOG

This volume is published in open access format, i.e. the file of the entire work can be freely downloaded from the FrancoAngeli Open Access platform (<http://bit.ly/francoangeli-oa>).

On the FrancoAngeli Open Access platform, it is possible to publish articles and monographs, according to ethical and quality standards while ensuring open access to the content itself. It guarantees the preservation in the major international OA archives and repositories. Through the integration with its entire catalog of publications and series, FrancoAngeli also maximizes visibility, user accessibility and impact for the author.

Read more: [Publish with us \(francoangeli.it\)](#)

Readers who wish to find out about the books and periodicals published by us can visit our website www.francoangeli.it and subscribe to *Keep me informed* service to receive e-mail notifications.

University Food Policies

DESIGNING SUSTAINABLE FOOD SYSTEMS ON CAMPUS

Edited by
Davide Fassi

PRODUCTION MANAGEMENT

Eleonora De Marchi

ART DIRECTION

Marco Quaggiotto

GRAPHIC DESIGN

Giada Zoncada, Arianna Priori

ISBN e-book Open Access: 9788835193135

Copyright © 2026 by FrancoAngeli s.r.l., Milano, Italy.

This work, and each part thereof, is protected by copyright law and is published in this digital version under the license Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0). Text and Data Mining (TDM), AI training and similar technologies rights are reserved.

By downloading this work, the User accepts all the conditions of the license agreement for the work as stated and set out on the website <https://creativecommons.org/licenses/by-nc-nd/4.0>

Links and QR codes in the book are provided by the author. The publisher assumes no responsibility for links and QR codes contained therein that lead to websites outside of FrancoAngeli.

Contents

7	Foreword Alessandro Perego
11	Introduction Davide Fassi
15	1. Guidelines for University Food Policy Davide Fassi, Annalinda De Rosa
27	2. Codesigning the Polimi Food Policy Marta Corubolo, Irene Bassi
49	3. Experimenting Approaches to Food Waste Reduction and Monitoring in Universities Stefano Quaglia, Camilla Borsani, Federico Caniato
61	4. A Roadmap Towards Best Practice Enhancement in University Canteens Annalisa De Boni, Giovanni Ottomano Palmisano, Rocco Roma, Pietro Santamaria, Massimiliano Renna
81	5. Promoting Sustainability in Higher Education: A Case Study Analysis Donatella S. Privitera, Alessandro Scuderi, Irene Selvaggio, Carla Zarbà
97	6. Campus as a Living Lab: Shifting Food Habits to Shape Urban Sustainability Abhishek Dattu Narote, Riccardo Guidetti, Valentina Giovenzana

109	7. Engaging Stakeholders for Sustainable Food Procurement Giovanna Del Gaudio, Elena Lupolo, Fabiana Sepe
121	8. Driving Sustainable Food Procurement Through the University Campus Community: Insights from the <i>UNIPR Bio Bags</i> Experience in Parma Filippo Arfini, Marianna Guareschi, Teresa Tugliani
133	Authors

5. Promoting Sustainability in Higher Education: A Case Study Analysis

Donatella S. Privitera¹, Alessandro Scuderi², Irene Selvaggio¹,
Carla Zarbà²

¹Department of Educational Sciences, University of Catania,
Via Biblioteca, 4, 95124 Catania

²Department of Agriculture, Food and Environment (Di3A), University
of Catania, Via Santa Sofia 98-100, 95123 Catania

ABSTRACT

The aim of this study is to analyze the role of universities, and in particular the University of Catania, in promoting sustainable lifestyles, with a specific focus on food and nutrition. By examining the syllabi of degree programs and applying text mining tools (Voyant Tools), the present research analyzes the frequency and distribution of concepts related to sustainability and nutrition across various disciplinary areas.

This study thus underlines the need to promote a systemic and interdisciplinary perspective within academic curricula, one that can overcome traditional disciplinary boundaries and contribute more effectively to the goals of sustainability.

The results reveal a heterogeneous distribution: while the medical and scientific fields tend to focus more on nutrition, the technical-scientific, economic-legal, and humanities areas address greater attention to sustainability and the goals of the 2030 Agenda. The analysis also highlights specific correlations between key concepts and disciplinary sectors, revealing the persistence of

fragmented approaches. However, the transition towards sustainable models of life and consumption requires stronger integration of themes related to health, food, and environmental and social sustainability inside education.

5.1 Introduction

Educating citizens and future leaders in values compatible with sustainable development is a priority at all levels of education, especially in higher education, as academic institutions play a strategic role in preparing professionals and shaping decision-makers who are aware of sustainability challenges (Leal Filho *et al.*, 2023; Lewis, 2014; Niu *et al.*, 2010; Yuan *et al.*, 2013).

Sustainability is a complex and multidimensional concept, involving the simultaneous achievement of productive, ecological, temporal, economic, and socio-cultural objectives (Gaspar *et al.*, 2022). In this context, education is essential for providing students with the knowledge and skills necessary to make responsible decisions for the well-being of present and future generations (UNESCO, 2017; Didham & Ofei-Manu, 2020; Leal Filho *et al.*, 2025).

From this perspective, Education for Sustainable Development (ESD) aims to develop the skills to critically reflect on one's actions and their impacts, promoting responsible behaviors, innovative ideas, and participation in socio-political processes (UNESCO, 2017). It fosters transformative learning, capable of shaping perspectives, values, and skills essential for building more equitable, resilient, and sustainable societies (Laurie *et al.*, 2016).

The concept of ESD has undergone significant development since the 1990s, thanks to international initiatives, and has also been consolidated through specific policies implemented by European Union member states (and beyond). In 2015, the adoption of the 17 SDGs emphasized the importance of quality education, with Goal 4.7 aiming to ensure the acquisition of skills for sustainable development, global citizenship, and respect for human rights by 2030 (Elmassah *et al.*, 2020; United Nations, 2015). In this context, the document "ESD for 2030: A Roadmap" outlines five priority areas for the implementation

of ESD: policy development, transformation of learning environments, teacher training, youth engagement, and concrete actions within local communities (UNESCO, 2020).

In light of the above, this article examines the role of sustainability education in higher education, with particular reference to the University of Catania (Italy), focusing on the promotion of sustainable lifestyles and dietary habits among students. By analyzing degree program syllabi and applying text mining tools (Voyant Tools), the study investigates the frequency and distribution of concepts related to sustainability and nutrition across different disciplinary areas.

5.2 State of art of sustainability education

The role of the university has evolved beyond its traditional function as a producer of knowledge, taking on an active role as an agent of change (Robinson *et al.*, 2011; Peer e Stoeglehner, 2013; Brugmann *et al.*, 2019; Leal Filho *et al.*, 2023). Universities train students to apply knowledge, make informed decisions, and understand the global context of their actions, enabling them to become agents of change; as future experts and leaders, they can drive significant social transformations (Al-Nuaimi & Al-Ghamdi, 2022; Rosenau *et al.*, 2024). Universities should therefore position themselves as learning institutions that foster interdisciplinarity and transdisciplinarity, active participation, problem-solving, and the integration of formal and informal learning (AdomBent *et al.*, 2014; Holm *et al.*, 2015). To achieve this goal, universities must integrate sustainability across all curricula, enabling graduates to apply its principles in their future professions and contribute to social well-being (Xue, 2022).

Among the areas where adopting sustainable behaviours is essential, food and nutrition play a crucial role, as individual and collective choices directly impact the environment, public health, and social dynamics. Universities have the responsibility to promote healthy and sustainable eating habits among students by fostering awareness within the academic community and supporting the transformation of the food system (Franchini *et al.*, 2023; Gaspar *et al.*, 2022).

5.3 Material and methods

5.3.1 Materials

The materials analyzed include the course programs publicly available on the official web pages of the University of Catania, in the section dedicated to course descriptions for the 2024/2025 academic year, as well as a structured questionnaire administered online.

The curricula, downloaded in PDF format between January and February 2025, represent the official educational offerings and detail learning objectives, teaching methods, prerequisites, course content, reference materials, and assessment criteria.

The analysis focused on the curricula of 109 degree programs (out of 116) offered across the University's 17 departments. Only curricula updated for the 2024/2025 academic year, corresponding to active courses and written in Italian, were included. Programs that were outdated, taught in English as part of international programs, or not available online were excluded.

Disciplinary area	Name of departments
Medical area	General Surgery and Medical-Surgical Specialties (CHIRMED) Clinical and Experimental Medicine (MEDCLIN) Biomedical and Biotechnological Sciences (BIOMETEC) Medical, Surgical Sciences and Advanced Technologies (DGF)
Scientific area	Physics and Astronomy (DFA) Mathematics and Computer Science (DMI) Biological, Geological and Environmental Sciences (DSBGA) Chemical Sciences (DSC) Drug and Health Sciences (DSF)
Technical-scientific area	Agriculture, Food and Environment (DI3A) Electrical, Electronic and Computer Engineering (DIEEI) Civil Engineering and Architecture (DICAR)
Economic, political-social and legal area	Economics and Business Law (LEX) Political and Social Sciences (DSPS)
Humanities area	Educational Sciences (DISFOR) Humanities (DISUM)

Table 5.1.
Distribution of syllabi
by thematic area and
department.

To highlight potential differences between disciplinary areas and facilitate comparative analysis, the degree programs were grouped into five broad disciplinary areas: (1) medical, (2) scientific, (3) technical-scientific, (4) economic, political-social, and legal, and (5) humanities (Table 5.1).

5.3.2 Content Analysis Methodology

Content analysis was employed as the methodological approach to systematically and objectively support the present study, drawing on the scientific examination of communication content.

This type of analysis focuses on the meanings, contexts, and intentions embedded within messages, thus enabling a deeper understanding of communication processes. More generally, the content of a message or document can be considered the basis for drawing inferences and formulating conclusions (Devi Prasad, 2008; Mustapha & Ebomoyi, 2019; Nachmias & Nachmias, 1976).

Specifically, the analysis of the course syllabi was carried out using Voyant Tools (<https://voyant-tools.org/>), a free, open-source, web-based suite that offers a wide range of tools for textual analysis (Brenner, 2014; Cortés Sánchez, 2018; Elhersh & Alqawasmeh, 2024; Miller, 2018; Schumann, 2022).

The syllabi of the degree courses were initially compiled into a single PDF file for each department. These organized files, were subsequently uploaded to the Voyant Tools platform, dividing them into five distinct corpora corresponding to their respective disciplinary areas.

For the analysis, keywords belonging to two broad conceptual areas were selected: *sustainability* and *nutrition*. The selection of these categories aims to identify sustainable development concepts in the syllabi and to analyze the topic of nutrition from both nutritional and environmental perspectives, while also allowing for the exploration of potential connections between the two dimensions.

Since the selection process included only syllabi written in Italian, the keywords were initially defined in Italian; however, to maintain consistency with the English text of the article, they were later translated and used in English during the analysis phase (Table 5.2).

Table 5.2.
Selected keywords by
conceptual area.

Sustainability	Nutrition
Sostenibilità → Sustainability	Alimentazione → Nutrition
Sostenibile → Sustainable	Alimentare → Nutritional
Sostenibili → Sustainable	Alimentari → Groceries
Agenda	Alimenti → Foodstuffs
Dell'agenda → Of the agenda	Cibo → Meal
2030	Dieta → Diet
Goal/s/*	Diete → Diets
Target	Food
Sdg/s/*	Nutrizione → Nourishment

(*) Indicates the simultaneous analysis of multiple forms of the same word.

To account for all possible variations of certain words, an asterisk (*) was used in some cases as a truncation operator, allowing for the simultaneous analysis of multiple forms of the same term. For example, the term *goal* includes both *goal* and *goals*.

Additionally, to optimize the analysis, customized *stopwords* were defined based on the content of the syllabi and the specificity of the terms under examination.

The first phase of the analysis used the *Terms* tool to calculate the absolute frequency of key terms; subsequently, *Links*, *Collocates*, and *Contexts* were used to examine co-occurrences and semantic relationships.

5.4 Results

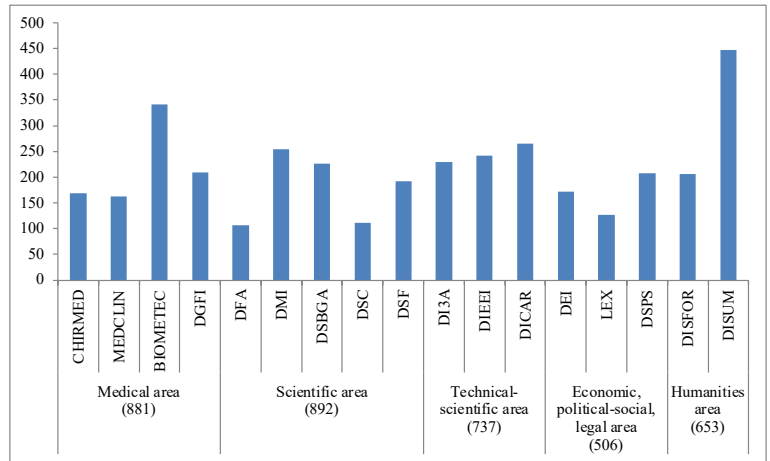
5.4.1 Distribution of Key Terms Across Disciplinary Areas

The analyzed corpus consists of a total of 3,669 syllabi, divided by thematic area and department as shown in Figure 5.1.

The use of the *Terms* tool reveals a different incidence of these concepts across the various areas.

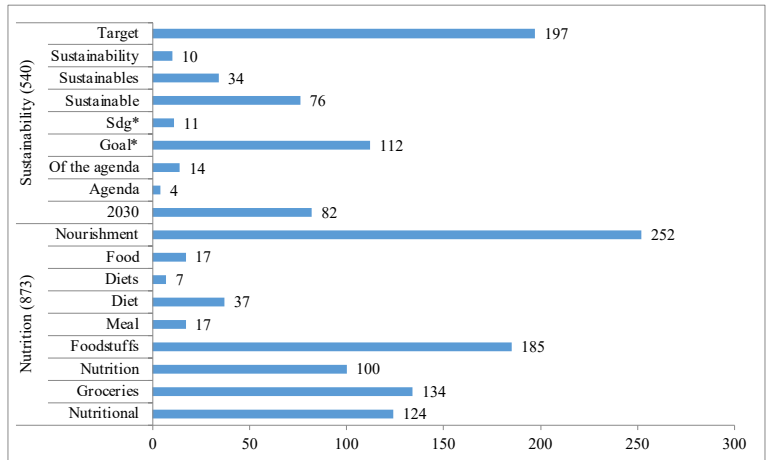
In the medical area, terms related to nutrition predominate, with *Nourishment* being the most frequent at 252 occurrences, followed by *Foodstuffs*, *Groceries*, and *Nutritional*, suggesting a focus on the effects of diet on health. Terms such as *Nutrition* and *Diet* also highlight attention to dietary patterns. The presence of terms like

Figure 5.1.
Distribution of syllabi
by thematic area and
department.



Target, *Goals!**, *2030*, and *Sustainable* indicates a reference, albeit less pronounced, to the sustainability goals (SDGs) (Figure 5.2).

Figure 5.2.
Term frequency in the
syllabi of medical area.



In the scientific area, terms related to nutrition predominate, with *FOODSTUFFS* being the most frequently used term (228 occurrences), and a centrality of words such as *NUTRITIONAL* and *GROCERIES*, suggesting a focus on processes related to the production, processing, and quality of food. The terms *GOALS!*, *2030*, and *target* reflect attention to the objectives of the 2030 Agenda, but the low presence of *Sustainability* and the absence of *SDG/s!* and *Agenda* indicate a less in-depth treatment of the topic (Figure 5.3).

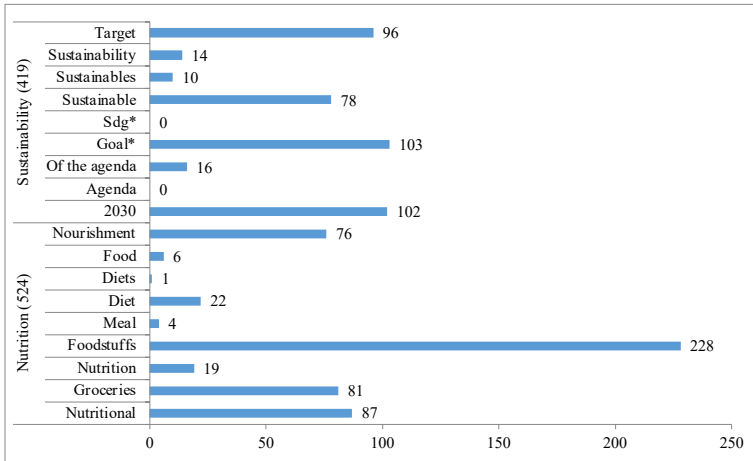


Figure 5.3. Term frequency in the syllabi of scientific area.

In the technical-scientific area, terms related to sustainable development are particularly prominent. *Sustainable* is the most frequent term in this corpus, with 411 occurrences, followed by other key terms such as *2030*, *Goal**, *Target*, *Sustainability* and *Sustainables*, indicating a strong commitment to promoting sustainability in educational content. Nutrition-related themes are also present, with terms like *Foodstuffs*, *Groceries*, *Nutritional*, and *Diet* highlighting attention to food production, quality, and management (Figure 5.4).

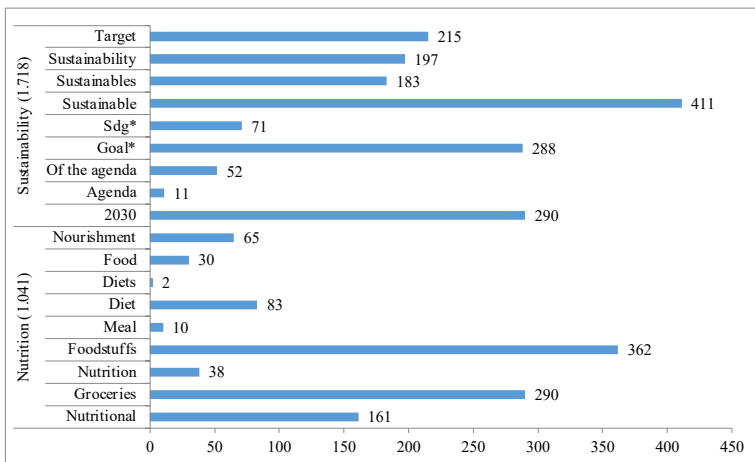
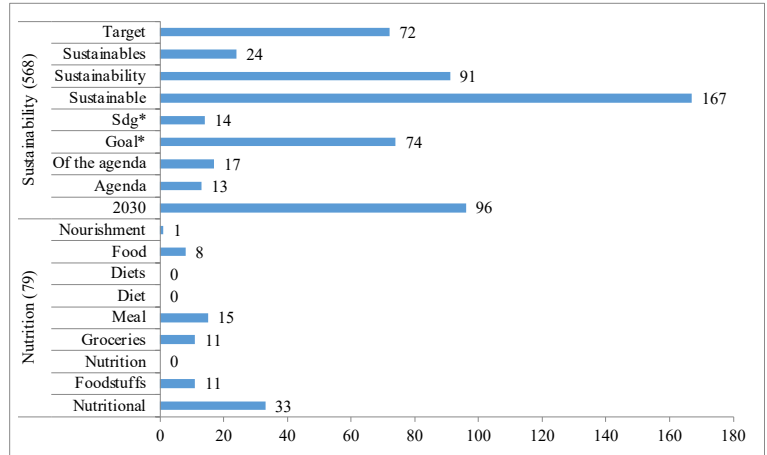


Figure 5.4. Term frequency in the syllabi of technical-scientific area.

In the economic, political-social, and legal area, terms related to sustainability are the most recurrent, with *Sustainable* ranking first at 167 occurrences, followed by *2030*, *Sustainability*, and

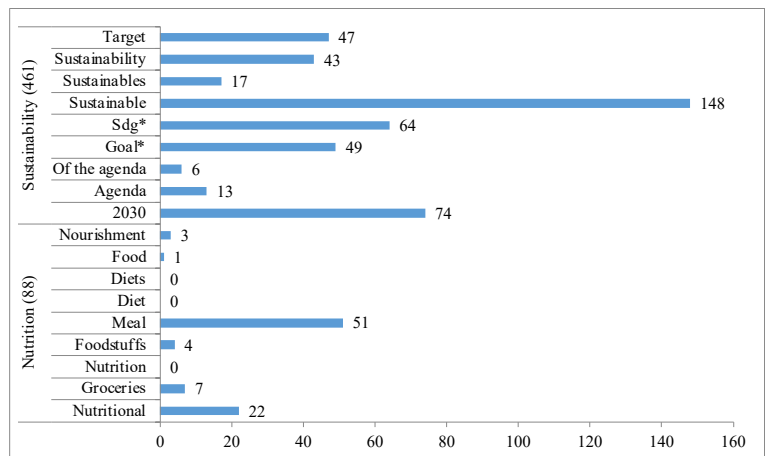
target, highlighting significant attention to the objectives of the 2030 Agenda. *Sustainables* and *Of the Agenda* further confirm this trend. The topic of nutrition is less central, with *Nutritional*, *Meal*, *Foodstuffs*, *Groceries*, and *Food* present but at lower frequencies (Figure 5.5).

Figure 5.5.
Term frequency in the syllabi of economic, political-social, and legal area.



In the humanities area, terms related to sustainability are predominant, with *Sustainable* being the most frequently used term and a prevalence of words such as *2030*, *Sdg/s/*, *Goal/s/*, *target*, and *Sustainability*. Terms related to nutrition are less represented: *Meal* is the most relevant, while *Nutritional* and *Groceries* have a marginal presence (Figure 5.6).

Figure 5.6.
Term frequency in the syllabi of humanities area.



The analysis of the course syllabi reveals a heterogeneous distribution of the concepts of sustainable development and nutrition across the different disciplinary areas. The medical and scientific fields are characterized by a strong presence of terms related to nutrition, with sustainability and the 2030 Agenda goals playing a secondary role. The technical-scientific area shows greater attention to sustainability, while still including nutrition content. The economic, political-social, and legal areas focus primarily on sustainable development goals, with limited emphasis on nutrition, highlighting a focus on regulatory and economic aspects. Finally, the humanities area places significant emphasis on sustainability and the 2030 Agenda, while nutrition is addressed less centrally, although the term meal appears notably.

5.4.2 Analysis of Relationships Between Key Terms

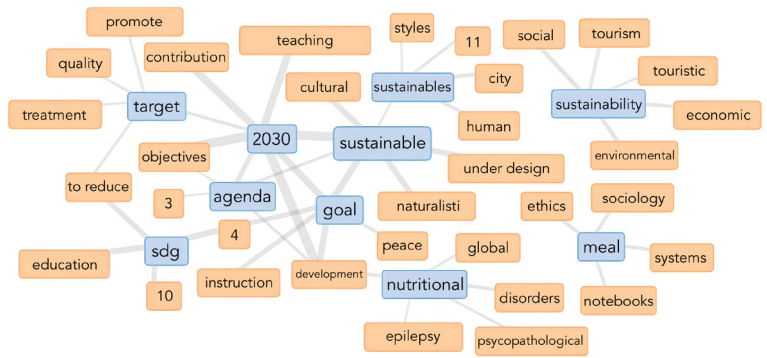
Links tool in Voyant Tools, along with the *Collocates* and *Contexts* tools, allowed the analysis of the connections between the keywords. The exploration focused on the top 10 terms identified by the terms analysis for each disciplinary area. To ensure a clear representation of the connections, a co-occurrence window of 5 words before and after each key term was set.

In the medical area syllabi, certain terms emerge as central in the network of connections. *Nourishment*, the most frequent term, is linked to *Human* (54 co-occurrences), *Hygiene* (28), and *Clinical* (27). Its connection with the key terms *Foodstuffs* (27) and *Nutrition* (18) highlights a direct relationship with food composition and quality. Regarding sustainable development, there is a reference to *goal 3*, dedicated to health and well-being. In fact, the keyword *Target* is connected to *Health* (36 co-occurrences) and the numbers *3* (58) and *3.9* (24). In particular, the number *3* is central in the semantic network, linked to *Goal/s/** (35 co-occurrences) and *Sustainable* (34), emphasizing the key role of health within the sustainability framework (Figure 5.7).

The analysis of the scientific area shows that *Foodstuffs* is the central term, linked to *Chemistry* (63 co-occurrences), *Nutraceuticals*, and *Preservation* (32), indicating a focus on food safety and quality. *Nutritional* and *Groceries* are also connected to *Pharmaceuti-*

The analysis of the humanities syllabi highlights the central role of sustainability, with particular attention to culture, education, and social dynamics. Sustainable is linked to 2030 (45 co-occurrences), Goal/s/* (23), Cultural (20), and Naturalistic (19), emphasizing the connection between sustainability and cultural and environmental heritage. 2030 is also strongly associated with Development and Objectives (47 co-occurrences each), as well as with the contribution of teaching (30), confirming the educational focus of the UN Agenda (Figure 5.11).

Figure 5.11.
Map of relationships
among terms –
humanities area.



It is important to highlight that, especially in the analysis of the last two disciplinary areas, some correlations show low co-occurrence frequencies. This may indicate either a marginal relationship or an underrepresentation in the corpus, making it difficult to draw firm conclusions.

5.5 Conclusion

The analysis of course syllabi at the University of Catania reveals a complex and multifaceted picture, where the commitment to sustainability and attention to nutrition are reflected in the educational offerings in different ways across disciplinary areas. On one hand, there is a clear intention to promote the 2030 Agenda goals through the proposed training; on the other, the approach appears fragmented, with topics specialized within specific fields, reflecting the independence of each course and the diverse backgrounds of instructors.

Nutrition, in particular, emerges as a crucial theme, but its treatment varies significantly: in the medical and scientific areas, nutritional and food safety aspects prevail, while in the technical-scientific area, the focus shifts to connections with sustainable production. However, a comprehensive perspective integrating the various dimensions of nutrition – including health, environmental, social, and economic aspects – is lacking.

This fragmentation highlights the need for a holistic approach to sustainability that transcends disciplinary boundaries and fosters greater synergy across different fields. Universities, as educational and research institutions, play a fundamental role in promoting sustainable development. To achieve this, it is necessary to strengthen the interdisciplinary dimension of the curriculum, encouraging collaboration among instructors and researchers from different areas and promoting teaching projects that integrate the various dimensions of sustainability.

It is important to note some limitations of this analysis and the need for future research. This study focuses exclusively on syllabi and does not examine how sustainability concepts are actually applied in courses (e.g., in practical teaching, laboratories, or field activities). Furthermore, relying solely on course descriptions may not fully capture the university's overall commitment to sustainability, which also encompasses other forms of education, extracurricular activities, and research initiatives.

Funding

This work was supported by the Italian Ministry of University and Research – *OnFoods – Research and innovation network on food and nutrition. Sustainability, Safety and Security – Working ON Foods*, spoke 1 – National Recovery and Resilience Plan (NRRP) [Award Number: Project code PE00000003, CUP E63C22002060006].

References

- AdomBent, M., Fischer, D., Godemann, J., Herzig, C., Otte, I., Rieckmann, M., & Timm, J. (2014). Emerging areas in research on higher education for sustainable development – Management education, sustainable consumption and perspectives from Central and Eastern Europe. *Journal of Cleaner Production*, 62, 1-7. <https://doi.org/10.1016/j.jclepro.2013.09.045>
- Al-Nuaimi, S. R., & Al-Ghamdi, S. G. (2022). Assessment of knowledge, attitude and practice towards sustainability aspects among higher education students in Qatar. *Sustainability*, 14(20), 13149. <https://doi.org/10.3390/su142013149>
- Brenner, N. (2014). *Implosions/Explosions: Towards a Study of Planetary Urbanization*. Jovis.
- Brugmann, R., Côté, N., Postma, N., Shaw, E. A., Pal, D., & Robinson, J. B. (2019). Expanding student engagement in sustainability: Using SDG- and CEL-focused inventories to transform curriculum at the University of Toronto. *Sustainability*, 11(2), 530. <https://doi.org/10.3390/su11020530>
- Cortés Sánchez, J. D. (2018). Mission statements of universities worldwide: Text mining and visualization. *Intangible Capital*, 14(4), 584. <https://doi.org/10.3926/ic.1258>
- Devi Prasad, B. (2008). Content analysis: A method in social science research. In *Research methods for social work* (pp. 173-193).
- Didham, R. J., & Ofei-Manu, P. (2020). Adaptive capacity as an educational goal to advance policy for integrating DRR into quality education for sustainable development. *International Journal of Disaster Risk Reduction*, 47, 101631. <https://doi.org/10.1016/j.ijdr.2020.101631>
- Elhersh, G. A., & Alqawasmeh, H. K. (2024). Public sentiment and ethical considerations of ChatGPT in higher education: Insights from data analytics of conversations on platform X. *Journal of Infrastructure, Policy and Development*, 8(12), 7518. <https://doi.org/10.24294/jipd.v8i12.7518>
- Elmassah, S., Biltagy, M., & Gamal, D. (2020). Engendering sustainable development competencies in higher education: The case of Egypt. *Journal of Cleaner Production*, 266, 121959. <https://doi.org/10.1016/j.jclepro.2020.121959>
- Franchini, C., Biasini, B., Rosi, A., & Scazzino, F. (2023). Best practices for making the university campus a supportive environment for healthy and sustainable diets. *Current Opinion in Environmental Science & Health*, 32, 100436. <https://doi.org/10.1016/j.coesh.2022.100436>
- Gaspar, M. C. D. M. P., Celorio-Sardà, R., Comas-Basté, O., Latorre-Moratalla, M. L., Aguilera, M., Llorente-Cabrera, G. A., Puig-Llobet, M., & Vidal-Carou, M. C. (2022). Knowledge and perceptions of food sustainability in a Spanish university population. *Frontiers in Nutrition*, 9, 970923. <https://doi.org/10.3389/fnut.2022.970923>
- Holm, T., Sammalisto, K., Grindsted, T. S., & Vuorisalo, T. (2015). Process framework for identifying sustainability aspects in university curricula and integrating education for sustainable development. *Journal of Cleaner Production*, 106, 164-174. <https://doi.org/10.1016/j.jclepro.2015.04.059>
- Laurie, R., Nonoyama-Tarumi, Y., Mckeown, R., & Hopkins, C. (2016). Contributions of education for sustainable development (ESD) to quality education: A synthesis of research. *Journal of Education for Sustainable Development*, 10(2), 226-242. <https://doi.org/10.1177/0973408216661442>
- Leal Filho, W., De Vasconcelos, C. R. P., Ferreira, P., Araújo, M. M., Berenguer, A., Almeida, N., Fritzen Gomes, B., Júnior, J. M., Colombo, C. R., Lira, W. G., & Agostinho, T. L. A. (2023). Perceptions of the academic community on the performance of sustainable development initiatives in higher education. *Sustainable Development*, 31(5), 3896-3912. <https://doi.org/10.1002/sd.2633>

- Leal Filho, W., Neiva, S. D. S., Vasconcelos, C. R. P. D., Fritzen Gomes, B. M., Sharifi, A., Kozlova, V., Mifsud, M., Pace, P., Platje, J., Dinis, M. A. P., Da Cunha, D. A., Hopkins, E. A., & Rayman-Bacchus, L. (2025). Exploring the imperative of education and learning for sustainable development: Research gaps and pathways. *International Journal of Sustainability in Higher Education*, 26(8), 1729-1748. <https://doi.org/10.1108/IJSHE-11-2023-0543>
- Lewis, D. A. (2014). Engagement and citizenship: A new core for the university. *The Journal of General Education*, 63(1), 57-63. <https://doi.org/10.1353/jge.2014.0003>
- Miller, A. (2018). Text mining digital humanities projects: Assessing content analysis capabilities of Voyant Tools. *Journal of Web Librarianship*, 12(3), 169-197. <https://doi.org/10.1080/19322909.2018.1479673>
- Mustapha, A. I., & Ebomoyi, I. (2019). Methodological usefulness of content analysis in social science research. *African Research Review*, 13(1), 93-102.
- Nachmias, D., & Nachmias, C. (1976). *Research methods in the social sciences*. St. Martin's Press.
- Niu, D., Jiang, D., & Li, F. (2010). Higher education for sustainable development in China. *International Journal of Sustainability in Higher Education*, 11(2), 153-162. <https://doi.org/10.1108/14676371011031874>
- Peer, V., & Stoeglehner, G. (2013). Universities as change agents for sustainability – framing the role of knowledge transfer and generation in regional development processes. *Journal of Cleaner Production*, 44, 85-95. <https://doi.org/10.1016/j.jclepro.2012.12.003>
- Robinson, J., Berkhout, T., & Campbell, A. (2011). *The university as an agent of change for sustainability*. Policy Horizons Canada Toronto, ON, Canada.
- Rosenau, N., Neumann, U., Hamblett, S., & Ellrott, T. (2024). University Students as Change Agents for Health and Sustainability: A Pilot Study on the Effects of a Teaching Kitchen-Based Planetary Health Diet Curriculum. *Nutrients*, 16(4), 521. <https://doi.org/10.3390/nu16040521>
- Schumann, F. R. (2022). Using voyant tools for data mining social media comments about a destination: A Guam study. *Journal of Hospitality & Tourism*, 20(2), 106-118.
- UNESCO. (2017). *Education for Sustainable Development Goals: Learning objectives*. UNESCO. <https://doi.org/10.54675/ICGBA9153>
- UNESCO. (2020). *Education for sustainable development: A roadmap*. UNESCO. <https://doi.org/10.54675/YFRE1448>
- United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development*. United Nations.
- Xue, Q. (2022). Increasing commitment to the Sustainable Development Goals across universities worldwide. *Sustainable Horizons*, 2, 100021. <https://doi.org/10.1016/j.horiz.2022.100021>
- Yuan, X., Zuo, J., & Huisingh, D. (2013). Green universities in China – what matters?. *Journal of Cleaner Production*, 61, 36-45. <https://doi.org/10.1016/j.jclepro.2012.12.030>



Research and Innovation
for Sustainable Food
and Nutrition



Project funded under the National Recovery and Resilience Plan (NRRP), Mission 4 Component 2 Investment 1.3 - Call for tender No. 341 of 15 March 2022 of Italian Ministry of University and Research funded by the European Union – NextGenerationEU; Project code PE00000003, Concession Decree No. 1550 of 11 October 2022 adopted by the Italian Ministry of University and Research, Project title «ON Foods - Research and innovation network on food and nutrition Sustainability, Safety and Security – Working ON Foods».

Universities are increasingly recognised as key actors in the transition towards more sustainable, inclusive, and resilient food systems. As complex socio-technical environments, where food is variously produced, procured, distributed, consumed, and embedded within spatial, organisational, and social practices, university campuses can be understood as *cities within the city*, offering unique opportunities to connect policy, design, and everyday life.

This book presents the results of the *PPP-URB* project, developed within the PNRR OnFoods research, and explores how universities can design and implement integrated food policies by acting across multiple dimensions, including procurement, services, spaces, community engagement, and short food supply chains. The volume introduces a set of guidelines for university food policies and investigates their application through prototyping activities carried out in different Italian institutional contexts. Bringing together contributions from multiple disciplines and universities, the book shows how campuses can function as living laboratories for food system innovation, where strategic visions are translated into concrete actions through participatory and design-driven approaches. By linking research, experimentation, and policy-making, it offers both a conceptual framework and practical insights for scholars, practitioners, and policy-makers engaged in food system transformation.