

# STUDY

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## Questionnaire for the State of the Art

in educating sustainability and heritage

### EDITORS

**VLADAN DJOKIĆ**  
**KONSTANTINOS SAKANTAMIS**  
**ANGELIKI CHATZIDIMITRIOU**  
**EMANUELA SORBO**  
**MAR LOREN-MENDEZ**  
**ANA NIKEZIĆ**  
**MARIA PHILOKYPROU**  
**MARÍA F. CARRASCAL PÉREZ**

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#### PARTNERS:

The University of Belgrade - Faculty of Architecture // Serbia  
Università Iuav di Venezia // Italy  
The University of Cyprus // Cyprus  
The Aristotle University of Thessaloniki // Greece  
The University of Seville // Spain

**Enhancing of Heritage Awareness and  
Sustainability of Built Environment in  
Architectural and Urban Design Higher Education**

2021



CONTRIBUTORS: phases of conceptualization,  
dissemination and analysis:  
HERSUS CONSORTIUM MEMBERS

UB-FA

Vladan Djokić  
Ana Radivojević  
Ana Nikezić  
Jelena Živković  
Nataša Ćuković Ignjatović  
Milica Milojević  
Jelena Ristić Trajković  
Aleksandra Milovanović  
Aleksandra Đorđević  
Mladen Pešić  
Ana Zorić  
Bojana Zeković  
Nevena Lukić

IUAV

Emanuela Sorbo  
Enrico Anguillari  
Sofia Tonello

UCY

Maria Philokyprou  
Aimilios Michael  
Panayiota Pyla  
Odysseas Kontovourkis  
Maria Nodarakis  
Theodora Hadjipetrou  
Stavroula Thravalou  
Andreas Savvides

AUTH

Konstantinos Sakantamis  
Alkmini Paka  
Kleoniki Axarli  
Maria Doussi  
Angeliki Chatzidimitriou  
Sofoklis Kotsopoulos

USE

Mar Loren-Méndez  
Marta García-Casasola  
Daniel Pinzón-Ayala  
Julia Rey Pérez  
José Peral López  
María F. Carrascal-Pérez  
Enrique Larive  
Roberto F. Alonso-Jiménez

## IMPRESUM

EDITORIAL BOARD:

Vladan Djokić, Konstantinos Sakantamis  
Angeliki Chatzidimitriou Emanuela  
Sorbo, Mar Loren-Mendez, Ana Nikezić  
Maria Philokyprou, María F. Carrascal  
Pérez / *HERSUS Scientific Coordinators*

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## STUDY: Questionnaire for the State of the Art in educating sustainability and heritage

IO2 lead: Konstantinos Sakantamis, AUTH

HERSUS Project leader: Vladan Djokić, UBFA

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## DISSEMINATION PROCESS

The dissemination process and the communication of the Students' Questionnaires was extensive. It consisted of three phases: the general email to all the student categories involved; the involvement of targeted students in a guided fill-in activity; the dissemination on social networks.

During the first dissemination phase, the luav Team sent almost 4000 emails to all the contacts given by the IUAV office of the students from the Second Cycle - Master Degree courses, PhD, Specialization School course and recent Alumni. The email explained the project and the Questionnaire's purposes. After this general email, the team contacted students from the past courses led by professor Emanuela Sorbo (738), and students graduated with her (50).

This first dissemination phase started from the activating day of the link, and it was concluded in four days (April 03rd – 07th).

The second phase of promotion consisted of the students' involvement in the Restoration Theories and Techniques course led by Professor Emanuela Sorbo and SSIBAP students in a guided fill-in activity to answer students' doubts (almost 100 students filled in the Questionnaire on these occasions).

During the last two weeks (from April 12th to 15th), the IUAV Social Networks (Instagram and Facebook) helped the dissemination process online to reach, by April 19th, 200 completed questionnaires. In this phase, Hersus Project and the IO2 activities were promoted via social networks outside the luav community at the National and International level.



Sofia Tonello  
Emanuela Sorbo

ITALY

02

## ABSTRACT / ITALY / Iuav



*The students' questionnaires involved about 500 students from Iuav and other Italian Universities. The LimeSurvey Platform registered 206 complete and 294 incomplete questionnaires. The most involved categories are the Second Cycle – Master's Degree courses, with more than 300 accesses. It can be noticed how about 290 students stopped filling in at question Q2.1.*

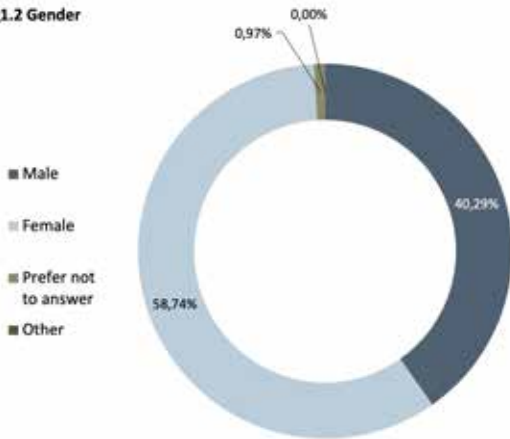
*The difficulties for Iuav students to address specific courses to Sustainability and/or Cultural Heritage emerged from the questionnaires, given the fact that current programs address architecture with an interdisciplinary perspective.*

*The answers to the third part show the most interesting results and reveal students' perception of educational programs and highlight their specific expectation about the future work environment.*

# RESPONDENTS SAMPLE



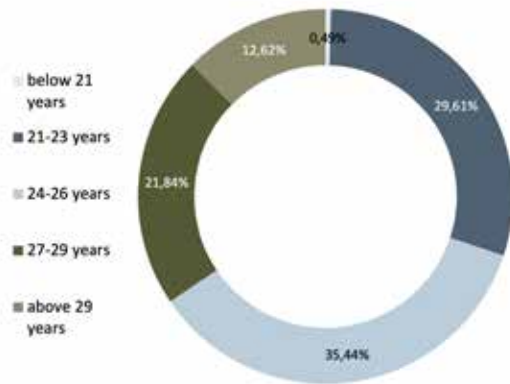
**Q1.2 Gender**



## Gender

Among the answers by students who attend higher education institutions in Italy (26,89% of the total responses), 58,74% are female students, and 40,29% are males.

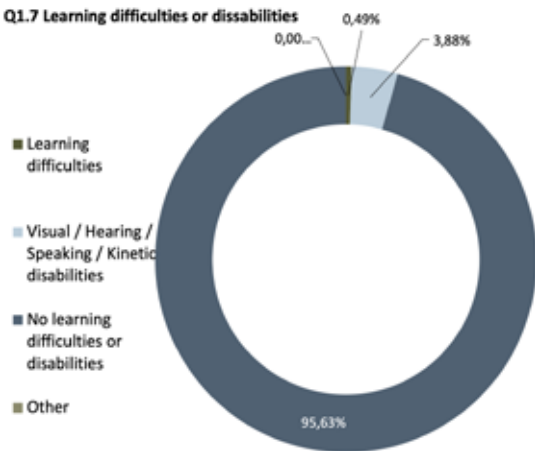
**Q1.3 Age**



## Age

Students' age is homogeneously distributed between 21 to 26 years old (21-23 years 29,61%, 24-26 years 35,44%, 27-29 years 21,84%, above 29 years 12,62%).

**Q1.7 Learning difficulties or disabilities**



## Learning difficulties or disabilities

The total percentage of studnest with learning difficulties or dissabilities reaches 4,37%, of which 3,88% with visual, hearing, speaking or kinetic disabilitties and 0.49% with other dissabilities.

Fig 1. Mapping of the various backgrounds of the respondents based on responses to Q1.2, Q1.3 and Q1.7

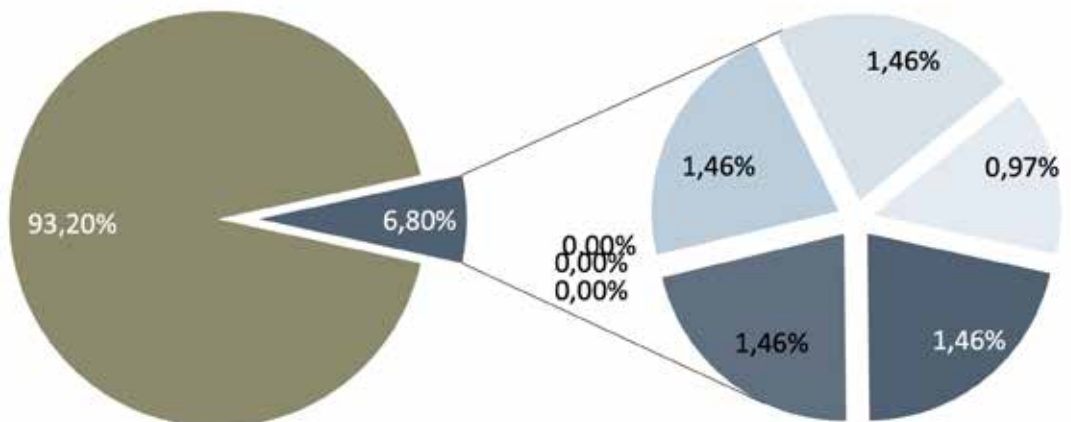


## Respondents' studies or professional background

The graph Q1.4 (Figure 02. Mapping of the various backgrounds of the respondents based on responses to Q1.4) focuses on the students' studies/professional background. Almost all the students studied in the Architectural field (93,20%). The remaining part (6,80%) are almost equally divided in Engineering, Spatial Planning/Land Survey/Topography/Geography, Archaeological/Heritage Conservation, Urban and Regional Planning and History of Arts ("other").



Fig 2. Mapping of the various backgrounds of the respondents based on responses to Q1.4



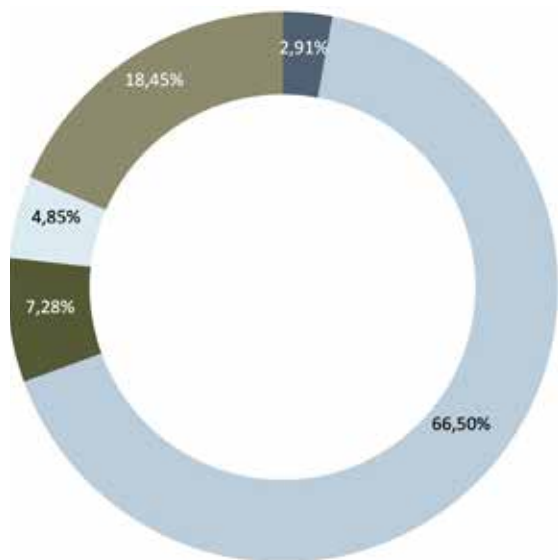
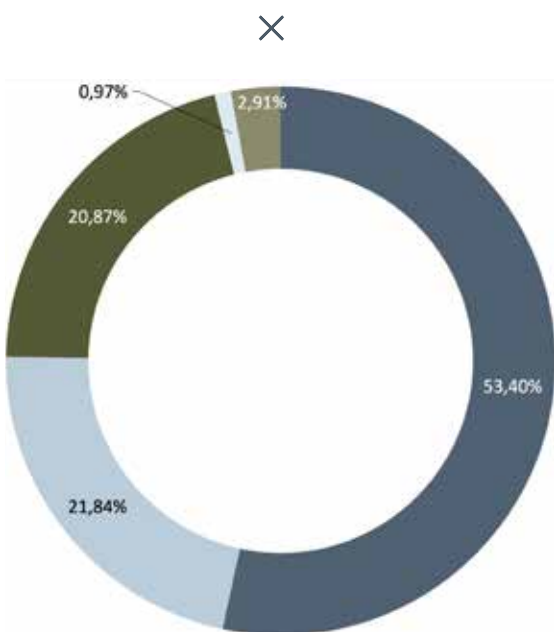


Fig 3. Mapping of the various backgrounds of the respondents based on responses to Q1.5

#### Q1.5 Program of Studies

- Second cycle: 4th / 5th year of 5-year single cycle integrated Master Studies
- Second cycle: Master's degree studies / professionalization courses
- Third Cycle: Specialisation School
- Third Cycle: PhD studies
- Recent Alumni of the above Programs



- Architecture/ Built Environment
- Sustainability/ Environmental Design
- Heritage/ Conservation/ Restoration/ Cultural Management
- Sustainable Heritage
- Other

Fig 4. Mapping of the various backgrounds of the respondents based on responses to Q1.6

#### Type of program that they currently attend

More than half of the students who completed the questionnaires attend Second Cycle - Master's degree studies, and many of these do so in the field of Architecture and Cultural Heritage. The questionnaire also involved 15 students from Third Cycle - Specialisation School (7,28%), 10 from Third Cycle - PhD (4,85%), 38 recent Luav Alumni (18,45%). Only 6 students attend a Second Cycle - 4th/5th year of 5-year Single Cycle integrated Master Studies. This small number reflects the educational path in Architecture in Italy because almost all Italian Degrees' path in Architecture consists of Bachelor and Master Degree programs.

#### Main Focus of their current studies

The mapping of the focus of studies indicates that almost all the students consider Architecture/ Built Environment (53,40 %) as central themes in their educational path. Sustainability is considered the main focus by 21,84% of them; Cultural Heritage by 20,87%.

The distribution of available courses in the curriculums

Table 01 shows an analysis of existing curricula that students attend (Second and Third Cycle).

The data highlight that almost 55% of the courses in Architecture study programs in Italy focus on *Sustainability and Cultural Heritage*.

Second Cycle - Master's degree Students in *Sustainability Curricula* at Luav attend 13 courses divided into 2 courses on *Documentation/Conservation/Restoration of Cultural Heritage*, 3 courses on *Sustainability/ Environmental Design*, and 2 courses focusing on both.

Second Cycle - Master's degree Students in *Cultural Heritage Curricula* at Luav attend 14 courses divided into 3 courses on *Documentation/Conservation/Restoration*

of *Cultural Heritage*, 3 courses on *Sustainability/ Environmental Design*, and 4 courses focusing on both.

Students from Third Cycle courses in Specialisation Schools focus on *Architecture and Cultural Heritage Documentation/ Conservation/Restoration of Cultural Heritage and Raising the value/appreciation or dialogue with the National/International Historical Context* (71,5 %). Students from Specialisation School highlight how the theme of Sustainability is present in their study programs, in particular in the link between Sustainability and Cultural Heritage.

Table 01. Available courses in the existing programs of studies according to responses to Q2.1

	Responses		Focus of Studies			Taught Courses of the Curriculum	Courses focusing mainly on documentation Conservation Restoration of Cultural Heritage		Courses focusing mainly on Sustainability / Environmental Design		Courses focusing both on Sustainability & Cultural Heritage		Courses raising issues of Sustainability / Environmental Design / Planning		Courses raising issues of the value / appreciation or dialogue with the National / International Historic Context	
	number	% of total samples	Architecture	Heritage	Sustainability	Median	Median	% of total courses	Median	% of total courses	Median	% of total courses	Median	% of total courses	Median	% of total courses
4th / 5th year of 5-year single cycle integrated Master Studies	6	0,8%	66,7%	16,7%	16,7%	17	2	11,8%	3	17,6%	2	11,8%	4	23,5%	2	11,8%
Master's degree studies / professionalization courses	43	5,6%	0,0%	0,0%	100,0%	13	2	15,4%	3	23,1%	2	15,4%	2	15,4%	2	15,4%
	17	2,2%	0,0%	100%	0,0%	14	3	21,4%	2	14,3%	2	14,3%	3	21,4%	2	14,3%
	75	9,8%	100,0%	0,0%	0,0%	14	2	14,3%	2	14,3%	2	14,3%	2	14,3%	1	7,1%
Specialization School	0	0,0%	0,0%	0,0%	0,0%	0	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
	14	1,8%	0,0%	100%	0,0%	28	16	57,1%	2	7,1%	4	14,3%	2	7,1%	4	14,3%
	1	0,1%	100,0%	0,0%	0,0%	38	22	57,9%	3	7,9%	7	18,4%	3	7,9%	38	100,0%

# IMPACT OF ACADEMIC ACTIVITIES IN STRENGTHENING STUDENTS COMPREHENSION

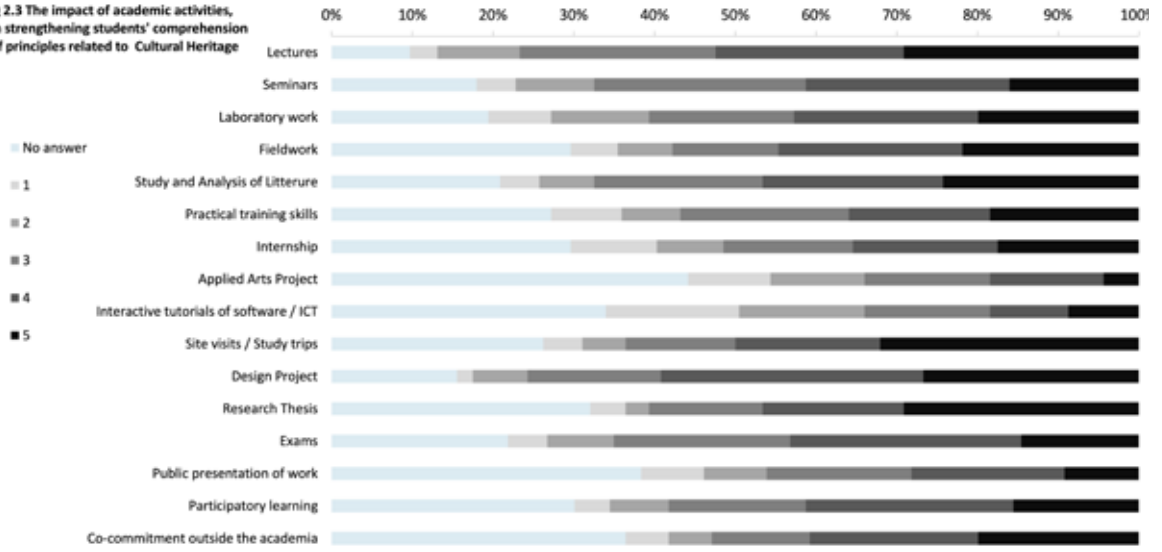
Italian students consider *Lectures* and *Seminars* as important as practical activities, such as *Laboratory working activities* and *Practical training skills*, both in Sustainability and Cultural Heritage.

The most relevant activities in strengthening students' comprehension of Sustainability and Cultural Heritage principles are *Design project activities*, *Research thesis activities*, *Participatory Learning*, and *Co-commitment outside the academic activities*. In strengthening their comprehension of the principles related to Cultural Heritage issues, students consider *Lectures*, *Seminars*, *Site visit* and *Study trips* more important than in the other fields. Students evaluated the *Study and Analysis of Literature* positively.

Almost all the students thought of the interface between Sustainability and Cultural Heritage from an operative perspective. They considered the importance of *Lectures* and *Seminars* to comprehend the *Fundamentals* and the *State of art* as a base for the *Design Project* with an interdisciplinary perspective.

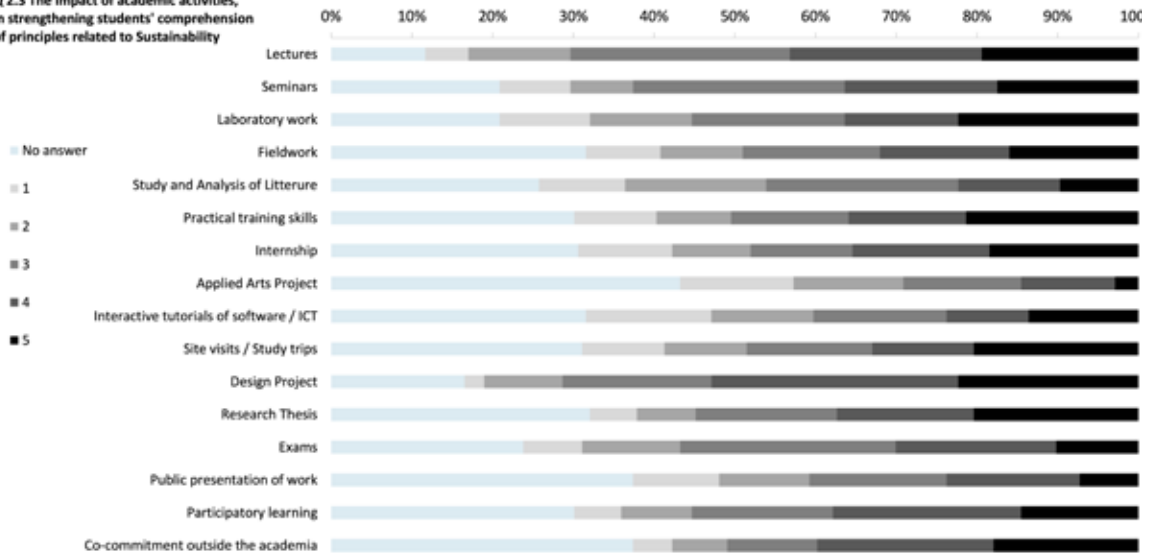
Fig 5. The impact of academic activities in strengthening students' comprehension of principles related to (a) sustainability, (b) cultural heritage or (c) both

Q 2.3 The impact of academic activities, in strengthening students' comprehension of principles related to Cultural Heritage



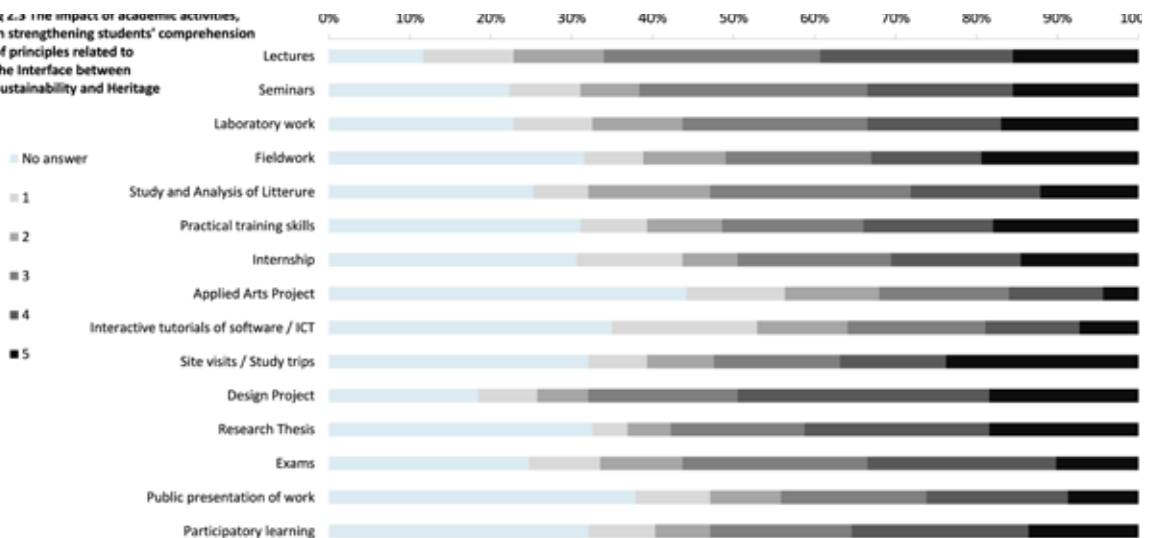
HERITAGE

Q 2.3 The impact of academic activities, in strengthening students' comprehension of principles related to Sustainability



SUSTAINABILITY

Q 2.3 The impact of academic activities, in strengthening students' comprehension of principles related to the Interface between Sustainability and Heritage



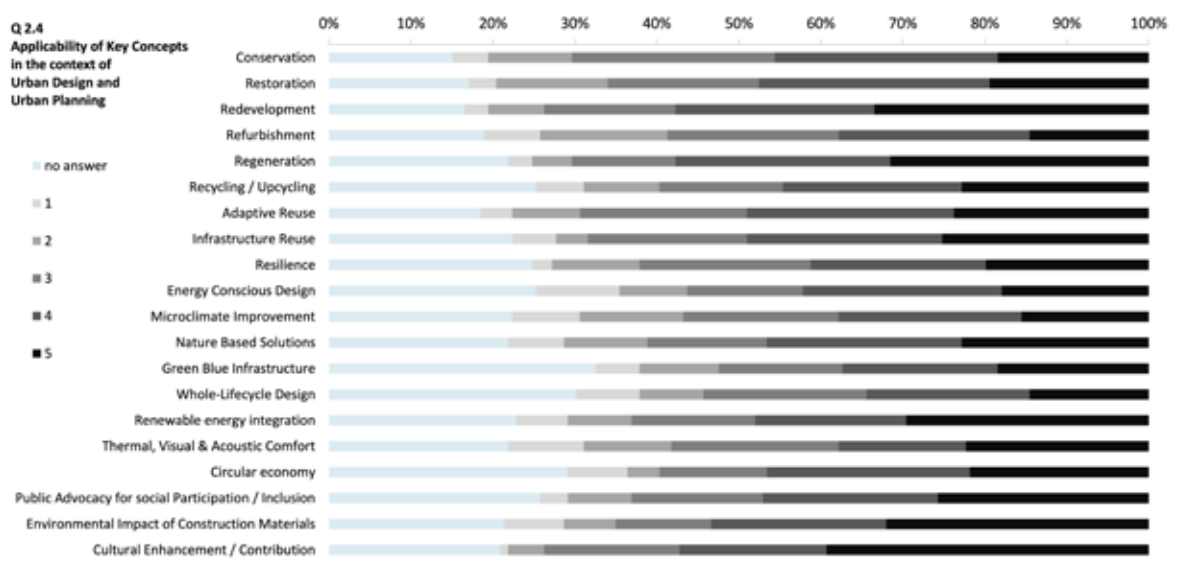
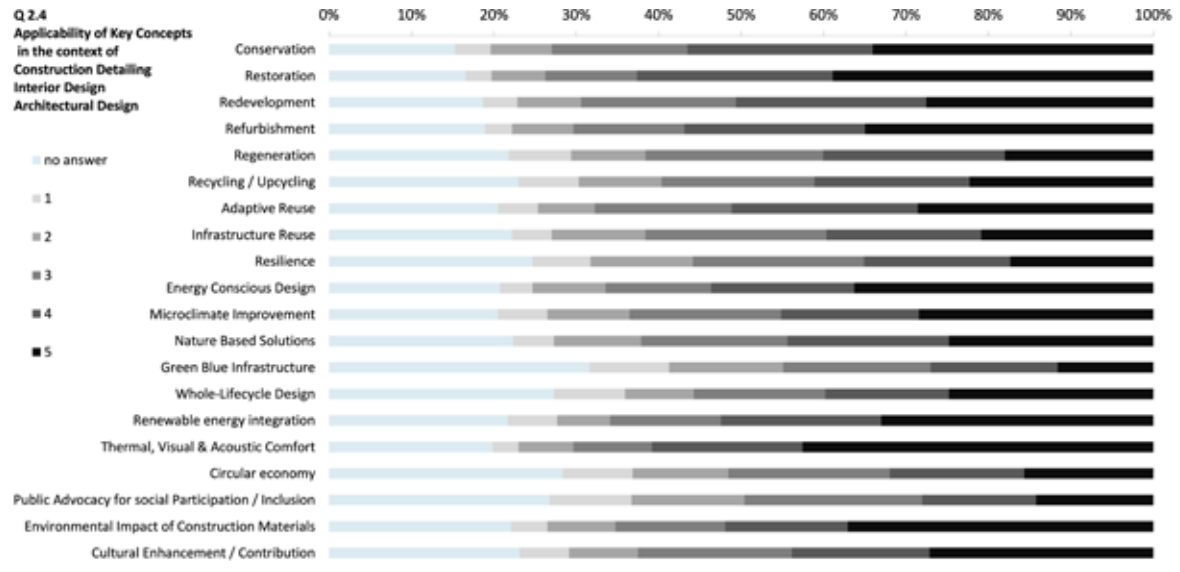
INTERFACE OF HER/SUS

# APPLICABILITY OF KEY CONCEPTS RELATED TO SUSTAINABILITY AND CULTURAL HERITAGE IN RELATION TO DIFFERENT SCALES

Question Q2.4 helps to understand the students' perception of 20 key concepts related to Sustainability and Cultural Heritage at different scales of design practice. *Regeneration, Environmental Impact of Construction Materials* and *Cultural Enhancement* maintain a high score in students' perception. Almost 50% of the students consider the *Cultural Enhancement* concept more relevant in Urban Design, Planning and Landscape Design than in Architectural design.

Italian students consider Architectural and Construction Detailing design more related to the concepts of *Thermal, visual, and acoustic comfort, Restoration* and *Adaptive reuse*. They consider Urban Planning and Design more linked to *Regeneration, Redevelopment, and Infrastructure reuse* and Landscape Design more related to *Nature Base Solutions, Infrastructure Reuse* and *Resilience*.

Fig 6. Applicability of Key Concepts related to sustainability and cultural heritage in the context of different scales of design practice



# STUDENTS' SELF-EVALUATION IN TERMS OF THE SKILLS AND KNOWLEDGE

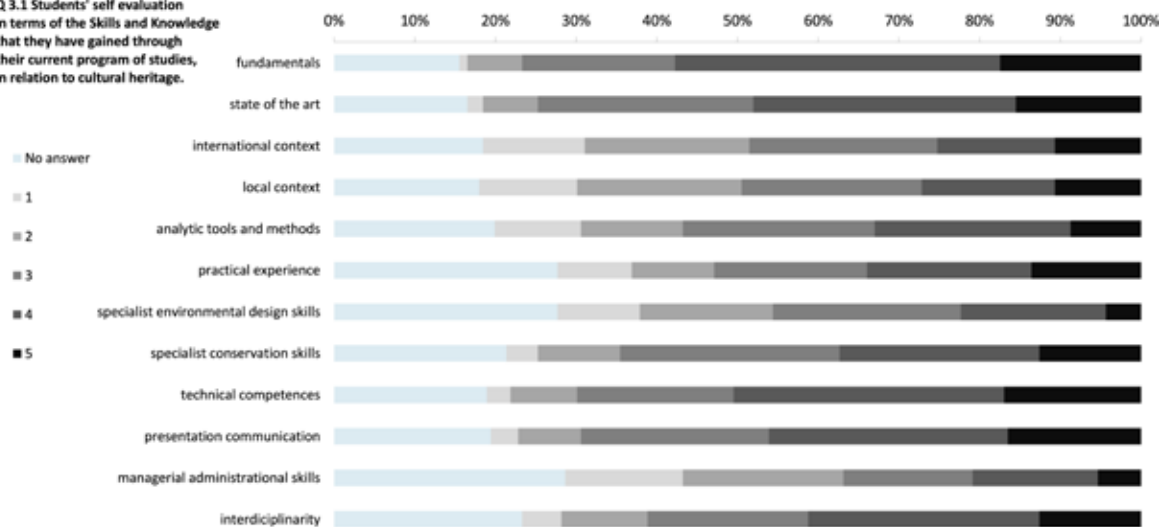
The following graphs show the self-rating exercise done by the students about the Skills and Knowledge they have gained through their current program of studies concerning Sustainability, Heritage, or both.

Students consider *Interdisciplinary competencies* and *Awareness-raising* as strengths in their educational paths in Sustainability, Cultural Heritage or both. Italian students think they have gained adequate knowledge about *Fundamentals*, *State-of-the-art* and *Technical competencies* related to Cultural Heritage, and they feel less confident about Sustainability issues. Almost 15% of the students give themselves 5 on their competencies on Cultural Heritage. While less than 10% of the students rate themselves with 5 on their competencies related to Sustainability. The 3 and 4 rates are frequent, and the general result highlights that students feel more comfortable with *Fundamentals*, *Knowledge of State-of-the-art*, *Analytic tools and methods*, *Technical competencies* and *Presentation communication*.

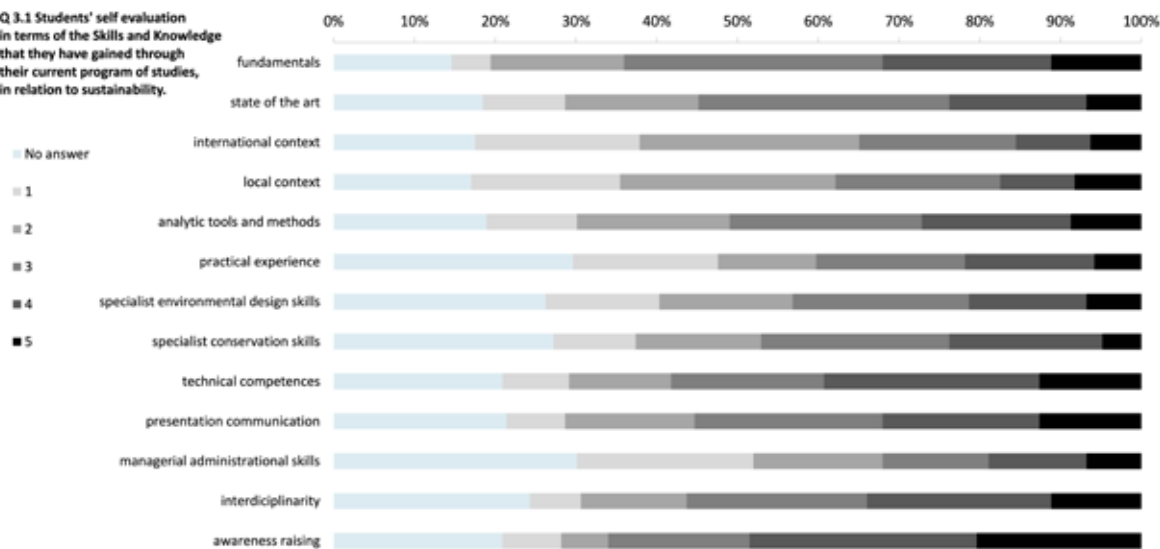
Fig 7. Students' self-evaluation in terms of the Skills and Knowledge that they have gained through their current program of studies in relation to (a) sustainability, (b) cultural heritage or (c) both



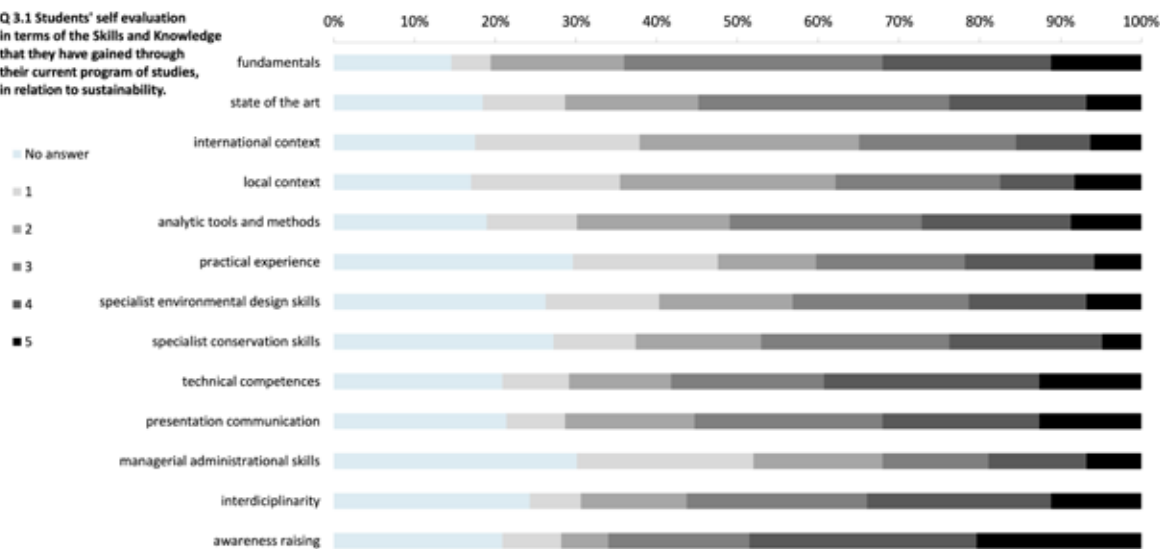
Q 3.1 Students' self evaluation in terms of the Skills and Knowledge that they have gained through their current program of studies, in relation to cultural heritage.



Q 3.1 Students' self evaluation in terms of the Skills and Knowledge that they have gained through their current program of studies, in relation to sustainability.



Q 3.1 Students' self evaluation in terms of the Skills and Knowledge that they have gained through their current program of studies, in relation to sustainability.



# THE IMPORTANCE OF SKILLS AND KNOWLEDGE THAT STUDENTS THINK WILL IMPROVE THEIR EMPLOYABILITY

The 3.2 Question inquires students' perception of the importance of Skills and Knowledge in improving their employability dealing with Sustainability or Cultural Heritage or both in the work environment.

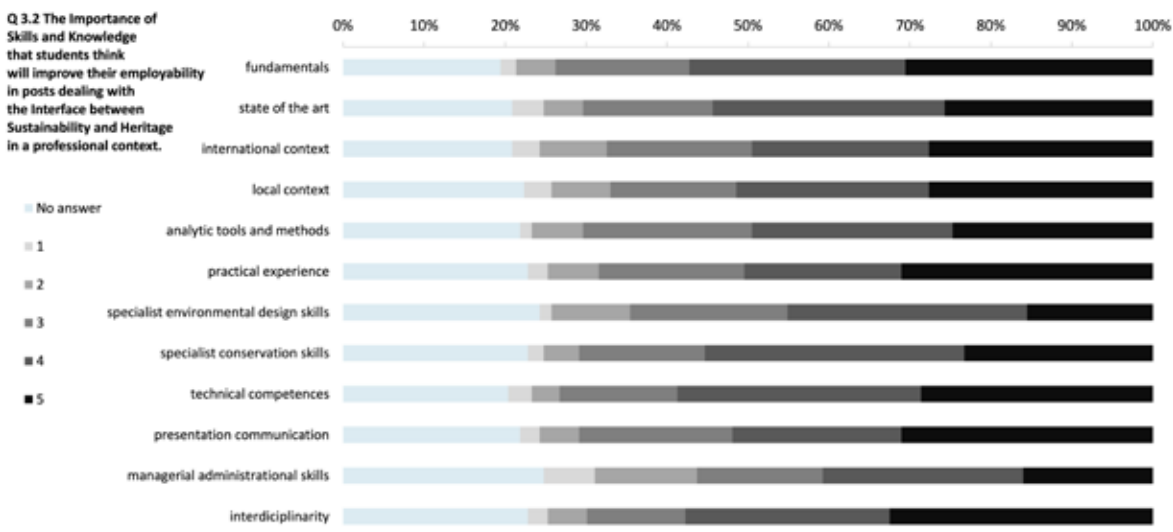
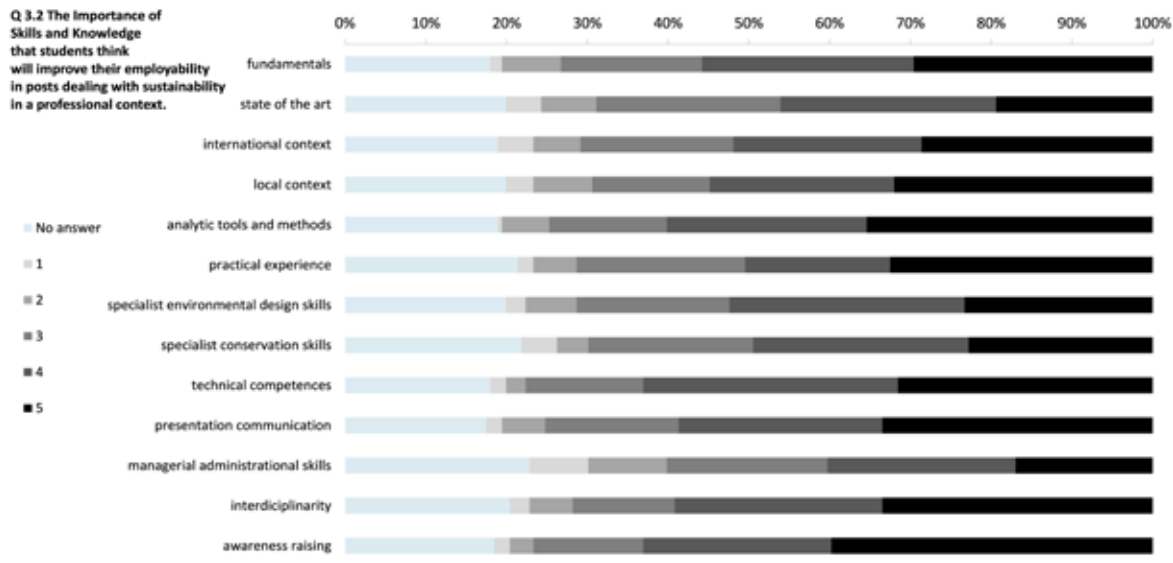
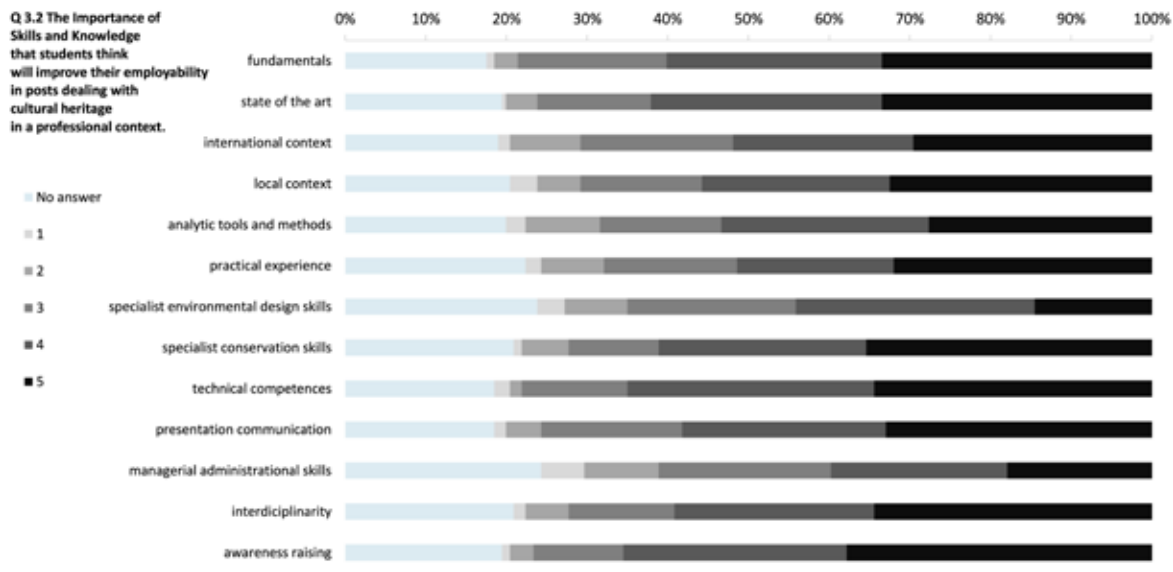
Students shared the idea that *Managerial administration skills* and *Specialist environmental design skills* are unnecessary in future working activities in Sustainability and Cultural Heritage fields. Three graphs (a, b, c) highlight that students consider the postgraduate level specialisation in Sustainability and Cultural Heritage essential to be employed in these fields. The knowledge of the *Fundamentals, State of Arts, International and Local context, the comprehension of Analytic tools and methods and Interdisciplinary perspectives, Technical competencies* and *Awareness-raising* are considered equally important by the students.

The Questionnaire highlights a close connection between students' perception and some of the ideas expressed by the Experts in Q3.2a and Q3.2b of the experts' Questionnaire.

In particular, Experts consider Sustainability and Cultural Heritage complex issues, so they suggest that students, after graduation, should attend Specialisation Schools.

The students' perception confirms this idea because they required more specialisation in the field of Sustainability and Cultural Heritage (66,50%).

Fig 8. The Importance of Skills and Knowledge that students think will improve their employability in posts dealing with (a) sustainability, (b) cultural heritage or (c) both, in a professional context



# DISCUSSION / CONCLUSIONS

*Questionnaires highlight that students emphasise the importance of Cultural Heritage and Sustainability in their Educational Career, considering them from an interdisciplinary perspective. This is the main challenge in teaching methodologies in Iuav Educational Methods (as reported in IO1).*

*While the Master's degree Students (Second Cycle) declare they need a better specialisation in Sustainability and Cultural Heritage, the Students of Specialisation Schools (Third Cycle) declare a high level of achievement regarding the learning objectives concerning Cultural Heritage.*

*This state-of-the-art reveal common ground between students' perceptions and experts' ideas, highlighting the importance of the Third level of education to achieve high-quality skills and knowledge required in a work environment concerning Cultural Heritage and Sustainability.*

