



Project 539369-LLP-1-2013-1-ES-ERASMUS-ENW

Start: 1.10.2013

Duration: 36 months

Funded with the support from the European Commission.

OIKONET A global multidisciplinary network on housing research and learning



Deliverable 6.3

Evaluation of learning activities

Revision: 8

Due date: 2016-09-30 (m36)

Lead partner: USI

This project is funded with support from the European Commission (Project number 539369-LLP-1-2013-1-ES-ERASMUS-ENW). This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Deliverable Administration and Summary					
No & name	D6.3 Evaluation of learning activities				
Status	Final	Due	M36 (2016-09-30)	Final version	2017-02-28
Author(s)	Anna Picco-Schwendener (USI), Stefano Tardini (USI)				
Editor					
Work Programme Description	<p>The reports will present the main results of the evaluations of the learning activities performed in the OIKODOMOS Learning workspaces organized in WP4. They will provide suggestions to improve the effectiveness of future learning workspaces.</p> <p>The evaluation of learning activities will be performed through questionnaires that will be distributed to participants at the end of each learning workspace, and through the observation of participants' online and offline interactions. The questionnaire will focus on the participants' perception of the effectiveness of the learning activities and the overall learning and teaching process, and on their satisfaction in terms of their use of the digital environment. Different questionnaires will be provided to different types of participants (basically, teachers and learners).</p>				
Comments	An in-progress version of the this document was previously submitted with the interim report				
Document history					
V	Date	Author	Description		
1	2014-11-28	Anna Picco-Schwendener (USI), Stefano Tardini (USI)	First draft of Report on Evaluation of learning activities		
2	2015-03-14	Leandro Madrazo (LA SALLE)	Formatting.		
3	2015-03-14	Leandro Madrazo (LA SALLE)	Content review and update.		
4	2015-04-13	Anna Picco-Schwendener (USI), Stefano Tardini (USI)	Final review and update, including answers to the questions of Leandro Madrazo.		
5	2015-03-18	Leandro Madrazo (LA SALLE)	Review to check alignment with other deliverables, before submitting the document with the interim report.		
6	2016-07-05	Anna Picco-Schwendener (USI), Stefano Tardini (USI)	First draft of final deliverable (updated to m36)		
7	2016-01-31	Anna Picco-Schwendener (USI), Stefano Tardini (USI)	Finalization of deliverable		
8	2017-02-08	Leandro Madrazo (LA SALLE)	Review to check alignment with other deliverables, before submitting the document with the final report.		

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1 EXECUTIVE SUMMARY

This report briefly presents and discusses the major results from the evaluation of OIKONET's learning activities. A total of 9 learning spaces not related to a workshop and 3 annual workshops with their related learning spaces have been evaluated in order to assess the effectiveness of collaborative learning among different institutions in different countries. Paper and online surveys as well as semi-structured interviews have been used to evaluate the learning activities. The main findings of these evaluations can be summarized as follows:

Learning Spaces:

- Both students and teachers enjoyed their participation in the learning space. They particularly liked the idea of **collaborating** with students and teachers from different levels, institutions and countries.
- It emerged that both **collaboration and communication activities** should be accurately designed and structured. It is fundamental to define which communication tools to use and how. Only if the use of such tools is well planned, a successful exchange among participants can be expected. Students liked "commenting on other students' works" as online collaboration activity, which motivated all involved parties to actively engage and contribute.
- **Collaboration and communication** among students/teachers from different institutions/countries is very important to both students and teachers. They worked very well during the workshops, where students worked in mixed groups towards a common goal. However, they were more difficult to implement online inside the learning spaces.

Workshops:

- All three annual workshops have been very much appreciated by **students and teachers**.
- **Working in mixed, international groups** was one of the most valuable aspects of the workshops according to both students and teachers: they enjoyed interacting and working together with students/teachers from other countries, institutions, levels and specializations. The **quality of the outputs** of the group works was generally very high.
- **Studio time was valued more than lectures:** lectures have been appreciated but should be less and more spread over the whole workshop week and be in line with the group assignment. Students should have the possibility to start working in their groups right from the first day.
- **Site visits have been valued very high.** They helped students contextualize their work.
- **Including social activities** in the program is very important for the students to get to know each other and create a pleasant and intense working atmosphere among them.
- It is important to **define well the role of each teacher** so that everyone knows exactly what his/her tasks will be during the workshop. This improved over the three workshops.
- It is important to **explain the workshop goals and tasks** to the students at the beginning.
- **Preparatory Learning Activities** are considered very important to prepare the students for the workshop. However, they have to be well prepared, not too broad, should consist of a limited number of very specific tasks, and have to be well aligned with the workshop activities. More and better collaboration and communication is necessary to improve the preparatory and follow up activities.

2 INTRODUCTION

2.1 Purpose and target group

The project description suggests that Deliverable 6.3 will present the main results of the evaluations of the learning activities performed during the 3 years of OIKONET. This includes both learning spaces and the three annual workshops. Furthermore, it will provide suggestions on how to improve the effectiveness of future learning activities.

During the OIKONET project **8 different learning spaces** (LSs) not linked to a workshop have been implemented on the OIKODOMOS Workspaces platform (3 of them have been carried out in multiple editions) and **1 LS** – Thinking Dwelling – has been implemented on a new web-based learning environment appositely created – for a total of 9 LSs. 2 LS have been carried out during the first year of the project (2013/14), 3 during the second year (2014/15), and 8 during the third year (2015/16). As it can be seen, **there has been a significant increase of LS use in the last year** of the project. During this year, 4 new LSs have been created and 4 LSs have been re-used. Furthermore, the **Lisbon workshop** (carried out in the first year), the one in **Cottbus** (second year) and the one in **Belgrade** (third year) have been evaluated together with their preparatory activities conducted in 3 LSs specifically dedicated to prepare students and teachers for the workshops. In addition, a **MOOC** called “Housing Design: From Concept to Fabrication” has been carried out twice during the last two project years (2015 for 6 weeks & 16th May, 2016 for 6 weeks) on the MOOC platform CANVAS. As the MOOCs have been evaluated directly by the group that organized them, the results are not described in this report.

To evaluate the above-mentioned learning activities, surveys have been created and sent or handed in to the respective target groups. Each survey is based on the same model, already defined at the beginning of the project. However, as learning activities and especially learning spaces evolved during the project (see Deliverable 6.1 Evaluation Plan), it has been necessary to adapt the questionnaires to fit each learning space by modifying, omitting or adding questions. For most LSs, feedback has been collected only from students, whereas for the workshops and their preparatory activities it was obtained from both students and teachers. For the LS Thinking Dwelling only teachers’ feedback has been collected since it was difficult to get it from students. Whenever possible, the online surveys were distributed to the students and teachers immediately after the end of the learning activities they were involved in.

The table below shows the **learning activities linked to the annual workshops** and the types of evaluations that have been carried out to assess them:

Table 1. Evaluated learning activities linked to annual workshops

Learning Activity	Evaluation	Response Rate
Annual Workshop (Lisbon - 2014)	Paper Survey for Students	95.7% (45 out of 47)
	Online Survey for Teachers	47.0% (11 out of 23)
LS "Contemporary Living Patterns" (SS 13/14)	Paper Survey for Students (section within Lisbon Workshop survey)	95.7% (45 out of 47)
	Online Survey for Teachers (section within Lisbon Workshop survey)	11 resp.
Annual Workshop (Cottbus – 2015)	Paper Survey for Students	98.1% (51 out of 52)
	Online Survey for Teachers	14 resp.
LS "Contemporary Living Patterns: Growth / Shrinkage" (SS 14/15)	Paper Survey for Students (section within Cottbus Workshop survey)	98.1% (51 out of 52)
	Online Survey for Teachers (section within Cottbus Workshop survey)	14 resp.
	Short interviews with teachers	8 interviews
Annual Workshop (Belgrade – 2016)	Paper Survey for Students	81.1% (43 out of 53)
	Online Survey for Teachers	12 resp.
LS "Renewing / Revitalizing: Creating liveable cities"	Paper Survey for Students (section within Belgrade Workshop survey)	81.1% (43 out of 53)
	Online Survey for Teachers (section within Belgrade Workshop survey)	12 resp.

The following table shows all the other collaborative learning activities that have been carried out during the three years of the project. For each learning activity it is mentioned how it was evaluated.

Table 2. Evaluated Learning Spaces

Learning Activity	Evaluation	Response Rate
LS "Civic Housing"	1 st round (WS 13/14) by La Salle	Not evaluated
	2 nd round (SS 15/16) by DIT	No responses
LS "Introduction to Housing"	1 st round (SS 13/14) by UPV Online Survey for UPV Students	25 responses
	2 nd round (WS 15/16) by UPV Online Survey for UPV & ITU students	22 responses (20 UPV & 2 ITU) - report
	3 rd round (SS 15/16) by UPV	23 responses (16 UPV, 5 ITU & 2

	Online Survey for UPV, ITU & ISCTE students	ISCTE)
LS “Habitat Regeneration Strategies”	WS 14/15; by FASTU – Online survey for FASTU & FAVSUACE students	91 responses (90 FASTU & 1 FAVSUACE) - presentation
LS “Housing Systems”	WS 14/15; by La Salle – Online survey for La Salle students	4 responses - report
LS “Threshold Matters”	WS 14/15; by KUL – Online survey for KUL students	18 responses – summary report
LS “Urban Systems”	WS 15/16; by La Salle – Online survey for La Salle students	6 responses - report
LS “Urban Housing Regeneration”	WS 15/16; by DIT – Online survey for DIT students	5 responses (out of 20) - report
LS “Small is Power”	1 st round (WS 15/16); by KUL – Online survey for KUL students	2 responses (out of 18) - report
	2 nd round (SS 15/16); by KUL – Online survey for KUL students	7 responses
LS “Thinking Dwelling”	WS & SS 15/16 – Online survey for participating teachers	100% (6 out of 6)

The LS “Civic Housing” has not been evaluated. For the first edition (LA SALLE), evaluation surveys were not yet ready when the LS closed, and in the second edition (DIT), none of the students answered the online survey.

Most LSs saw the **involvement of different partners**. Wherever possible, the evaluation team tried to collect the feedback of all involved institutions. However, in many cases this became difficult, as the timing was often not the same for all involved partners (some finished earlier and some later). As a result, in most cases we had good response rates from the organizing institution’s students and low participation from the others. Thus, the evaluation results are mainly based on the feedback of the students from the organising institution.

The students’ feedbacks on the **preparatory activities** of workshops were collected together with the feedback gathered during the workshop, to avoid overloading students with surveys.

The response rate of the printed surveys for evaluating the three workshops by students was particularly high thanks to the fact that during the workshop they had time to fill in the questionnaire.

The results of the learning activities linked to each annual workshop (Preparatory Activity LS & Workshop) will be treated together. They are strongly related to each other and, in part, they have been evaluated together.

2.2 Contribution of partners

As leader of WP6 Quality Assurance, USI was responsible for the creation and distribution of the evaluation questionnaires. Furthermore, they were in charge of analysing the collected data and summarizing the results in a report/presentation for each single learning activity.

In order to collect students' feedback, it is of crucial importance to choose the right moment to deliver the surveys, as students may not be available or reachable after the end of a course. In order to have a good response rate and thus to obtain valuable results, a good collaboration between the leaders of each workspace (WP4), the organizer of the workshop (WP4) and the evaluation team (WP6) was fundamental. Furthermore, the leaders of each learning activity were responsible for distributing the questionnaire to their students while the evaluation team personally contacted the teachers.

As collaborator in WP6, Paul Riddy participated in the creation of the questionnaires.

2.3 Relations to other activities in the project

As the design of learning activities and especially learning spaces evolve during the project, it was important to adapt evaluation surveys each time. A standard survey was used as basis for evaluating each learning activity, but it was adapted to each learning space by modifying or omitting questions and adding new ones. Often it was important to understand how the students referred to the learning space, what exactly it was for them in order to be able to formulate the question in the correct way, that is, in a way that it was clear to whom it had to answer it. Therefore, it was fundamental that the evaluation team was involved or at least informed about the design of the learning space, their structure and timetable. Only in this way, the team could capture the important differences and correctly adapt the survey to the needs of each learning space. This collaboration worked increasingly as the project progressed.

2.4 Abbreviations

- WP stands for Work Package.
- LS stands for Learning Space.
- WS stands for Workshop.
- LO stand for Learning Outcomes.

3 EVALUATION OF 1ST WORKSHOP (LISBON)

The first international OIKONET workshop took place in Lisbon, at the ISCTE – University Institute of Lisbon, from 14th to 19th July 2014. The topic of the workshop was “Contemporary living patterns in mass housing in Europe”. 47 students and 23 teachers from 15 different schools of architecture and urban planning took part in this workshop. Collaborative preparatory activities were carried in the OIKODOMOS Workspaces before the workshop, in the LS “Contemporary Living Patterns”.

Both students and teachers were asked for feedback immediately after the workshop. Students filled in a printed questionnaire on the day before the presentations and teachers had to fill in an on-line survey that was sent to them after the workshop. A detailed evaluation report can be found in the Appendix of Deliverable 4.3.

3.1 Learning space: “Contemporary living patterns”

As a preparation for the workshop, students and teachers participated in a series of learning activities and tasks that were carried out in a learning space created for this purpose under the name “Contemporary living patterns”.

Teachers pointed out the **importance of preparatory learning** activities, especially because the workshop itself was quite short. The activities helped preparing students for the workshop and allowed **collecting learning and teaching materials** and getting to know each other.

3.1.1 Alignment between preparatory learning activities and workshop

Timing was an issue that prevented a good **alignment** of the preparatory activities with the regular activities of **each institution**. Preparatory activities started at the end of the spring semester when students were already involved in exams and other end-year projects, leaving them little time to engage with other learning activities. Furthermore, it was difficult to motivate students to participate once their courses were finished. For future workshops it might be important to **start earlier** with the preparatory activities and to **align** them better with the regular courses of each institution and the following workshop activities (some students mentioned that they had almost nothing in common with the workshop tasks).

3.1.2 OIKODOMOS Workspaces

Teachers consider the **OIKODOMOS Workspaces** an **interesting** collaborative learning environment. However, in preparatory LS “Contemporary living patterns”, **collaboration** between the various universities **did not work well** and objectives and common procedures were not clear to some of the participants. As a result, the LS was **not used much** for preparatory learning activities. A better initial coordination of the LS might help mitigating this problem.

Both students and teachers complained about the **difficulty of working with OIKODOMOS Workspaces**. It was considered confusing, not easy to use and not user friendly. Students found it difficult to find tasks in the LS and teachers to upload documents to the platform.

3.1.3 Communication and collaboration

According to students, there was **no communication** with students from other institutions was taking place during the preparatory learning activities. Direct on-line communication was possible only with teachers managing the LS. There was only **some collaboration** (e.g. commenting) among students and between groups and teachers, as the on-line learning

environment did not allow for active **collaboration**. It was suggested to complement LSs with additional communication tools like e-mail, Google+ or Facebook to **organize on-line meetings before the annual workshop** in order to get to know each other.

3.2 Workshop activities

3.2.1 Quality of students' outputs

Eight groups of 5 to 7 students from different universities had to elaborate a project on one of the two neighbourhoods in Lisbon (Portela / Liberdade) which they visited the first day of the workshop.

Most teachers agreed that the overall quality of students' works was **very good**, especially considering the short time they had, the variety of tasks they had to complete and the fact that they were working with people they did not know. Only one teacher remarked that the outputs were **not truly interdisciplinary** and did **not really bring out novel approaches** to housing issues.

3.2.2 Adapting teaching and promoting OIKONET

Many teachers plan to adapt their way of teaching after the experience of the workshop. They would like to **propose more collaborative activities** and to **use materials** produced during the workshop in their courses. Some teachers thought that it was rather the good discussions with colleagues they had in the parallel WP4 meeting that led to new teaching and collaboration ideas.

A majority of teachers had been promoting OIKONET within and outside their institution. They talked to their colleagues about it, organized lessons or lunchtime talks about the project and the workshop, and even introduced their colleagues to the on-line learning platform.

3.2.3 Communication and collaboration

Communication and collaboration between students from different institutions and countries were considered one of the **strongest and most successful aspects of the workshop** (unlike during the preparatory learning activities). Participants enjoyed exchanging ideas and working towards a common architectural solution. They managed to communicate even though different language levels sometimes made understanding difficult.

3.2.4 Lectures and design studio work

In general, students liked the lectures and thought that they were a good introduction to the design studio work. Both teachers and students would have preferred a **better distribution of the lectures** to the whole workshop duration instead of concentrating them on the first days. They would have liked to **start with the group works earlier** and to have more time for their projects. Assignments should be explained better at the beginning, as they were not clear to everyone.

3.2.5 Most valuable aspects according to students

- **Collaborating** with students from other countries, exchanging ideas and work towards a common architectural solution in order to get confronted with different architectural interpretations and different approaches to design and architecture.
- **Visiting the two sites (Portela, Liberdade)**, in order to understand the people's housing conditions, to learn about the history of each place and to develop solutions to solve the problems in a collaborative way.

- Understanding the importance of the **social context** for architecture with regard to social housing, and learning about participatory processes for housing design.

3.2.6 Suggestions for future workshops

For the future workshops, teachers and students suggested improving the following aspects:

- Have **less and shorter lectures** and spread them over the whole week
- Have **more time for the design studio work**
- Have a **social event** to kick-off the workshop to get to know each other right away
- Better **integration** of preparatory learning activities and workshop
- For the preparatory learning activities, **interaction and collaboration** between universities should be actively promoted, as they will not happen on their own
- Have **less crowded** working conditions for the students
- Clearer **instructions for teachers** (it was not clear what they were supposed to do)
- Explain better the **workshop goals** at the beginning
- Make the **on-line learning platform** more user friendly and use other communication tools in addition
- Have **more free time** (in order to be able to visit the city)
- Change the **period** of the workshop, so that it does not fall into holidays
- **Blog** is not the best medium to use for communication, sharing & presentation

4 EVALUATION OF 2ND WORKSHOP (COTTBUS)

The second international OIKONET workshop took place in Cottbus, at the BTU – Brandenburg University of Technology in Cottbus, from 1st to 6th June 2015. The topic of the workshop was “Contemporary living patterns: Growth/Shrinkage (Berlin/Cottbus)”. 52 students and 19 teachers from 16 different schools of architecture and urban planning took part in this workshop. Collaborative preparatory activities were carried in the OIKODOMOS Workspaces in a Learning Space created for this purpose.

Both students and teachers were asked for feedback immediately after the workshop. Students filled in a paper questionnaire on the last day (Friday after lunch) and teachers had to fill in an on-line survey which was sent to them after the workshop. A detailed evaluation report can be found in the Appendix of Deliverable 4.3.

4.1 Learning space: “Contemporary living patterns: Growth / Shrinkage”

To be prepared for the workshop, students and teachers participated in a series of learning activities, which were carried out in the appositely created learning space “Contemporary living patterns: Growth / Shrinkage”.

During the Cottbus workshop, semi-structured interviews were carried out with eight teachers participating in the preparatory activities and the workshop. The goal of these interviews was to understand how much teachers were involved in the design of the preparatory activities and how collaboration among teachers and with the research partners (WP2) was perceived.

In the 1st part of the workshop survey, students were asked to provide their feedback about the preparatory activities (tasks defined in the learning environment, materials provided through it and interaction with other students and teachers before the workshop).

4.1.1 Teachers' involvement in the design of LS

This year, several teachers were involved in the preparation of the preparatory activities for the workshop, which allowed for different levels of involvement. Some actively participated at the design of the workshop, others contributed by uploading useful materials and resources and others simply participated in the Skype meeting that has been organized at the beginning of the preparation period.

Also during the preparatory activities there were various levels of involvement by teachers, some followed their students and thought them how to use the LS, some just informed their students about the tasks and provided them access but then left them work independently and find out how the platform works, and others again just used the platform to upload the finished works. Some used OIKONET Facebook group for communication.

4.1.2 Collaboration in design of LS (among teachers & with WP2)

Adriana Diaconu (UGA), Tomas Ooms (KUL) and Matthias Klöpfel (BTU) were the leading partners of the preparatory activities' organization. They collaborated very well. However, their goal was to try to involve various partners in these activities in order to actively involve teachers in the preparatory activities. To do so they organized a **Skype session** to which all teachers were invited. During the session, they presented the main structure of the activities and the defined tasks and asked all partners in which way they could contribute something. Some partners agreed to contribute in some way (e.g. by setting up templates for one or two tasks or by

uploading materials) but no one wanted to take leadership over a specific task. Finally, Adriana took over the leadership for all tasks. Nevertheless, thanks to the various inputs, a **large amount of resources and relevant literature** on the workshop topic could be created. Those teachers who were not actively involved in setting up the preparatory activities were well informed on how to carry them out with their students, **by e-mail**. During the preparatory activities, a **Q&A session** was organized where teachers and students could meet online and discuss about the topic. This was a very good way to foster collaboration.

Timing and differences in time schedules was certainly an issue that prevented more active collaboration among teachers and more active involvement in the preparatory activities by students (final deliveries / exams). However, by **framing more the responsibilities** of everyone, maybe some more commitment and collaboration could have been obtained. It was also suggested to use **Skype** more especially at the beginning to get to know each other and brainstorming and at the end to wrap up. In between, e-mail seems to work well.

The **collaboration with the project's research partners** (WP 2) took mainly place through the person of Adam Evans from UCLan. He helped writing out Task 1 of the preparatory activities and led the Q&A session. Most teachers were not aware of this involvement and of how they contributed to the preparatory activities.

4.1.3 Alignment between preparatory learning activities and workshop

According to both teachers and students, the **preparatory activities** were well aligned with the workshop and the proposed readings were relevant. Exercises offered a good introduction to the topic and the site. Tasks 3 & 4 (getting to know Cottbus and Berlin) were perceived as too far away from the local reality. They should have been prepared by local teams with an initial and short introduction by the organizers.

Even though this year the workshop was anticipated to June, **timing** was still an issue. Many students had their exams at the same time and therefore they could not dedicate much time to the preparatory activities. Starting with the activities even earlier might allow them to be better acquainted with the topic of the workshop.

4.1.4 OIKODOMOS Workspaces

Students considered the **task-based structure** of the learning space a coherent way of learning. Generally tasks and learning activities were relevant and clear and their sequence meaningful. Still, some students had difficulties in understanding what to do, as the task descriptions were very short.

Even though most students agreed that the **materials provided** on the LS were useful, only about half of them also read them. This might be because many students were under exam during the preparatory activities.

Even though teachers were more acquainted with the online platform, some still have difficulties in using it and would prefer using other, simpler collaboration tools. Some teachers had difficulties in finding and accessing resources like the maps of Cottbus and found that the platform was not fluent and missed consistency. The OIKONET Facebook group complemented the online platform as it facilitated communication and information sharing.

4.1.5 Communication and collaboration

During the preparatory activities, there was **not much online interaction among students and teachers**. Students suggested improving this by using **Facebook groups** as an informal place for topic-related discussions, by creating **university-mixed groups** also for the preparatory

activities, by providing a **list of each group** with some basic information on its members and by introducing a “**ludic task**” to break the ice.

4.2 Workshop activities

4.2.1 Quality of students' outputs

Eleven groups of 4 to 5 students from 16 different universities explored the concepts of “Shrinkage” and “Growth”, exemplified by the two cities of Cottbus and Berlin. Half of the groups focused on “Shrinkage” – Cottbus and half on “Growth” – Berlin.

Most teachers agreed that the **quality of the students' works was good** (some better, some worse) considering the limited time, the complexity of tasks and the international composition of groups. They managed to express the problematics of the urban situations and to suggest an approach to solve them. However, they performed not so well in explaining their ideas and design strategies in written form.

In this second workshop, a **different format was used to present the students' outputs** at the end of the week: there was an informal poster-session on Friday evening and a wrap-up session on Saturday morning. For most teachers this format was efficient as it enabled them to engage students in discussions and informal conversations. It took place in a relaxing, efficient and interesting atmosphere even though it was very late in the evening. Although there were many presentations, they were made at a good pace. The wrap-up session was also efficient, as it facilitated to get various thoughts, ideas and critics about the workshop in general. Most criticisms were about having limited access to printing facilities. Because of this, posters were available only online. In addition, students' answer to this format was excellent; they were very positive about it and collaborated in a more active way than in previously used formats (PowerPoint presentations).

4.2.2 Achievement of learning outcomes

Three main learning outcomes were defined for the workshop:

1. Being able to describe urban growth and shrinkage from a multidisciplinary point of view (**average rating: 6.7**)
2. Being able to analyse patterns of urban densification and reduction (in spatial planning, housing policies, housing typologies, ...) (**average rating: 6.9**)
3. Being able to design and evaluate housing models and strategies for densification / reduction for the cities of Berlin and Cottbus: (**average rating: 5.9**)

According to teachers the first two were achieved quite well, while the last one a bit less (scale from 1 to 10). More time would have been necessary for a good achievement of the third learning outcome.

One of the most interesting results is that the students managed to relate the issues of shrinkage and growth and create design strategies encompassing both urban development patterns.

4.2.3 Adapting teaching and promotion OIKONET

Many teachers were **inspired by the format of the poster-session** to present the final outputs, as it resembled a vernissage. They could imagine using this kind of presentation format also in their own institutions.

Some teachers are thinking to **implement short workshops** like the one in Cottbus in their own curriculum/institution. For example, by facilitating students from different levels in the program to work together on a same project. Other partners plan to reuse some of the case studies,

examples of growing and shrinking and texts that were presented during the workshop and the preparatory activities in their own teaching.

Teachers reported about the workshop activities at their own institutions. They talked to their colleagues informally or presented the results in more formal presentations. Some added the link to the OIKONET project to their departmental website. One teacher even brought forward the OIKONET framework for an elective next year and will present it at an urban design workshop with professionals in Ireland in September. Other partners discussed the possibility of including the workshop's posters into an exhibition next year.

4.2.4 Communication and collaboration

Students liked working together with peers and teachers from other countries and most of them were able to communicate effectively with the other members of their group. Collaboration was thus a chance for them to see and discuss other opinions, ideas and approaches. However, language barriers were still an issue for some students.

Students particularly appreciated the **exchange with teachers from different schools**. They perceived the staff and tutors as friendly and easily approachable, and enjoyed that some great relationships between students and teachers were created. **Comments and feedbacks** have been appreciated, they provided the students helpful information, presented them different points of views and made them reflect on the topic. They got new examples on housing and learnt the value of a well-structured presentation.

4.2.5 Most valuable aspects according to students

- **Having ludic activities as part of the educational experience:** Students appreciated that the organizers of the workshop also thought about social life. They enjoyed the warm-up party on the first evening and an evening barbecue. They liked the fact that everything started up slowly by visiting the cities so that students could get to know each other. Furthermore, they enjoyed the pleasant and relaxed atmosphere, which nevertheless allowed them to work hard.
- **Collaborating with students from other countries,** exchanging ideas and work towards a common architectural solution and communicating with tutors in a friendly, informal way, was valued very much. Sharing experiences with colleagues, understanding their points of view helped creating a productive and friendly environment.
- **Visiting the two sites (Cottbus and Berlin),** in order to better understand the context of shrinking and growth. Students particularly enjoyed the bike ride to explore Cottbus.

4.2.6 Suggestions for future workshops

For the future workshops, teachers and students suggested improving the following aspects:

- **Making the site visits more focused:** Students would have preferred to focus on some areas in Berlin or to visit only the site they will be working on in order to visit those properly and with more time.
- Students would have expected a more detailed brief with clearly defined goals and outputs
- More **engaging formats for presentations** of preparatory work: presentations were too long and repetitive as each group talked more or less about the same
- Make the first day “lighter” avoiding too many presentations and overwhelming of information
- More collaboration between students of different institutions (international collaboration) already during the preparatory activities.

- **Reorganize tutoring:** each group should be advised by no more than 2-3 tutors, in order to avoid that they get too many – sometimes opposing – opinions and suggestions.
- **Better facilities:** students missed easy access to an A1 **printer** and to plotters. They would have appreciated an A3 colour printer in the studio. Some students also complained about the poor **Internet connection**. Finally, one student suggested to make the working places a bit more attractive for example by providing some **music**.
- Students would have appreciated **more time** to work on their projects. To do so they suggested either to add some days or to place some lectures in the preparatory phase.
- **Having less additional charges:** students would have appreciated if the bus trip was included and if free coffee, tea and water would have been available.

5 EVALUATION OF 3RD WORKSHOP (BELGRADE)

The third international OIKONET workshop took place in Belgrade, at the Faculty of Architecture, University of Belgrade from 6th to 11th June 2016. The topic of the workshop was “Renewing / Revitalizing: Creating Liveable Cities”. 51 students and 26 teachers from 17 different schools of architecture and urban planning took part in this workshop. Collaborative preparatory activities were carried in the OIKODOMOS Workspaces before the workshop, in the LS “Renewing / Revitalizing: Creating Liveable Cities”.

Both students and teachers were asked for feedback immediately after the workshop. Students filled in a printed questionnaire on the last day, just before the presentations and teachers were asked to fill in an on-line survey after the workshop. A detailed evaluation report can be found in the Appendix of Deliverable 4.3.

5.1 Learning space: “Renewing / Revitalizing: Creating Liveable Cities”

Students and teachers were involved in a series of learning activities in order to get prepared for the workshop. The activities were carried out in a learning space especially set up for this purpose.

In the first part of the workshop evaluation survey, students were requested to provide their feedback about the preparatory activities and their importance for the learning experience during the workshop itself. Also, teachers provided their feedback on both the preparatory activities and the workshop through an online survey that was sent to them after the workshop.

5.1.1 Alignment between preparatory learning activities and workshop

Students and teachers agreed that the preparatory activities had been well aligned with the workshop and that they were fundamental as preparation for the workshop. According to them, it was helpful for the design process to start analysing the area of intervention and the urban context of the city as early as possible. Analysing the place, reading about the needs of liveable cities and looking for other examples was a good way to get to know the workshop theme.

The proposed activities were clear to most participants, however many suggested to make a better selection of the readings: less and shorter texts focused on only a few topics. The proposed readings were too broad and long and those in Serbian language useless to most students. For some groups time was not enough to complete and upload all the preparatory tasks, eventually, because the subject and the tasks were too broad and generic.

5.1.2 OIKODOMOS Workspace

For most students the **task-based structure** of the learning space offered a coherent way of learning. According to them tasks and learning activities were relevant and clear and followed a meaningful sequence. However, some students would have preferred to submit the outcomes of each task, once completed instead of all together at the end. Most students agreed that they received enough **training** to work efficiently with the OIKODOMOS Workspaces. Some however suggested that the interface could be more user-friendly.

5.1.3 Communication and collaboration

For most students interacting with other students / teachers during the preparatory activities had been a good experience. This is a clear improvement compared to the last year experience in Cottbus. However, according to them, interaction could have been further improved by creating

cross-institutional groups already before the onsite workshop and by asking them to do the preparatory activities together. Students could have introduced themselves to their peers through short introduction videos and then used different social media tools (Facebook, Skype) to communicate and collaborate. To increase interaction, students suggested using online voting systems (e.g., classroom response systems) to take participative decisions and to introduce competitions with incentives and prizes.

5.2 Workshop activities

5.2.1 Achievement of learning outcomes

Before the workshop, **six learning outcomes (LOs)** have been defined (average rating on scale from 1 to 4).

1. Being able to understand the differences between various approaches to make cities liveable, such as regeneration, renewal and revitalization. (**average rating: 3.4**)
2. Being able to identify the specific characteristics of an area, which embodies a potential for future change. (**average rating: 3.5**)
3. Being able to develop a multi-dimensional analysis focusing on environmental, social and psychological aspects of liveable cities. (**average rating: 3.4**)
4. Being able to understand the importance of climate change as a driving factor to make cities more liveable, renewable and responsive to environmental challenges. (**average rating: 2.9**)
5. Being able to propose strategies to revitalise and regenerate cities, which allow for the participation of local community representatives. (**average rating: 3.4**)
6. Being able to cooperate with team members, communicate my ideas and present them to others making an effective use of visual media. (**average rating: 3.5**)

Students felt to have well achieved most of the learning outcomes; only number 4 (climate change) did get slightly lower scores. This might have been because during the workshop climate change was treated only very marginally.

These generic learning outcomes have been re-phrased at the end of the workshop into **seven shorter and more specific learning outcomes** in order to better allow teachers to evaluate the work of the students. Each final group presentation has been evaluated according to these criteria by all present teachers. LO 1 and 5 have been very well achieved while LO 2 and 4 not so well (see average rating on scale from 1 to 5)

1. Describe the key elements of the problem (**average rating: 4.3**)
2. Evaluate the effectiveness of their strategy (effectivity, economic viability, social impact, sustainability, ...) (**average rating: 3.4**)
3. Discuss the impact of multiple dimensions and scales on their proposals (evidence of a systematic approach to the problem) (**average rating: 3.9**)
4. Describe the roles of various actors in the development of the proposals (participation of citizens) (**average rating: 3.7**)
5. Communicate the ideas making an effective use of visual media in various formats (**average rating: 4.3**)
6. Communicate orally their proposals in a proper way (**average rating: 4.0**)
7. Work cooperatively with team members to complete the work required (level of involvement of all team members) (**average rating: 4.1**)

Teachers remarked that the level of engagement was not the same for all students and that in some cases language issues prevented effective group collaboration.

Teachers liked the **role-play format** of the final presentation and found it an efficient way to present the outcomes and valorise the multitude of point of views. Some participants got a bit too much involved, which led to several interruptions. A slightly better planning of the role-play might have allowed for even better results (great emphasis was given to the investors and much less to citizens and local variables). It might be even more valuable if real actors (representatives of municipality, citizens) could be invited to a presentation of this kind and participate playing a role.

5.2.2 Communication and collaboration

Generally, students liked to work in international groups and managed to communicate effectively with group members. However, also during this workshop language barrier was an issue in some groups. The English level of some students was not sufficient to fully participate and contribute to the work of their group. Another difficulty that emerged was “interdisciplinary” communication: for example, for some urban planners it was not easy to explain their point of view to architects.

5.2.3 Most valuable aspects according to students & teachers

- **Collaborating with students and teachers from different countries** was one of the most valuable experiences for both students and teachers. It allowed them to see other approaches and ideas. Students liked to be organized in international groups and to work with people with different backgrounds.
- **Importance of organizing social events and sharing free time.** Social events were actually useful to break the ice and get to know each other. It was particularly helpful for the students to stay all in the same hotel. This allowed students to spend time together also after official working times and facilitated the organisation of common activities.
- **Site visits:** visiting the Kosančićev Venac and Belgrade Waterfront sites have been highly appreciated. They helped the students developing their work and inspired them.
- **Involvement of real stakeholders:** Meeting the developers of Belgrade Waterfront was a very educational and interesting experience.
- **The excellent atmosphere** that has been created during the workshop, the positive atmosphere of the students and their engagement and the creation of a real team among the OIKONET teachers.

5.2.4 Suggestions for future workshops

For future workshops, teachers and students suggested improving the following aspects:

- **Time:** Students would have appreciated to have more time to explore the city, and to work on their projects. They would have liked to add some days to the workshop.
- **Give the students more time to actually do their work** and keep lectures to a minimum. Design studio activity should actually start from the first day and supporting events/lectures could be evenly spread through the week.
- **Better infrastructures:** The rooms dedicated to the studio activities did not provide enough space. Students were packed in the studio area and tutors did not have a space of their own for coordinating the activities. Furthermore, there were not enough electrical sockets and Internet connection was not very good. There was not enough help for printing.

- **Giving more use to the workspace created for the preparatory activities:** For example, the intermediate presentations could have been posted on the platform or on the workshop blog rather than on Facebook. Facebook is actually more useful for interactions and announcements than for posting working materials.
- **Better organization of presentations:** for many participants, two presentation sessions were too much. Many presentations of the preparatory activities were similar and thus the whole session slightly boring and not very useful. The role-play format of the final presentation was interesting although sometimes a bit chaotic.
- **Better planning of timetable:** for some participants it was difficult to adapt to a continuously changing program.

5.2.5 Reflections on the experience of the three workshops

Teachers have been asked to provide some overall considerations of the three workshops to provide a final evaluation of their whole workshop experience.

- **Improvements over time:** The first workshop in Lisbon provided the fundaments for the following ones. Over time, the number of preparatory activities have been reduced and became clearer. Teachers became more experienced with the online platform and thus managed to guide their students better. This helped improving the preparatory activities and thus allowed students to arrive at the workshop well informed and prepared.
- **Collaboration:** collaboration in preparing the workshops worked best in small groups of three to four people. A good way could be to keep always one member of the previous group and add new ones for the organization of the next workshop. In this way, knowledge transfer can take place. Distance collaboration has been a big challenge but collaborations during the workshop have always been excellent.
- **Lessons learned** from the three workshops and their preparatory activities: organizing a workshop implies a huge time commitment from all involved partners; however, it is worth all the effort. Successful workshops require:
 - A good planning of all elements by keeping some flexibility in the program to pick up ideas that emerge during the workshop and implement them
 - That tasks are clear, easy to do and limited in their number
 - That during the workshop itself, students can use the maximum of time for working in groups / studio works

Furthermore, teachers learned:

- That students enjoy working in international groups and are able to assimilate a big amount of information in a short period and to produce good results
- How to implement a blended learning approach
- **Value of the created collaborations during the three workshops for the teachers and their institutions:** the workshops managed to create the foundations for stable and durable relationships. The participating institutions gained happier, more experienced staff with a larger network. The created relationships will thus be a valuable resource for future joint projects in education and research and will facilitate the creation of Erasmus programs. Teachers themselves learned much from their OIKONET colleagues (e.g. different pedagogic methodologies, new learning approaches ...) and explored topics that otherwise they would not have had time to look at.
- A majority of teachers agree that the **design / structure of the three workshops can be further exploited in the future.** Students from different universities could use the already developed workspaces to gain common knowledge on a topic. Then they could meet for some days to work together and when back to their schools continue with an individual process, sharing the results on the platform. Another proposal could be to

meet for the final presentations only (e.g. 2 days), or at the beginning of the collaborative activities, just to start the process.

This being said, most teachers would be interested in continuing the workshops even without external funding. However, they point out the importance of funding, especially for students. Some launched the idea of finding external sponsors.

6 EVALUATION OF LEARNING SPACES

During the three years of the OIKONET project 9 online learning spaces have been evaluated (no evaluation for LS “Civic Housing). 8 have been carried out as LS on OIKODOMOS Workspaces, and one (Thinking Dwelling) in a web-based environment especially created for it (http://www.oikonet.org/thinking_dwelling/home).

The surveys contained questions about the students’ learning experience (expectations, learning outcomes), about the online environments, and their experience of online collaboration (e.g. commenting as a way of collaborating online).

The results of each evaluated LS will be briefly summarized in the following sections.

6.1 Introduction to Housing

This is the only LS that has been re-edited and updated each of the three academic years during the duration of the project. It was organized and managed by the School of Architecture of the Universitat Politècnica de València (ETSA-UPV). During each edition of the learning space, UPV collaborated with different OIKONET partner institutions. However, the core participants of the LS have always been students from the UPV. The LS has been evaluated three times by means of online questionnaires submitted to students: once after the spring semester 2014 and twice during the academic year 2015/2016 (once after the winter and once after the spring semester).

- 1st evaluation: WS 2013/14 – 25 respondents from UPV
- 2nd evaluation: WS 2015/16 – 20 resp. from UPV & 2 resp. from ITU
- 3rd evaluation: SS 2015/16 – 16 resp. from UPV, 5 from ITU & 2 from ISCTE

The goal of the course at UPV was to identify, analyse and apply strategies to start with a housing project. Students learned how to recognize basic structural systems, perform conceptual models, analyse projects and recognize patterns in order to design a house. The goal of the LS “Introduction to Housing” was to integrate various courses on the same topic (from UPV, ITU and ISCTE) in a common structure, having teachers and students collaborate in the online environment.

6.1.1 Students’ expectations & learning outcomes

Beyond topic-related expectations (e.g. learning the basics to realize an architectural project), students had strong expectations regarding **networking and sharing**. They expected to virtually interact with people from other countries and other architecture schools and exchange ideas, methodologies and projects with them, to learn about other ways of working and to learn other types of analysis. Furthermore, some expected to improve their **English** and to learn how to **explain their work** in an understandable way to other students and teachers. During the first evaluation, expectations were satisfied less than in the other two. In general, students would have appreciated **more communication and interaction** with other students from other schools maybe also by using additional tools such as Facebook. However, they were enthusiastic about the high number of schools and students who **shared their work** through the LS. They saw different projects and **got several comments**, which was very valuable for them.

During their participation in the learning space students learned **topic-related knowledge and skills** (e.g. to think about the form of a house, how to organize spaces, that there are many ways of understanding, analysing or designing a houses), **communication and presentation skills** (e.g. present their work so that others can understand it, comment and value the projects of others, English language) and **attitudinal skills** (e.g. importance of precision and details,

importance of hand drawing and creativity, team work, sharing).

6.1.2 Online environment / Tasks

During the first edition of the learning space, the use of the on-line learning platform OIKODOMOS Workspaces **was not considered very important**. Many students did not use the platform very often and accessed it only to submit a deliverable. However, during the third edition of the course (2nd and 3rd evaluation), the students valued the use of the online platform more. According to them, it offered a **good way to share projects, view other students' projects and provide critical opinion** on the works of others. The LS **motivated students to do more** than they would have done normally and thus to learn more. However, the online environment was not easy to use. The main issue of the environment was **finding the information one was looking for**. It was not easy to identify projects by topics or content and thus difficult for the students to look for projects similar theirs. Some **more training** on how to correctly and efficiently use the platform would have been useful. The user interface should be more user-friendly and the contents within the platform better organized and easier to access.

In general, the **tasks and their sequence were clear and meaningful**. Teachers explained the tasks but some students still had **difficulties** in understanding them. It might have been useful to add a simple **explanation of the tasks to the online platform**. Each school then adapted the tasks to their own program, which made it a bit confusing. If the projects/curricula in different schools would be more similar, the task-based structure would work better. Still, for some students, the task-based structure of the LS was **one of the strongest points** of the OIKONET project.

6.1.3 Online collaboration

Online collaboration with peers from other institutions was a very **good experience** for the students. They **liked commenting** as a way of online collaboration. They appreciated **receiving comments** on their works, both from peers and teachers as this allowed them to improve their works. However, they thought that it could be still improved: **more and more extensive comments** would have been useful. Students should thus be encouraged to participate more actively in the exchange of views. Students should also learn how to **provide constructive/useful comments** that do not just say "good" or "well done", and take care to **present their work** in a way that others can understand in the context of online communication. Furthermore, it would be useful to activate in the settings of the LS the possibility to automatically send an e-mail when someone comments on the work of a student, so that faster replies are possible. In addition to the OIKODOMOS online learning environment, students used several other collaboration tools such as Facebook, Pinterest, Instagram, Tumbler or Twitter. These tools were used to share designs, references, and ideas that could inspire their own work. Students also suggested complementing the use of the platform with the use of some more interactive tools such as, skype (group), Facebook (group) or video conferences in order to have more direct communications. On the other hand, some students suggested **using the OIKONET learning environment more frequently** and extending its use to other institutions.

6.1.4 Overall evaluation & Suggestions for improvement

Most students clearly said that this **learning experience is worth to be repeated**. They appreciated the **innovative learning approach**, which allowed them to collect many different ideas from students from different countries and using them for their own projects.

However, some mentioned that the **collaboration could be further improved** by including, for instance, more interactive ways of communicating (e.g. chat, online video conference) in order to allow **real-time interactions** and exchanges. For future courses, the interface of the

online platform should be **improved**. As it is, the platform is not intuitive and confusing and makes it difficult to find information and tasks. In addition, some students would have expected more participation and motivation from their peers. They suggested that teachers should incentive **active and regular participation** by students.

6.2 Habitat Regeneration Strategies

The Faculty of Architecture from the Slovak Technical University in Bratislava (FASTU) has managed this learning space. It was carried out by FASTU in collaboration with the University of Belgrade, UPV and VSUACE during the winter semester 2014/15. The objective of the learning space was to explore in theoretical and practical ways the complex issue of housing regeneration; learning activities were aimed at analysing particular cases, identifying problems and needs for regeneration, exploring the examples of housing regeneration strategies, forging new visions and proposing actions that bring together multiple domains (urban planning, architecture, urban geography). A Facebook group was created to complement the LS by facilitating a less formal exchange of information.

This has been the LS with the largest number of answers to the evaluation surveys: 90 students from FASTU and 1 student from VSUACE provided their feedback on the collaborative learning experience.

6.2.1 Students' expectations & learning outcomes

The main expectation of students was experiencing **real international collaboration**, that is a course where they can **meet** students and teachers from other schools and countries, **work together** on a specific topic and **establish new contacts** and relationships. Because of this, students also expected to **improve their English skills** and learn how to present their works in a foreign language. In addition, various **topic related expectations** were mentioned.

Students learned how to **work in groups with local and international peers**: they understood the importance of a good **group organisation** that allows to split up the work, **motivate** all group members to contribute in some way, **share opinions** and value the work of other group members. They learned the importance of **time management** and to stick to a schedule and they learned how to **present their works** in a comprehensible way to their peers. They also learned how to **use an online platform** for international collaboration, and how to **comment** the works of other students to provide constructive feedback.

6.2.2 Online environment / Tasks

In general, students were **satisfied with the OIKODOMOS online environment**. However, they suggested that its user interface and structure should be improved (more intuitive, more attractive, and more innovative). For some students the platform was not easy to use. Sometimes students had difficulties in finding what they were looking for. Still, students agreed that they were **well trained** in order to use the platform but still, it took them quite some time to understand how it really worked. Teachers were always available to give further explanations.

Most students **liked the task-based structure**. The tasks had been well explained by the teachers, were clear, relevant, and **followed a logic sequence**: from analysis, through research, to final conceptual design. They always knew what they had to do and did not encounter big difficulties in working through the tasks. The task-based structure helped students to **organize their work and achieve good results**. Some students would like to use this way of working in other projects too. However, some students did not like that some tasks were changed during the semester and considered it a very time-consuming method.

6.2.3 Online collaboration

The international collaboration among students and teachers was one of the **strongest points** of this course. Thanks to online collaboration, they managed to exchange ideas, share their final projects, compare results and outcomes and comment on the projects of others.

Students particularly liked the possibility of **providing and receiving feedback** through comments, especially from students and teachers coming from other countries and cultures. This helped them to widen their views. The exchange of opinions contributed to create a **friendly and helpful working environment** among all the involved parties. Students particularly enjoyed comments. **Having more opportunities for commenting**, sharing views and exchanging recommendations would have further enhanced online collaboration. **Defining specific time slots** dedicated to these activities (and online collaboration in general), could be a possible solution. However, some students did not consider this kind of exchange as collaboration, for them it was more comparing and getting inspired by other students. Often there was no answer to comments and thus no real exchange of opinions took place. Students mostly provided feedback to works they liked and thus comments sometimes lacked constructive advice.

For some, the **language barrier** was a big problem. They had difficulties in understanding and writing comments in English language.

To create real international collaborations, collaboration should **not be limited to commenting** on people's work. Students suggested creating **video presentations** and either **stream** them live or record them, **share** them over the platform and then have a live-stream follow-up discussion. A videoconference was actually planned twice but did not take place because of **technical problems**. In addition, using **chat** to interact in more direct way could be useful. Creating **international groups of students** could further improve these kind of collaborations. Some students suggested including an award system in order to motivate them to actively participate and to create a sort of competition among different groups or institutions.

Even though students collaborated with international peers, they do not think that long-lasting relationships have been created. There was not enough personal involvement to do so. Some might stay in contact over Facebook.

6.2.4 Overall evaluation & suggestions for improvement

Students appreciated the innovative way of learning. They enjoyed international collaboration and the use of online tools to favour distance collaboration. They are glad that the OIKONET project favours this kind of activities. This way of working inspired students, made them to exchange opinions, learn new approaches and collaborate with other students. They hope that this kind of working can be applied also to other subjects/projects.

6.3 Housing Systems

This LS was created for the OIKONET seminar “Housing Systems” and carried out at the School of Architecture La Salle in Barcelona, during the winter semester 2014/15. The aim of the seminar was to understand housing as a system. This implies dealing with industrialization and fabrication (mass customization), dwellers’ participation, and adaptability. It was a collaboration between La Salle and the university of Cyprus. After the seminar, the students received an online survey in order to provide their feedback on the course. 4 (3 from LA SALLE & 1 from Cyprus University) out of 6 students answered the survey.

6.3.1 Students' expectations & learning outcomes

Students expected to **collaborate with peers** from other countries in order to increase their

knowledge on housing systems, and to practice design skills. For most students this was aligned with what they actually learned. Students particularly appreciated the interactive way of working. With more students participating at the learning experience, this way of working would have been even more interesting and stimulating. It was therefore a pity that only a few people knew about this elective seminar.

6.3.2 Online environment / Tasks

Exploiting the advantages of technology in teaching was one of the major benefits of this learning experience. In fact, the task-based structure forced students to focus and think harder.

Students liked the task-based structure of the LS very much. The tasks, their sequence and how they relate to each other were clear. It was an **innovative way of learning** which facilitated the exchange of opinions and forced students to reflect on others' works and express their own thoughts. Students were well introduced to the online platform and considered it quite easy to use.

6.3.3 Online collaboration

Students **appreciated** working online collaboratively. They particularly valued the exchange of ideas and opinions with students and teachers from other countries and that group discussions on the work of each student was favoured. The involvement of more universities could have further enriched discussions. Students particularly appreciated the collectively created OIKODOMOS Case Repository. However, they would put even more weight on collaboration. For example, by starting with the collaborative learning activities earlier in the semester, by analysing the work of multiple students and not only of one or by including group activities with students from other schools. Using social media in addition to the online platform would allow students to interact in a more direct and informal way.

Students considered the **OIKODOMOS Workspaces** a very useful tool. It allowed everyone to be engaged and contribute actively by commenting on the work of others. In this way, they were able to see and discover aspects that else would have been less visible.

They did not use any other collaboration tools beyond the platform. An **introductory video or skype lecture** with students from other universities might be an interesting way to get to know the other students of the course.

Commenting worked very well and it was much appreciated. A lot of effort was put in comments and many interesting and useful suggestions emerged. Comments made them reflect on others works, identify strong points and suggest ways of improvements or alternative points of views. However, interaction was limited to commenting on others' works.

6.3.4 Overall evaluation & Suggestions for improvement

Most students would be happy to repeat this kind of collaborative learning experience. The quality of the whole learning experience could be further improved by amending certain collaboration aspects.

6.4 Threshold Matters

This learning space was organized by KU Leuven (KUL) during the spring semester 2013/2014 and winter semester 2014/15. Students explored the relation between the domain of dwelling and the domain of public and focused on the intersection and overly of spaces of the public realm and the private sphere. Students from GTU, ETSA-UPV and KUL participated in this common learning activities. At the end of the activities, students were requested to give their feedback through an online survey. 8 students from KUL and 10 from ETSA-UPV answered

the survey for a total of 18 answers. In general, the feedback they provided was very positive.

6.4.1 Students' expectations & learning outcomes

Students expected a course where **design would be approached in an original and creative way** and to participate in an **international collaboration** to discuss ideas with people from different cultures and countries and to establish new relationships among students and teachers from different architecture schools.

During the course, they learned to work, think and design using sections as representation and analysis tool, to approach design from new perspectives and to discover a new design tool (Urban Tomography). Furthermore, they learned to communicate their ideas to others and to cooperate with students from different levels and institutions. For one students it was a good occasion to practice English language.

Students agreed on the fact the collaborative learning experience was well integrated in the general program of their school. They thought that many tasks were useful also for other courses they had.

6.4.2 Online environment / Tasks

Even though the online environment was rather difficult and complicated to use, the students found it useful as it facilitated cultural and educational exchange among different institutions. Other tools such as Facebook group, Skype and Twitter were used to support communication, as the OIKODOMOS environment does not provide these kind of interaction tools.

The students appreciated that the task-based structure allowed them to do many different things and saw it as a sort of learning by doing. They enjoyed discussing a subject more and more in detail with every new task. Some students were not very clear about the outputs they had to produce and one suggested adding keywords to the single tasks.

6.4.3 Online collaboration

Students particularly valued the exchange of knowledge with students from other institutions. They liked to see other people's works on the same subject and to work with students who brought in different views and inspired them.

They appreciated reading and writing **comments** even though they considered collaboration by commenting too limited. Usually, they did not receive any answer to their comments and thus no real exchange of ideas took place. Often, comments from other students were not very critical and thus teachers' feedback was more useful in this regard. Nevertheless, commenting on the work of others was a good experience for them. They realized that it is not easy to formulate a comment which is both encouraging and valuable.

They had one plenary **Skype conversation** but the groups on both sides were too big. Technical problems and poor English level of some students made interaction during the call quite difficult.

The different levels of students (2nd and 5th grade) made collaboration more challenging but also more stimulating. However, the duration of the course was not enough to really feel the effect of collaboration. To improve collaborative learning students suggested having more **small-scale communications** (e.g. through chats) rather than having plenary Skype sessions (where it was often difficult to understand the counterpart). In this way, small groups of students from one institution could directly collaborate with a group from another institution. The fact of not knowing personally other students has its charm, providing that other efficient communication ways are feasible. Using a **speed-dating technique** to have a short one-to-one

skype conversation could be an interesting solution. It would have been appreciated if also teachers of different institutions had collaborated more actively.

The students felt that the online collaboration on the OIKODOMOS Workspaces was a bit forced and unnatural. Commenting was not enough to create a real collaborations and interactions.

6.4.4 Overall evaluation & Suggestions for improvement

Most students would be happy to repeat such a collaborative learning experience. They are sure that with each experience, it can be further improved. They think that the future of learning goes in this direction as it is a way of getting broader and more various perspectives on the treated topic.

6.5 Urban Systems

This learning space was created for the OIKONET Seminar “Urban Systems” and carried out at the School of Architecture La Salle in Barcelona, during the winter semester 2015/16. The goal of the seminar was to develop an understanding of urban system models using the Superblock of “Les Corts district” as a case study. At the end of the seminar, students were asked to provide their feedback through an online survey. 6 out of 8 students answered the survey.

6.5.1 Students' expectations & learning outcomes

During the seminar, students learned the concept of urban system by which all elements of a city (buildings and spaces, people and activities) are related to each other. The model of a Superblock, which is part of the planning strategy of the municipality of Barcelona, was taken as case study to explore the notion of urban system. Students created models of urban systems for the Superblock of Les Corts, an area of the city, and represented them by means of diagrams. In the preparation of the seminar it was involved a research group from Chalmers University, partner of OIKONET and members of the subnetwork Housing Research.

6.5.2 Online environment

Students appreciated that from the beginning everything was **organized in learning activities and tasks**. This helped understanding how the various activates were connected and to see the whole picture of the seminar. However, as for most students it was the first experience with task-based learning, they needed to get used to it.

Furthermore, the online environment facilitated the sharing of ideas among students. However, although the environment offers an **accessible way to see the different works**, it does **not invite to relate much** and creates a slightly **formal atmosphere of collaboration**.

Students agreed that they received enough training to work efficiently with the online environment. Nevertheless, they needed some time to get used to it.

6.5.3 Online collaboration

The students liked the idea of collaboration but thought that it could still be **improved**. They appreciated receiving comments from external teachers. However, they suggested doing it **interactively**, for example through Skype, and not just by leaving a comment as they often had **difficulties in understanding the written feedback**. In general, the comments received were very interesting but sometimes the timing was not ideal: some comments arrived when the students were already working on the next stage of their research.

In addition to the exchange with external teachers, they would have appreciated some interactions with peer students, for example through a conference call. Only one student

actually **commented** on other students' works. Even though, s/he found it very useful, s/he was disappointed because there was no answer and thus **no real exchange of ideas took place**. For the others it was difficult commenting on other people work as they were not familiar with their peers' works. In order to create a feeling of real international collaboration, they suggested **working in international groups** on the same tasks online. Some of the participating students used Facebook in addition to the online platform.

6.5.4 Overall evaluation & Suggestions for improvement

For most students the learning experience (which – in this case – was limited to one course with the corresponding Learning Space at a single school, with a small collaboration by teachers from other schools), is worth to be repeated. Even though the topic was complex, it was very interesting and timely. Students particularly enjoyed the last session of the final works' exhibition where they received feedback from external guests. This occasion allowed for interesting discussions.

For some, it would have been useful to dedicate more time to the last task in order to create a valid project and to spend less time on the first tasks. Having the collaboration of students from Barcelona, who are more familiar with the place, would have benefit to the seminar. One student mentioned that it is important to define at the beginning what will be done during the course and what is expected from the students without adding additional work later.

6.6 Urban Housing Regeneration

This LS was created for the DIT's course "Urban Housing Regeneration" and carried out between the winter and the spring semester 2015/16 at the Dublin Institute of Technology (DIT) in Dublin. It focused on the renewal of three 1950's urban blocks in Dublin's north side. It involved collaboration between DSA and DIT 4th year architectural students and staff, Dublin City council, housing and architect Officials, professional architects and some residents of the block. During 15 weeks, the students undertook a simulation of architectural practice. At the end of all activities, students were invited to answer an online survey; 5 out of 20 provided their feedback.

In general, the feedback provided was positive and included interesting suggestions and reflections.

6.6.1 Students' expectations & learning outcomes

During the course, students **expected** to get a better understanding of urban housing regeneration, to discover new design methods, and to see how an architectural technologist is involved in the construction and design stages. The course fully met or even exceeded students' expectations. Students got a better understanding of building regulations, learned about environmental design and the importance of social housing and of considering the needs of the community during the design process. Furthermore, they acquired organizational skills, learned to work in team, to work under pressure and to present their works to others.

6.6.2 Online environment

The students appreciated the possibility of getting **comments and feedback** from external representatives through the online platform. This allowed them to get feedback from people from different locations with different nationalities and backgrounds. Generally, the OIKONET online environment was well integrated into the course and the students' projects and as such proved to be a great asset especially for students final design decisions.

According to students, the **tasks** defined on the LS were clear and made sense within the overall

structure of the project. Thanks to the tasks, the students were able to see the progression of their project and to know how much they were evolving throughout each stage.

Students would have appreciated little more training to work efficiently with the online environment.

6.6.3 Online collaboration

For those students who collaborated with people from other countries it was a very good experience, which allowed them to understand how other people see a building. Students appreciated receiving comments from other teachers. However, they would have **preferred receiving more frequent comments** and especially while working and not only after the completion of their project. This would have allowed them to integrate suggestions and improve their final design. Nevertheless, comments motivated them to further improve their works and gain confidence in what they were doing. Another very positive aspect of commenting was that students had to learn how to explain their works so that other could understand them. Students suggested that **each student should have access** to the online environment instead of just one per group. Adding a **personal profile** for each student on the platform (where from, study focus ...) would be helpful in getting to know each other.

6.6.4 Overall evaluation & Suggestions for improvement

For all students this learning experience is worth to be repeated. As the online environment grows, it will help students and lecturers use the already existing resources and learn from them.

6.7 Small is Power

The LS “Small is Power” has been created for an elective course that took place once in the winter semester and once in the spring semester 2015/2016. It has been organized by the Faculty of Architecture KU Leuven. In the 1st semester, 18 students participated and 12 in the second. Small is Power is a framework from which to explore the empowerment of the house. The aim of this conceptual framework was to challenge the notion of the house as being a passive element in the development of the public space.

Both editions of the elective have been evaluated through an online survey sent to the students at the end of the course. The results of the two editions are presented here together. The first edition had 2 responses whereas the second one had 7 responses. In general, the course received very positive feedback from the students.

The structure of the evaluation surveys for this LS was slightly different from the others. It has been elaborated in close collaboration with the teacher in charge (Tomas Ooms) in order to capture some peculiarities of this learning experience. This is the reason why this chapter is structured slightly differently.

6.7.1 Students' expectations & learning outcomes

The students had many **topic related expectations** such as understanding relations between public and private space, between architecture and city and housing and street. They expected to learn how small interventions can make big changes on housing, how to design space and to work with a different framework. For most students expectations were **fully met** or even exceeded. They particularly appreciated the great feedback from tutors and good ideas from other students. They achieved new skills and appreciated the good organization of the course, which was very inspiring for the students as they learned a lot through the process of completing tasks, discussing their works and the actual work itself. In addition, they learned new strategies

of mapping (tomography), conceptual thinking, being critical about their own and other's designs and the importance of human beings and society in the whole process.

Students also **learned concepts and terms** that they did not use before in their design activities but would use now, such as: Tomography, Threshold, Small is Power (importance of small scale design), designing in sections and space/sphere between private and public.

As such, for most students the course was **relevant for their own design-studio work**. They were able to re-use ideas and got inspired by the presented approach to design and the analytical thinking about space.

6.7.2 International collaboration

The international collaboration in this course consisted in having an **external expert** (Adam Evans, from UCLan) reviewing and commenting on the works of the students. Students were very positive about this kind of feedback and valued it highly. Adam Evans provided great examples, useful references and very relevant and motivating comments, allowing students to get an external view on their work and guiding them in improving their proposals.

When asked how real international collaboration could be further improved, students suggested to take advantage of the OIKONET community in various ways: 1) by having more online interactions with partner institutions through the learning space “Small is Power”; 2) by using the community to create / show specific examples from all around the world; 3) by organizing workshops where students could exchange views and compare approaches, that is having some common sessions or in-person meetings.

6.7.3 Task-based course structure

According to students, the course was **very well structured** from the beginning and followed an impeccable logic order. Tasks and goals were clear and well defined from the start. Even though the task-based structure of the OIKONET course **offered a good and clear way of learning**, some students needed to get used to this way of working. The well-organized task-based structure of the course made students to get used to another, to a new way of learning and thinking which still left them enough space for their own inputs/ideas.

During the second edition of the course the **modelling task “A moment between you and I”** started from the beginning and was kept active during the whole course (whereas in the first round it was one of the last tasks). The students of the second round appreciated the continuous making of models as it helped them to improve their ability of designing space, to try out more variations and think about their work deeper.

6.7.4 Overall evaluation & suggestions for improvement

The course was very much appreciated by the students. They would attend a course like this again and would definitely recommend it to other students. It offered a different approach to design studio with very valuable feedback and motivating structure and allowed students to produce something, even though conceptual, that they could include in their portfolio. It was a course that inspired and showed new prospective on things.

The only suggestion on how to improve the course was to add an international workshop for exchanging ideas with students of other universities.

6.8 Thinking Dwelling

Thinking Dwelling is a pedagogic program of online and face-to-face activities, designed to engage students and teachers from different courses, levels and schools, in a joint process of

reflection about contemporary dwelling. Students and teachers are invited to share online their contributions to the proposed activities: “Representing”, “Experiencing” and “Projecting”. These activities are to be carried out along with on-site lectures and discussions in the premises of the participating institutions. The program was designed by the School of Architecture La Salle, Ramon Llull University, coordinator of the OIKONET project, and it started in September 2015.

By the end of the academic year 2015/2016 six institutions participated in the program. To evaluate the program, an online survey has been sent to all involved teachers, asking them to reflect on a) the pedagogic value of the program, b) the activities carried out, c) the value for the students and d) the usability of the platform. All six participating teachers answered the survey.

6.8.1 Pedagogic Value of the program

Up to a certain point, the program has promoted a **joint reflection about** contemporary dwelling with students and teachers from other schools. It has enabled students to see alternative approaches, and to express their ideas in a short and artistic way. On the other hand, until now the program has been mainly used in a **one-directional way** (posting your own work). However, the program has a great potential to evolve, for example by having a joint event in different schools with live connections, etc.

For a majority of teachers, the program managed to create a **collective repository of insights and ideas** that can be reused during their courses. However, two teachers objected that most uploads were small and very personal and as such difficult to re-use, but very nice to browse through.

6.8.2 Evaluation of carried out activities

In general, teachers agreed that the purpose of the three activities (Representing, Experiencing, Projecting) was clearly described and that it was easy to explain students what to upload on the website. Teachers managed to easily link the activities of the programs to their own courses and the works submitted by their students were generally inspiring and contributed to enhance the program of their courses.

6.8.3 Value for the students

According to their teachers, most students benefitted from the insights and ideas previously uploaded by other students and allowed them to contribute themselves with meaningful ideas. Furthermore, the students learned to communicate their ideas within the constraints of an online learning environment even though some hesitated to share their ideas and products with the public.

6.8.4 Usability of the platform

For all teachers, registering to the platform and uploading materials was easy. However, some teachers (1/3) had difficulties in identifying the works of their students once uploaded.

7 CONCLUSIONS

The following conclusions can be drawn from the evaluation of the OIKONET learning activities:

- 1) For both students and teachers the collaborative **learning space** with the involvement of participants from different institutions and countries was a **positive experience**.
- 2) Students participating in the different learning activities had very **high expectations** regarding **networking, collaboration and sharing**. They expected to interact with peers and teachers from other institutions, countries and with different backgrounds. Through virtual interactions, they expected to establish new contacts and exchange views and ideas. In addition to this, students expected to improve their English and time-management skills and to learn how to present their works.
- 3) **Technological Tools:** Students and teachers considered the OIKODOMOS Workspaces a stimulating learning and teaching environment, but stressed the importance of including a **training session** on how to use the learning workspace at the beginning of each course, in order to ensure that technical difficulties do not bias the success of the learning experience itself. The more comfortable teachers became with the use of the platform, the better they managed to introduce it to their students. Students appreciated the **task-based structure** and found it a good way to share projects, view other students' works and provide critical opinion about them. The use of the platform motivated students to engage and contribute actively. The **use of additional communication tools** (e.g. chats, Facebook, Twitter) helped to further enhance the learning experience, as they facilitated direct exchange between participants.
- 4) It emerged that **communication and collaboration aspects are very important** to both students and teachers. **Direct, off-line collaboration** and communication during the workshops resulted to be **very successful** and were one of the strongest points of the events. However, **online collaboration** inside learning spaces **should be better planned and structured** in order to become more effective and successful. It emerged that online communication did not just happen but had to be included in the learning design. In fact, students liked **commenting on the works of others** as a way of online collaboration and would have liked to have even more opportunities to do so. Defining specific time slots for these activities and going beyond commenting (e.g. by doing video lectures or small-scale online conversations) might further enhance online collaboration.
Also **among project partners**, distance collaboration has been a big challenge but collaborations during the workshops have always been excellent.
- 5) **Importance of group work during workshops:** It emerged that even more time should be dedicated to **collaborative group works**. After the first workshop (Lisbon), students suggested starting with the group activities right from the beginning of the workshop and to spread input lessons, which should be in line with the group works, over the whole workshop duration (not all at the beginning); this happened in the two following workshops.
- 6) **Preparatory activities** play an important role in preparing students to the workshops. They have to be planned accurately and have to be in line with the workshop theme. They are particularly useful to give the students a basic knowledge on the workshop theme and on the local context. They have to be well focused and should include only limited number of very specific tasks. No international groups have been formed for the

preparatory activities, mostly for organizational and time-related reasons. However, creating cross-institutional groups also for the preparatory activities could be a further step. Students would have appreciated to get to know their groupmates already before the workshop and carry on the work of the preparatory activities in the same group during the workshop. This might create even more intense collaborations.

- 7) **Importance of site visits and social events:** Site visits allowed workshop participants to get a better understanding of the local context based on which they had to design strategies. Furthermore the **involvement of local stakeholders** was a very positive experience during the Belgrade workshop and could be further extended social events resulted to be fundamental, so that students had the possibility to get to know each other and break the ice right from the beginning of the workshop. They helped creating a good and positive working atmosphere.
- 8) **Space for experimentation:** During the Cottbus and the Belgrade workshops, new ways of presenting the final group works have been experimented. In both cases, the selected formats (informal poster-session & a wrap-up session and role-play) emerged from specific needs during the workshops and were the results of discussions in order to make presentations more engaging. Similarly, some teachers tried to implement slightly different formats of LS, for example by using different technological tools and by engaging students in a different way (e.g., in the second edition of the Learning Space “Small is Power”, where students were asked to work on the modelling task right from the beginning and throughout the whole course instead of adding it as final task; or in “Thinking Dwelling”, which aimed at creating a shared learning space on housing and dwelling across subject-matters and institutions).
- 9) The **definition of specific learning outcomes** during the preparation phase of the workshops and LSs, helped both students and teachers to focus on the most important goals of the learning activities and facilitated the final evaluation of students works.