

Teaching for Urbanism:
A Didactical Experience in a Newly Academicized Area

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Teaching for Urbanism: A Didactical Experience in a Newly Academicized Area

ABSTRACT: This paper describes a didactical experience in the Masters course of the Department of Urbanism of the Delft University of Technology (The Netherlands) and issues related to the academicization of its curriculum. Although urbanism is a firmly established discipline in many curricula, in The Netherlands it has entered higher education as a practical and vocational discipline from the engineering tradition. The experience of the implementation of a stronger academic approach in such an environment reveals differences in worldviews among practitioners and academics, which result in frictions about the role and the form of academic research in Masters' education.

This is becoming more evident as urbanism is confronted with the need to situate research actions and outcomes in relation to other more established disciplines, for example through research assessments. We have found problems related to a dysfunctional relationship between research claims and research actions, problems with assessment, trans-disciplinary dialogue and other issues common to areas of knowledge and practice recently entering academia. Here we discuss how new courses and requirements were introduced, that aimed to encourage an academic attitude and improve outputs in relation to academic standards, and how this was done by seeking a dialogue between research and design practice. The experience is examined both from the point of view of staff's expectations and students' reception.

Keywords: Design and research, academic values and parameters, education, urbanism, planning, design education

1. Introduction

'Urbanism' can describe various types of understandings and professional qualifications to be found in continental Europe and in Latin America with an emphasis on the design of the built environment. Professional and academic traditions expressed in the word 'Urbanism' as used in the Netherlands, for instance, are different from the spatial planning or urban design traditions prevalent in the Anglo-Saxon world. There is a particular understanding of the discipline in the Netherlands, which is not always communicable to outsiders, partly because practices are so ingrained that they become 'invisible' (those performing them are not aware they are different or notable), and partly because those practices are the result of very specific societal practices which do not translate easily to other contexts.

A problem in terminology ought to be clarified before we can proceed with the discussion. The Masters course in spatial planning and design at TU Delft is delivered

in English by the Department of Urbanism, in order to cope with the influx of international students. As a consequence, much of the documentation is written in English.

In the English language, 'urbanism' is not synonymous with spatial planning and design. Urbanism is used in English as referring to processes of urbanisation, or to city life, rather than the study of these processes and of the body of knowledge constituting disciplines related to spatial planning and urban design. In the Dutch tradition, spatial planning constitutes a different discipline altogether ('Planologie'), exclusively dedicated to understanding socio-economic trends in space and spatial planning policies.

'Urbanism', in the case of TU Delft, is a rough translation of the Dutch expression 'Stedenbouw' (literally, 'the construction of cities'). The Dutch tradition makes little distinction between spatial planning and the design of the built environment, as planning and designing must result in visual representations of interventions proposed. This has resulted in highly vocational educational paradigms specific to the Netherlands.

Four main issues arise in an education in 'urbanism' in this case. First, in the Netherlands there is a particular understanding of the discipline and the activities and actions connected to it (idiosyncrasy). Second, the scope of the discipline is very wide and different communities of practice have different understandings of the questions to be addressed (scope).

The third issue concerns the dynamic nature of urban studies and practices today. The existence of new challenges, new tools to understand them and new practices to tackle them means that the scope of the discipline is dynamic and in permanent evolution. Therefore, the traditional understanding of urbanism and the practices involved are being challenged and new research and practice paradigms are arising (evolving paradigms).

The fourth issue concerns an education in an increasingly internationalized environment, where understandings about the nature of the discipline are bound to differ (internationalization).

These different issues are interconnected and they have a huge impact on the nature of the questions being asked and the answers being delivered (the ontological question),

the methods employed to answer those questions (the methodological question) and the discourses being built around questions, answers and methods (the epistemological question) in an academic environment.

At the department of Urbanism of the Delft University of Technology (TU Delft), these issues have an enormous influence on how the education is conceived and delivered. Some problems have arisen. During a research conducted within the framework of a larger project¹, we have identified a dysfunctional relationship between the research actions being taken by different groups (the methodological question) and the beliefs being claimed (the ontological question) and the discourses being generated (the epistemological question). The nature of the questions being asked by different research communities within the Department of Urbanism seems to vary considerably, and so do their methods and answers. Of course, this is not a problem in itself and in fact this is often used as evidence of the richness of the discipline and the department. Urbanism is most certainly trans-disciplinary and multifaceted. However, because those differences are not made explicit, there is room for dissatisfaction over research and study actions among different groups.

To summarise, in the Department of Urbanism of the TU Delft, both the academic staff and the students acknowledge the importance of, on one hand, promoting close relations with the practice (a vocational and practical education) and, on the other hand, upholding high academic standards in the educational programme. However, because of the four issues listed above, a debate arises about the nature of the education offered.

This paper presents a didactical experience in the Masters program in the Department of Urbanism at TU Delft where we have tried to address the issues discussed above. It elucidates how we have dealt with different value systems among teaching staff and students, and describes outcomes of the methodological programme in association with the research and design studios. It also describes the academic skills students develop and the products they deliver.

¹ A large research project funded by the UK Arts and Humanities Research Council is conducted at the Research into Practice cluster of the University of Hertfordshire. This is a centre of excellence investigating the fundamental nature of research in the creative and performing arts. It is an international collaboration between the Universities of Lund (Sweden), Tartu (Estonia), Mackenzie (Brazil) and the Technical University Delft (Netherlands), coordinated by the University of Hertfordshire (UK). Further information can be obtained at: <http://r2p.herts.ac.uk/index.html>

We have sketchily described the nature of the discipline, as it is understood in the Netherlands and the issues arising in our particular case. In section two, issues arising in an education in urbanism are discussed in more detail. The problem of different worldviews in different communities of practice is explained and the necessity of the academicization of a predominantly practical area is introduced. In section three, a response to the necessity of academicization in the form of ‘research-by-design’ is introduced and its limitations and boundaries are discussed. In section four, we discuss the solutions we found to promote awareness and appreciation of the different research paradigms in operation in the Department of Urbanism of TU Delft. In section five, we briefly discuss responses to the program that was implemented and the challenges to be tackled. In section six, we discuss the next steps in trying to achieve a functional relationship between a practical and professional education and the requirements of an academic environment.

2. Issues arising in an education in Urbanism

When building up an MSc education program, a relevant question to be answered is: ‘What kind of qualifications must be offered in order to achieve high professional and academic standards?’ On close inspection, we learn that the Department of Urbanism at TU Delft offers a variety of qualifications in different areas that are relevant to the activity of spatial design and planning: urban design, landscape architecture, spatial planning and strategy, metropolitan and regional design, environmental design, technical ecology, cultural history, design and politics, to cite but a few (Department of Urbanism, 2010).

Secondly, the question arises about the nature of the methods we are using to achieve those objectives. Should an education in Urbanism dwell on traditional ways of study or should it incorporate elements of practice? What is the instrumental role of design in a design education? And what about the instrumental role of design in research? If it does have one, what are the methods used and how can they be taught and explained? How should one evaluate results? There is nothing new about offering an education with strong elements of practice: practice is an essential element in fields as varied as medicine, the performing arts and even teaching. In all these fields, strong communities of practice have built specific teaching tools and assessment criteria over the years. These communities have established common grounds to educate

practitioners and the level of dissatisfaction about a practical education in those areas seems to be low (Biggs et al., 2009). However, the same cannot be said about an education in design skills. Complaints about the lack of clear assessment criteria are common. And discussions about what must be assessed are frequent. Is the design itself the object of assessment? If so, what criteria should be used? Or is the process leading to the design the real object of concern? Or yet, is the discourse around the design what really matters? How important is academic research in this context? Or do we need new kinds of research practices that are design based? In this case, how do we communicate and assess them? How do these new kinds of research fit into an academic environment and communicate with more established ways of doing research?

There seems to be little consensus about the answers to those questions. Each community seems to establish their own criteria for appreciation and assessment. But different communities of practice often have very different worldviews. A worldview is basically a set of beliefs that one holds about the nature of the world and one's place in it (Biggs et al., 2009). In philosophy of science, a worldview determines how one sees the world and the questions one asks about this world. In short, in academia different worldviews determine different research questions and the activities one would undertake as a researcher to answer them. These different activities form different paradigms of inquiry. These different paradigms of inquiry must be articulated if urbanism wants to claim its place as a specific discipline and not a collection of disparate disciplines next to each other.

The 'practical' (or applied) approaches would normally have, in a technical university such as TU Delft, affiliations with the paradigms in operation in the physical sciences (especially engineering, in the Dutch tradition). However, because the understanding of the nature of the problem has changed in the last few decades (namely, the spatial organisation of human activity over space), a purely technical approach based on the physical sciences is no longer possible or desirable.

In order to address this problem, other research paradigms have been incorporated in order to comply with the complexity of the problem, constituting a network of knowledge that is permanently changing.

The 'worldview' of urbanism is multiple and in permanent transformation. When the emphasis is put on design practice, elements of creativity, spontaneity and craftsmanship are valued. These elements are valued and sought after by students and teachers alike. When the emphasis is on research, urbanism generally dialogues with disciplines that have functional research paradigms like human geography, economy, law, psychology and sociology.

We take a clear position in respect to the different paradigms of inquiry operating in urbanism. We believe that the goal of articulating different paradigms of inquiry would be more easily met if meaningful relationships between the various disciplines that are part of an education in urbanism were analysed within this framework, making the different research paradigms explicit.

We take the position that an emphasis on research should not exclude design practice because of the mutually complementary nature of image and text in urbanism. In other words, designs can communicate certain things that only the most skilled of writers could accomplish, and even then the time and effort employed might not make textual explanation the preferred tool to describe spatial relationships. On the other hand, text can convey messages that the design alone cannot convey. It is common practice in an education in urbanism to say, "designs do not talk by themselves" and therefore they have to be explained orally or in written form. On the other hand, texts are not able to communicate spatial relationships satisfactorily, and therefore they need to be illustrated, or 'designed'.

The issues discussed above bring us to a number of relevant considerations. First, what is the actual contribution of design for an education in urbanism? If design wants to claim a special role in the education, it needs to clarify how it contributes to the academic outputs in the course and how it is part of a sound methodological trajectory. Basic requirements would have to be agreed upon. This contribution could be clarified by asking the question: What would one NOT be able to communicate if you did not design?

Secondly, what is the contribution of written research for an education in urbanism? What -again- would one not be able to communicate if one did not write?

In the type of education we offer, we aim to answer the following questions:

- How to reconcile a practical/professional education in urban design and planning with the requirements of academia?
- How to make students aware of the existing body of knowledge in the discipline in respect to their own research project?
- How can different research methods stemming from different worldviews in Urbanism be made explicit to students?
- How can design become an integral part of a research methodology?

One of the conflicts between practice-based activities and academic research in the university arises from the necessity to academicize. The necessity of academicization arises, in our context, from the need to answer to assessment parameters from Dutch and European funding agencies.

There have been efforts to adapt these assessment parameters to practice-based research activities with the incorporation of evaluation parameters that reflect the activity better, notably with the introduction of the programme ‘Evaluating Research in Context’ (ERiC) by the Netherlands Organisation for Scientific Research (NWO).

In recent years, a particular way of doing research has emerged in this context as a response to the necessity to academicize knowledge generated through an eminently practical tradition related to the design activity. This is called ‘research-by-design’.

3. The role and the place of research-by-design

Research-by-design is, or should be, a specific form of practice-based-research where design has an instrumental role. In research-by-design, design is used to discover things that would be impossible to discover or resolve using traditional (text-based) tools of research. Design is simultaneously a tool for and the product of research.

Research-by-design is not an original approach on research in areas of design practice. It exists under various denominations in several research communities (Marchand and Walker, 2009).

One of the most prevalent views refers to the classification of types of design-related study put forward by De Jong and Van der Voordt (2002) (Fig. 1):

Figure 1 Type of design related study defined by De Jong and Van der Voordt (2002)

		OBJECT	
		<i>Determined</i>	<i>Variable</i>
CONTEXT	<i>Determined</i>	Design research	Design study
	<i>Variable</i>	Typological research	Study by design

In a technical university such as TU Delft, intuition and expression still play a significant role in design related activities, but claims concerning scientificity and an engineer-like approach are frequent. It is understandable that designers and planners wish to legitimize their position at the university by claiming scientificity. At TU Delft, this is done by claiming that the design activity ought to be based upon study (design study) and be documented, examined and evaluated (design research). ‘Study by design’, in a broad sense, varies either the object (design study) or the context (typological research) or even both (study by design). Following de Jong and van der Voordt (2002) closely, the terms from this matrix may be explained as follows:

Design research: Design research describes and analyses existing designs within a known context, often in the form of comparative studies. Not only is their function analysed, but also their form, structure and the way they were made, the design tools employed at each stage and the way in which they were applied. In other words, this type of research investigates how designs are made and how can they be compared to other designs.

Typological research: Whenever a specific architectural form, structure, technique, function or concept is recognised in different contexts, the notion of a ‘type’ comes to the fore. A type is a design tool, not yet a model. The study of such types, their use in the making of designs is called typological research.

Design study: Making a design in a relatively well-known context of potential users, investors, available techniques, building materials, political, ecological and spatial

restrictions, entails many stages of a type of study termed by de Jong and van der Voordt 'design study'.

Study by design: The main objective for this type of study is to generate knowledge and understandings by studying the effects of actively and systematically varying of both design solutions and their context (Jong and Voordt, 2002).

This particular take on design-related studies has been an important milestone in the discussion on research-by-design at TU Delft. However, several problems are present. The definition of the research actions to be taken when conducting a research-by-design are not clear and the concept remains elusive.

The four issues we mentioned before (idiosyncrasy, scope, evolving paradigms and internationalization) have destabilized the concept of research-by-design, because they have forced the community to make ingrained practices and beliefs explicit, which they find difficult.

The main problem seems to concern the role of research-by-design in an academic environment. In the discourses promoting it, research-by-design seems to dislocate and to some effects 'replace' traditional ways of doing research, which in fact promotes an isolationist attitude towards the methods used to produce knowledge. We describe what an isolationist position in academia is in detail, but here it suffices to say that an isolationist position in academia promotes the view that a community or individuals doing research can establish their own parameters of assessment, without reference to other communities in academia.

In several descriptions, the lack of a question one would set out to answer in a research endeavour is one of the main shortcomings of research-by-design towards accepted academic practice. Promoters of a research-by-design approach seem unaware that a question is an essential element in academic research.

When one sets off to design something, what questions does one want to answer with the design? And what does one want to know or uncover?

In summary, owing to it being a very new way of doing research in academia, the research actions that research-by-design entails have not been completely codified. This causes confusion about the questions research-by-design can actually answer (the ontological dimension) and results in epistemological and methodological

uncertainty. Extensive debate has taken place in TU Delft about the definition, the nature and the operationalization of research-by-design.

The ERiC programme (NWO) aims to assess the societal impact of scientific research. It has developed a special programme to assess research carried out at universities of applied science and carried out a pilot study at the Faculty of Architecture in 2008.²

According to NWO:

Delft University of Technology (TU Delft) needs methods to more accurately assess research from design-oriented disciplines. A pilot study was therefore started at the Faculty of Architecture. Research at this faculty is not only published in scientific journals. Architects make designs, set up exhibitions and compile catalogues. Urban planners publish in the national magazines about Vinex locations and advise regional and national governments. All too often these activities are scarcely appreciated by assessors despite being common practice within the discipline. As design-oriented research scarcely has specific indicators and criteria for assessing quality, ERiC will propose criteria and indicators for assessing the research, which it will then use to assess the research at the Faculty of Architecture (NWO, 2008).

One of the main conclusions of this study was that the concept of ‘research-by-design’ remained rather ‘elusive’ and needed to be better defined in academic terms (Spaapen, 2009)

In the current education, students’ designs are evaluated mostly through oral presentations. In these presentations, designs are shown and must be explained through a coherent and convincing narrative. Generally, the complexity of the tasks taken up by students (and suggested by staff) exceeds the boundaries that would be reasonably expected from the framework possible in research-by-design. This

² For NWO, ‘universities of applied science [such as TU Delft] have a research function in the form of lectorates. Lectorates are research groups, which bring together education, professional practice and applied research in socially relevant areas. Lectorates maintain partnerships with companies and organisations at a local, regional, national and international level. [□]From 2009 onwards, this research will be systematically assessed’.

happens because urban design and planning are exceedingly complex fields of study and action. It seems difficult to confine urban design to the study of form alone, since solving socio-economic problems and providing sustainable and functional urban environments through spatial intervention are the ultimate goals of the discipline. In other words, we face difficulties defining the ontology of the discipline because, although urban form and design are evidently the main products of the activity, they are never disconnected from the societal problems and issues they are set to tackle in the first place.

The question here is whether designs ought to be judged on aesthetics alone, or whether they ought to be assessed on their ability to give an answer to those societal problems they set off to answer. If the latter option is true, then research-by-design fails to provide an effective tool of research, because it does not provide the designer-researcher with ways to investigate causal relationships between space and real societal problems.

Research-by-design does not provide the designer-researcher with a valid research question on the outset. This happens because such research questions must be formulated using (mostly, albeit not only) traditional tools of research, such as literature review, interviews and data analysis. This is necessary to understand what the real issues and problems are and to connect them to spatial features upon which one must intervene. In other words, in order to investigate causal relationships, other kinds of inputs and research actions must permeate our research activity.

Naturally, different research groups take up different research objects, which stem from different ontological constructions. In other words, different research groups aim to answer different questions stemming from the built environment. As discussed above, these different approaches result in different methodologies and different epistemologies, constituting different worldviews. These different worldviews co-exist under the same umbrella denomination (urbanism).

The problem lies in how these different worldviews are articulated in a discipline (this ‘umbrella denomination’). Different research groups have radically different stands towards the issues exposed above. This is a problem because many of these groups adopt what we choose to call an isolationist position, and refuse to converse with more established academic traditions and sometimes with each other.

The isolationist position claims that design disciplines have a special position in the higher education environment, with special criteria and regulations. While we do not dispute the distinctiveness of the design activity, we do believe that it is advantageous to have conditions for assessment criteria and for communication across disciplines and communities. We call this is the situated position. The situated position is useful and desirable because of the very nature of the design and planning activities, but also because of the place urbanism wishes to find in the academic environment. In another paper (Biggs and Buchler, 2008) we have argued that claiming that we can define for ourselves what research means, without reference to anything else, is unhelpful and results in poor scholarship. 'If one never had to interact with any other discipline, this isolationist approach might be acceptable. However, this is not the case in academia. Academics exist in a comparative competitive environment and must therefore find and place themselves in relation to their peers. They are members of the academic community as a whole and not just a community of kindred colleagues from similar creative disciplines'. Apparently, all groups feel the need to academicize, because of institutional pressure (mainly in form of attribution of research grants and funds depending on recognisable academic output).

But this is not all. The need for academicization also stems from the perception that a practical education on design skills alone, based mainly on aesthetical considerations, is insufficient to deal with the broader task at hand: understanding the context, the role and wishes of stakeholders and the socio-political, economic and technological developments that ultimately produce 'real world' space. This would be necessary in face of the increasingly complexity of the built environment and the increasing committed role of the 'urbanist' in this context.

Different from architecture, where the assignment is given by a client, with clear spatial, functional and financial parameters, in urbanism the urban planner and designer must converse with a variety of forces, goals and visions in order to define and validate the assignment. In fact, a large part of the activity of urban designer and planner is related to the definition of the problem to be tackled by a design or a strategy and the formulation of spatial scenarios, visions and strategies. This includes discussion and negotiation with a variety of stakeholders with conflicting interests and views.

This presents us with the challenge of overcoming the predominantly isolationist position adopted by urban designers in academia.

Although social scientists, engineers and other professionals are deeply involved in urban studies and the definition of the problems to be tackled by urban designers and planners, the former do not have the tools of the designer or ‘urbanist’ at their disposal. Indeed, there might be some substance to the claim that design has a special role in research, because the spatial dimension of problems must be tackled and design might indeed have an instrumental role in doing so.

But rather than isolating itself in its own epistemology, urbanism must reach out to the vast community of professionals in urban studies and therefore must find ways to communicate its questions, methods and answers to a larger academic and non-academic audience. Design is one of the main tools at our disposal, but it needs to be communicated across communities of knowledge.

We conclude that the lack of explicit descriptions of methods in design research denotes a dysfunctional relationship between the claims and actions of our particular community (i.e. the relationship between design and academic research), which is reflected in the courses and the evaluation of students’ final works. This dysfunctional relationship occurs because various members of our specific community claim that urbanism, as a discipline related to the physical sciences, and by its own nature solution oriented, must deal with a research paradigm that is related to objective truth, where the knowable object (the external world) is independent of the knowing subject. Despite the fact that this position has been extensively criticised in philosophy as a kind of naïve realism, the positivist faith in technical solutions is still prevalent in discourses at the department of urbanism at TU Delft.

The research actions derived from the belief in objective truth must be anchored on accurate observation and measurement of the world and on empirical and quantitative research.

However, in design and planning practice, other values operate. Creativity, inventiveness, and originality come into play. There are political and ethical considerations. In short, there is no absolute truth in urban studies. Rather, agreement is reached on the base of communicative reasoning, where design and visual representation have a special place.

Design practice is, in many ways, a highly subjective activity. In this respect, design research can be considered as a kind of narrative. In other words, it is (at least partly)

subjectively constructed. Its validation is built upon peer appreciation and communication, rather than objective or technical parameters.

There are, it is true, several objective parameters for urban design and technical tools with which to assess urban design before and after execution. Most of them are new technical tools for spatial analysis (e.g. space syntax, space mate, GPS tracking technologies, etc.), and some of them are not well known or agreed upon by different communities.

But this is not the point. The point is rather that urban design itself, and the scenarios and visions that support it, is a constructed narrative, much like history or psychological interpretation. Although it does incorporate scientific elements and activities, it is not in itself a purely scientific activity, since its justification cannot be anchored on objective truth, but rather on logical discourse. Here the role of communication and communicative reason must be highlighted.

In pair with the ideas discussed above, we observe that the relationship between text and image is evident and must be reinforced, because even the most beautiful and compelling design must be explained within a logical and coherent narrative. Rather than purely empirical evidence, the urbanist uses compelling images and designs, reasoning and communication as tools for convincing others. This aspect of the discipline highlights the communicative role of design and planning. A logic narrative is highly valued when urban designs and plans are being assessed.

There seems to be at least two different ways in which this narrative can be shaped: either through research and accurate observation or through rhetoric. In the latter case, designs are explained and justified through persuasive language and compelling visual representation, with or without accurate observation and understanding of reality and logical argumentation that supports the design. Naturally, elements of rhetoric are found even in the most disinterested research. This is why explaining one's method to arrive at conclusions has become an essential part of the education, as we shall describe further.

4. The programme: tackling the relationship between research and design

The 2-year (120 ECTS) Urbanism MSc program at Delft University of Technology addresses spatial issues from the point of view of urban and regional design,

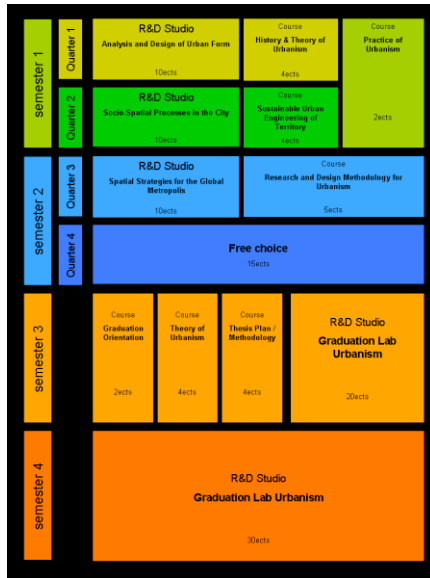
landscape architecture and spatial planning and strategy. One ECTS (European credit transfer system) is the equivalent to 28 hours of study. The didactic basis of the program (80 ECTS) consists of a Research and Design project education (Fig. 2): Research & Development (R&D) studios and graduation laboratories. A second part is the 9 ECTS Methodology programme: 5 ECTS in MSc2 and 4 ECTS in MSc3. A third part is the 8 ECTS Theory and History programme: 4 ECTS in MSc1 and 4 ECTS in MSc3. The programme is completed with courses focusing on technology and practice in the first year of the Masters, and a graduation project start-up course in MSc3.

In the first year, students have the following program:

- 3 different themes / urban questions developed by three different groups: form and composition of the city (Q1), urban transformation and regeneration (Q2), regional and metropolitan planning and design (Q3);
- 3 different teams of disciplines (with different worldviews) coordinate and teach: urban composition and landscape architecture (Q1), urban design and spatial planning (Q2), regional design and strategic planning (Q3);
- 3 different scales: the city (Q1), the district (Q2), the region (Q3);
- 3 different project approaches: intuitive design (Q1), research driven design (Q2), study by design (Q3).

In the second year, design and research laboratories are organised by different research groups.

Figure 2: Overview Delft MSc urbanism program. Source: R.Rooij.



In order to reconcile a practical education in urbanism with the requirements of an academic environment and answer at least some of the concerns explained above, a program was developed in order to give room to both a practical approach (project oriented studios) and to raise the question of the academic value of students' production within the course (Theory and Methodology courses).

We have developed a threefold approach to questions of connectivity between practical exercises and an academically oriented reflection on the assignments and the methods to fulfil them.

First, there are 'practical' studios where students are asked to develop design proposals and to discuss theoretical approaches that support these assignments. Both the societal and the academic relevance need to be made explicit and students are asked to situate their designs within the framework of an academic debate.

Secondly, four courses provide students with the skills and tools to operate in this academic environment, and aim to develop their critical thinking as well as their skills to communicate results in academic terms. The subjects taught in these courses refer to academic writing skills, research methods (both traditional and non-traditional), and the development of the discipline of urbanism, with an emphasis on the history of urbanism in the Netherlands. While developing their academic skills and values, students are asked to explicitly present the significance and the consequences of this structured academic debate to their design practice.

Thirdly, one specific course (Methodology for Urbanism) tackles the relationship between research and design. The specific aim of this course is to promote a dialogue between different qualifications offered by the department of Urbanism of the TU Delft, by proposing a dialogue between different worldviews, with their different values, requirements and expectations. By acknowledging that there are different value systems in different fields of urbanism, we can start to address the specific requirements of each community. The objectives of this course towards the aims are:

1. To clarify what are accepted academic research practices in each community
2. To identify what are alternative research practices in fields of design and planning practice
3. To define common and/or shared goals and evaluation criteria for students who are developing studies in urbanism
4. To broaden the spectrum of methods and approaches used to analyze and intervene in inhabited space.

In order to make students aware of the existing body of knowledge in the discipline, in the first year of the Masters program students are given an overview on the development of the field of urbanism (History and Theory of Urbanism). They are also presented with a course on existing technical parameters to design and to assess designs (Sustainable Urban Engineering of Territory). Finally, they are introduced to the state of the art of the professional activities and projects in The Netherlands (Practice of Urbanism). In the second year, we challenge students to develop their own theoretical and methodological framework to support their graduation projects (Theory of Urbanism and the Thesis Plan, where they lay out a design and research project).

Research groups within the Department of Urbanism operate with implicit assumptions about space and how to understand it. The differences between research methods stemming from different worldviews in urbanism are made explicit in the Q3 Methodology course through a structured review of the methods that are presented in different study tracks offered to students in the different design studio quarters. The course enables students to develop a critical reflection on different research and design paradigms and assessment criteria.

5. The response so far

The program we have just described was formulated in 2008 and introduced in September 2009. The former program had come under internal criticism (Bobbink et al., 2008). Among other aspects, students and staff missed an explicit dialogue about the different requirements, expectations, values, and limitations of each sub-area of research and practice.

We have noticed that students with no previous academic training find it difficult to fulfil expectations related to formal academic requirements. Our students have a great variety of backgrounds. Approximately 50% of students in the department are foreign students (predominantly from Eastern Asia, Eastern Europe and Latin America), with various degrees of proficiency in English and different degrees of familiarity with academic standards. Most students have a bachelor degree in architecture or some design-related discipline. Dutch students coming from the Bachelor in Architecture of the TU Delft (approximately 25% of the total) are much more homogeneous. But although the Delft Architecture BSc program offers an introductory course on Philosophy of Science, there is not an explicit dialogue between academic activity and the practical assignments in the Bachelor course. The remaining 25% of students originate from the Dutch vocational schools (Hogere Beroepsopleiding) and have had a predominantly professional education. This homogenous group needs to accept a new identity, that of the researcher, in contrast with the creative and bold designer identity they acquired earlier in their studies. According to on-going surveys we conduct in every semester, most find their new role as researchers attractive and useful.

The expectations from our students concerning an education in urbanism are mostly connected to practical professional skills. According to a survey conducted among 50 MSc1 students (Sept 2009), they expect to learn professional skills related to drawing and the use of technical tools to map, model and design spatial interventions. Approximately half of the students also mention critical thinking as one of the main skills they wish to develop during the course.

According to the same survey, the role models for urban planners and designers are all from professional practice and the Dutch educational system promotes a higher appreciation of professionals than academics. This makes it more difficult to promote the importance of academic research and academic values.

At first sight, the worldview of architects and urban designers privileges visual representation over words. One would think that the value of sound argumentation and reasoning is secondary in relation to the rhetoric of design, since design is able to convey information and ideas in an expressive way. Moreover, design can convey spatial qualities that words cannot. Therefore, one of the greatest challenges is to achieve good academic writing skills, which include relatively simple operations, such as referencing, applying citation conventions and avoiding plagiarism. It also involves complex skills, like building logical arguments and developing skills of critical assessment. However, this lack of appreciation for textual and oral argumentation is not verified in practice, as we indicated before. Designs must be accompanied by sound argumentation and logical narrative. This is specially apparent in the assessment moments (5 in total during the graduation year) and most specially in the last assessment moment, where a grade is given for presentation skills.

But this is not the only moments where we verify a high appreciation for academic skills. The formulation of sound research questions occupies a large amount of time and energy by students and staff. This is a crucial aspect of the task at hand, because formulating relevant and effective research questions will ground all the subsequent steps in the graduation project. From the research question, the methods to answer that research question are derived and explained in relation to what we call ‘research actions’ (very specific actions one takes when carrying out a research project). In this way, the role of design within the research process (and not only as a final product or a result of the research project) can be made explicit. This is by no means an easy task and students and staff struggle to connect research and design in a meaningful way.

In general terms, we notice an increase in appreciation of having a systematic approach to research and design. In other words, students seem to be aware of the advantages of having a set of clear methods, which will make their work and research and study process more structured, and thus criticisable and more easily assessed.

Cultural differences are also very evident when it comes to the appreciation of academic requirements and rules (Galtung, 1981). We are still learning how to deal with such diversity in an effective way.

6. Conclusions: how to carry on?

The steps we have taken contribute to raise awareness among staff and students about the nature of our education. We have aimed to clarify and make explicit what the different worldviews are in each research group and how these different worldviews contribute to the education. The aim is to make students more aware of their trajectory in the university as part of an enormously varied landscape of ideas and values.

There is a great variety of worldviews and different ways to address urban questions. In fact, our main task so far has been to raise awareness about very different questions being asked by different research groups, all of them relevant. The challenge seems to be how to build a coherent epistemology stemming from so varied ontologies. We cannot introduce an unlimited number of approaches: we must select the more relevant approaches to build up a relevant whole for students of urbanism

We have yet to find ways to develop students' critical package of skills, values, tools and knowledge in a very short time, and deal with very different cultural and educational backgrounds.

More evaluation results are needed – from students, teaching staff, and coordinating staff – to find out if the critical skills, tools, knowledge and values have been indeed carefully addressed.

We explicitly encourage debate and critical thinking among students. We provide students with the opportunity and confidence to participate and be critical. Part of our system of values is that the debate of ideas and knowledge is highly valued. Constructive and respectful debate is welcome: it is a condition for a rich academic environment and it is, as discussed above, an essential element in the activity of designer and planner. Students are encouraged to present and discuss their work intensively, but we need to extend this attitude to all components of the educational experience.

In short, our main task concerns finding a way to make students develop values, tools, knowledge and skills into a meaningful whole, where research and practice are valued and where each contributes to a solid education in urbanism. In order to do so, we are developing several instruments to map and make different worldviews explicit, which we present elsewhere. We believe that the steps and actions involved in design related study must be clearly described and exemplified by our staff. Feedback from students and staff is sought in explicit and implicit ways, through practical exercises and questionnaires.

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