

(In)forming the Information Design Student

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ABSTRACT In this paper we will discuss the pedagogical methods in curricular as well as extracurricular environments that encourage a student's familiarity with the theory and practice of information design. Information design is a field of study as well as a practice. For it to be applicable during the educational process, facilitation of a knowledge-empowering approach is key. This is particularly relevant in today's information age, where the potential for the learners to find themselves in an irrelevant study environment may elicit apprehension, fears, and misconceptions surrounding the comprehension of a particular subject. This surface approach is further stimulated by the range of references on the subject which may primarily focus on the aesthetic quality of information design output, as opposed to effective handling of the design process and complexity of the information.

We will be referring to the output and opportunities created through the recently initiated platform and publication entitled InformForm. InformForm examines how we generate, understand, organise, and give shape to data and information. The first issue of InformForm specifically looks at the process, properties, and scope of producing charts, schematics, and diagrammatic displays. InformForm documents and explores students' learning process through informed and empowering workshops, briefs, and other means of knowledge transfer. We will examine processes of information gathering, research methods, creative thinking, visual experimentation, and conceptual development.

INTRODUCTION

We generate, consume, and use information. With the rapid development of technology in the past decades the production of information, or more precisely the mass-production of raw data, has grown precipitously. Purchasing a train ticket, posting on social media, sending an email, or sharing a digital photograph to name just a few. We are

continuously surrounded by data and information.

Information design is a problem solving activity; it serves to define, explain or order content, simplify complexity, relate the seemingly unrelated, and create insight. It is a powerful tool with which to communicate knowledge. Therefore the teaching of information design can be understood as facilitating the development of this activity: in theory and practice.

There should be a reason and purpose to give form and graphically represent information. Information designers have a social responsibility: for what they communicate can influence the user's interpretation. The time when knowledge derived from limited and controlled sources is long gone. Views on neutrality and objectivity are under scrutiny more than ever before. The designer's ontological and epistemological positions influence the way he or she perceives, and more importantly, how the information is presented. The landscape in which the information designer resides is in constant flux.

Information design is largely taught within graphic design, graphic communication, or communication design courses; indeed, it plays an integral part in all areas of graphic design. Students naturally bring prior knowledge and experience to a course and their perception of the field of study can be blurry and undefined. We have found this is partly due to the term *information design* being intermittently and casually replaced with labels such as infographics, data visualization, info-vis, and other variations. A quick look at a reading list on most information design related projects would confirm this. The terms data and information are also often used synonymously, affecting the student's preposition toward analysis. Equally, the confusion around the use of the terms: symbol, icon, and pictogram—with different sources saying different things adds to the student's disorientation on the subject.

Debate on the "right" terms to describe information design, or specific strands of information design practice, will carry on. Meanwhile, as educators and practitioners we endeavour to empower the student with technical specifications, tools, and most importantly, the chance to experience and explore. This is one of the objectives of the platform InformForm.

PROCESS AND METHODOLOGY IN THEORY

The word *process* can refer to several loosely systematic stages or actions, while the term *method* can be explained as the underlying principles of this process. As educators we encourage students to refer to these concepts in order to constructively explore a design problem, brief, or project in an informed manner. The process allows for a design

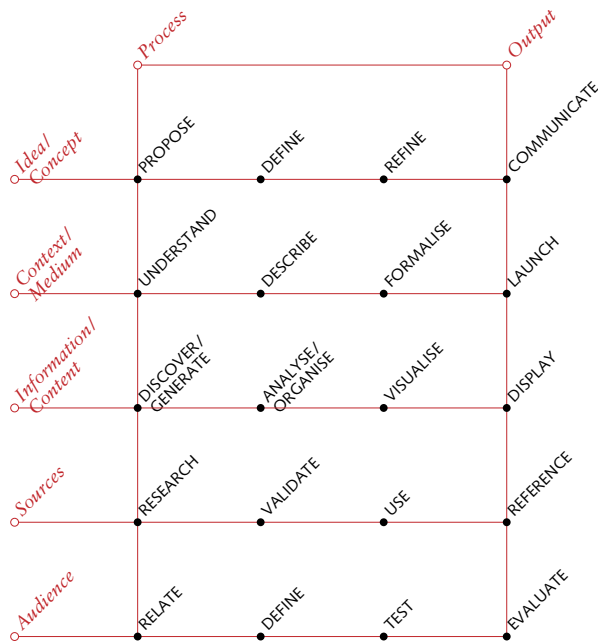


FIGURE 1: *The stage of process and development in information design, originally presented in the first issue of InformForm (2012).*

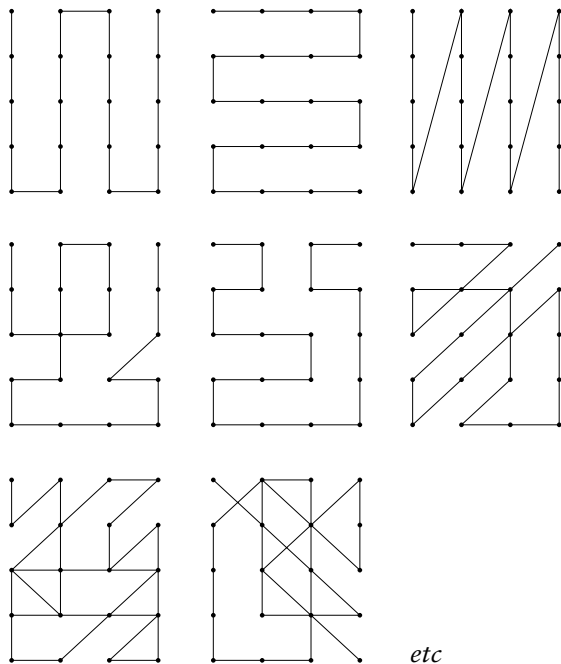


FIGURE 2: *The above diagram expands on the idea that the student's engagement with the design process (FIGURE 1) should be iterative but also a flexible and connective 'leapfrog' approach.*

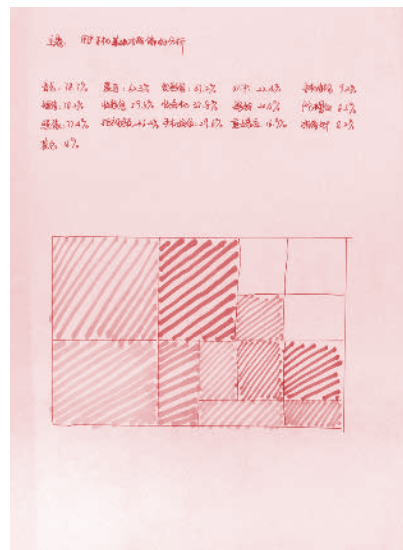
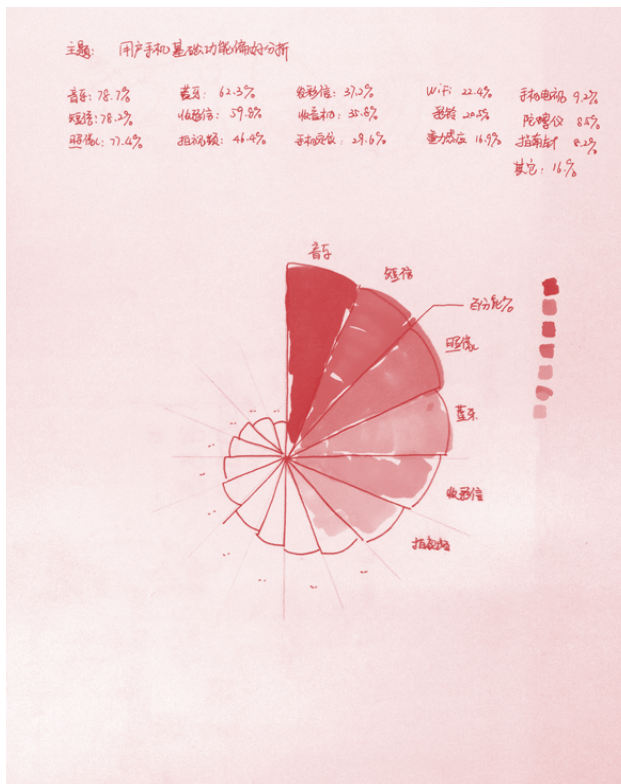
project to progress, it also permits the structure to be developed, thus allowing for the building of knowledge, skills, and experience. We learn to understand, we learn to design—this does not end when we graduate.

The design process can be referred to as cyclical as well as multilinear. Certain stages may need to be repeated or returned to at a later point depending on the experience and skills of the student. There will be a number of variables and concerns that need the student's attention. These will foremost be but are not limited to the progression of the idea, message, context, content, audience, and sources. The design process becomes an entangled network of response, consequence, and effect. Whilst as information designers we generally strive for clarity and simplification in form, by allowing for a more discursive, but inclusive approach, unexpected process models can emerge as beneficial alternatives.

For this reason explaining the "ideal" design process to a student as a model of work alone—even when dynamic qualities are clarified—may not suffice, a more flexible approach is required. It is through engagement with the process and the transfer, as well as the attainment of knowledge and practice, that the individual learner becomes familiar with the subject.

The information design student can be asked to be an author/editor as well as the designer: a visual narrator. Depending on the learning outcomes and assessment criteria of the unit, the response to the brief often asks for a 'return' proposal allowing for the act of clarification and determination to reside with the student. Where the brief was left intentionally abstract or rhetorical by the tutor it is now presented in a structured proposal by the student. This is a cycle that is not too dissimilar to the average client/designer discourse. As educators we introduce the student to the notion that data holds no defined meaning on its own, it's through the process of interpretation and the assignment of meaning that data becomes information. The different methods of organizing can create different vantage points and the manner in which we approach data, understand, and perceive information, informs our attempt to communicate it. It is a way to formulate a question and also a means to encourage creative thinking and problem solving.

As the student becomes familiarized with research and observation techniques they can explore and understand the *what*, followed by the *why* (is this information relevant); moving on to the *how* (will I do this: how can I visually convey this message). This sequence completes a cycle of evaluation toward the critical point of *so what?*. Exploring



The images on this page are sketches generated by Tsinghua University students capturing personal data and logged in diagrammatic form, FIGURE 3 & 4: *Mu Xinzhu* visualized data from research on user's preferences for smartphone functionality. These included music, picture messaging and photography.

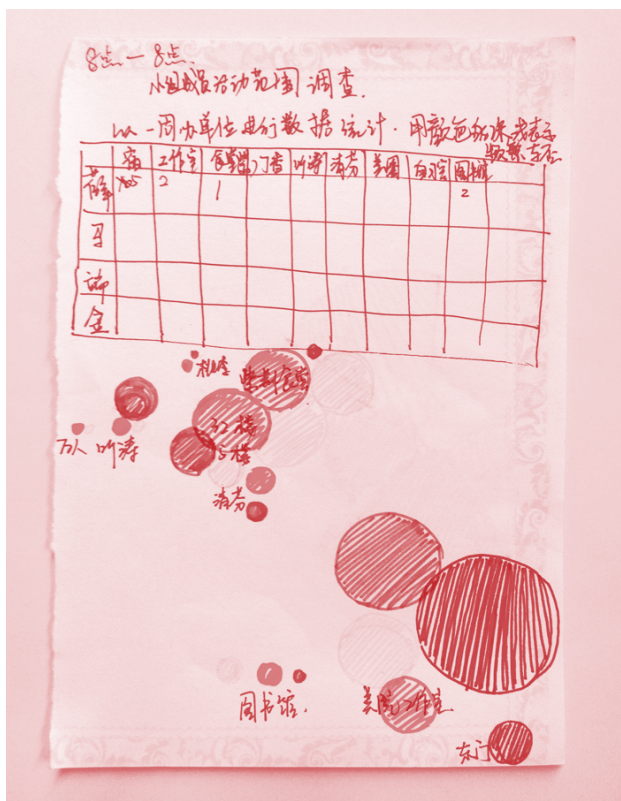


FIGURE 5 & 6: *Xue Bohan* examined how much time she and three friends spent in the different areas of the campus during one week. Each color represents a student and the size of the segments refers to time. The location of the diagrams on the page relates to the actual geographical location of the facilities on the campus, for example the largest diagram is the art college and library and the smallest the canteen.

a diverse range of sources will allow for a solid foundation of knowledge to emerge. The student gathers and analyses information and is then asked to judge what is interesting, relevant, useless, ambiguous, or superfluous respecting the resultant content and composition.

Understanding context is an indispensable and powerful tool in information design. The context within which information is observed and understood can change the designer's and the reader's vantage point. It becomes a valuable tool for the student when they decipher a contextual connection to their conceptual development and their visual experimentation. Ideas can't swim forever;

they need ground underneath their feet. The student needs to become aware that the removal of accessory information happens primarily to deconstruct the complexity of the message and to simplify the reading of the visual.

PROCESS AND METHODOLOGY IN PRACTICE

The designer's authorship and responsibility can cover several ambiguous states of information or data gathering. This is not merely a concern that belongs to the designer alone. It exists at the point of data generation, and its usage from this initiation point forward.

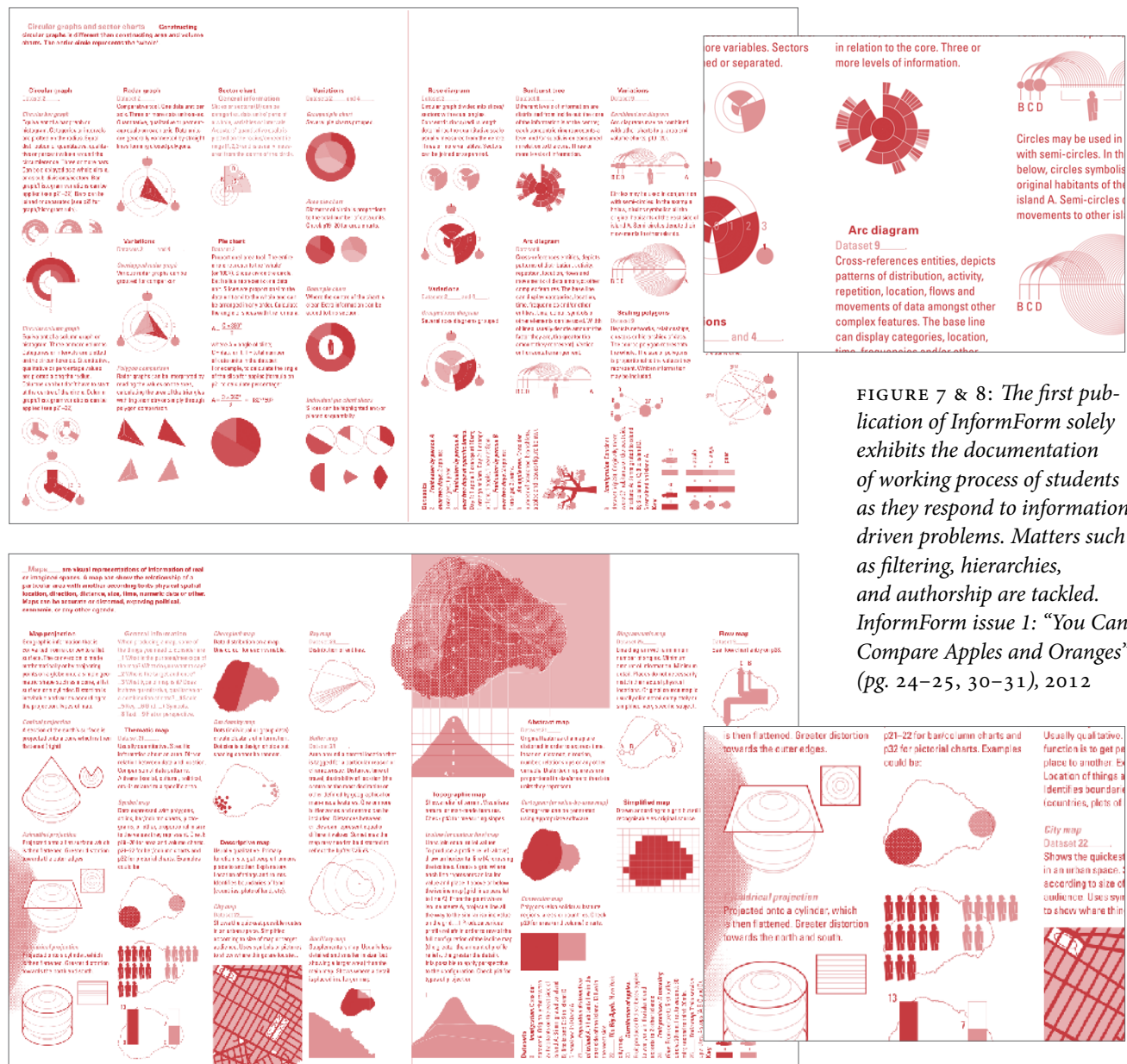
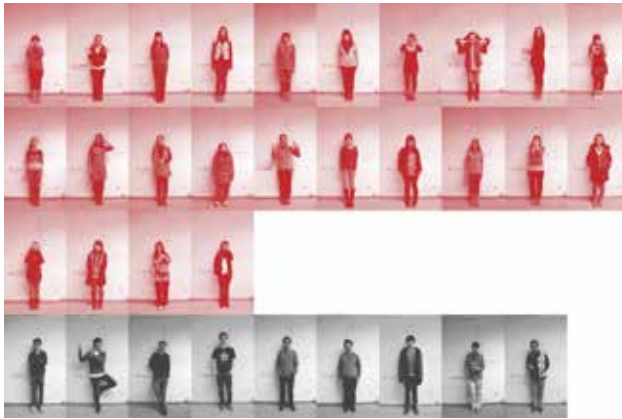
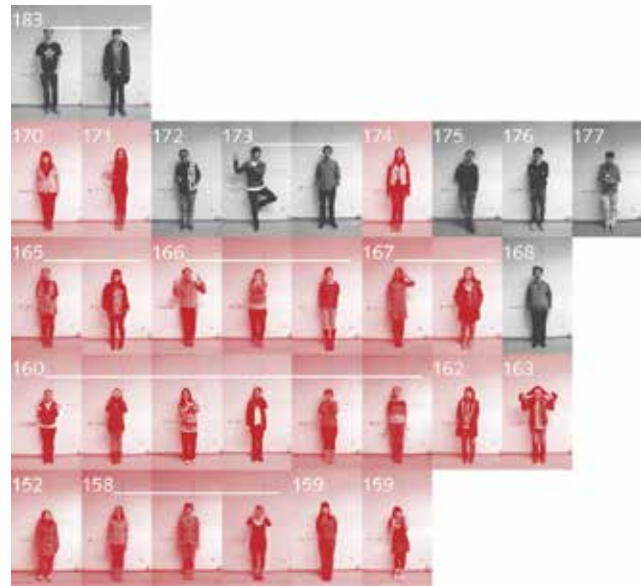


FIGURE 7 & 8: The first publication of InformForm solely exhibits the documentation of working process of students as they respond to information-driven problems. Matters such as filtering, hierarchies, and authorship are tackled. InformForm issue 1: "You Can Compare Apples and Oranges" (pg. 24–25, 30–31), 2012



FIGURES 9 & 10: *Category (left); Tsinghua University students organised by gender, and Hierarchy (right); Tsinghua University students organized by height in centi-meters (cm); from shortest (bottom) to tallest.*



The neutrality of data is altered through assignment and appropriation. Therefore, no design is ever neutral or objective. The selection of certain information (and therefore the non-selection of other information) will always carry a certain bias. The designer's perception of the originator's intentions, creates another filter of interpretation for a (new) receiver. All information needs to be understood in relation to itself within a framework of comparison and in a wider context.

Matters around filtering, authorship, and other information is discussed in the first publication of InformForm. InformForm exclusively includes the documentation of process and work of students alone. Professional practitioners and educators participate in an advisory capacity only, for example in the formats of interviews with Darren Clarke, Peter Crnokrak, Ronni Kimm and Stefanie Posavec. It includes a glossary of technical terms (FIGURE 7 & 8) and examples of work by undergraduates and graduates from various institutions. InformForm is a guide for students, as well as a reference for tutors. It is to be used alongside other relevant literature, journals and online resources.

At its core what the student needs to understand is that the manner in which we organise information has an impact on what will ultimately be communicated. The fear of data manifested by the student at the beginning of a project should be approached through the mitigating effect of processing through simple initial exercises. Through experimenting with samples of data sets the student should be encouraged to identify, analyze, and visualize patterns

and contradictions in the data. It is usually helpful to start with 'the obvious'; no judging. It is from this point that patterns will be observed and new leads for further investigation arise. Depending on the nature of the data set, consulting expert(s) of the data is a necessity. It's through experience and repetition that the student will become less apprehensive of this task and more fluent in its role as a visual narrator and a conveyor of meaning. As part of an InformForm short course at Tsinghua University in Beijing we conducted a workshop based around Wurman's principles of LATCH. The group of 33 students organized themselves according to first name, height, and date of birth. They were also asked to come up with two other ways of organizing themselves and photograph the results. Clear patterns emerged from this exercise. For example, there were more girls than boys in the class (FIGURE 9), as opposed to the general tendency in China's population. It was also observed that the majority of the students were between 160 and 170 cm tall (FIGURE 10), and that the most common year of birth was 1989. Even though the exercise used simple categories of organization it highlighted the strength of simplicity in information design to the students.

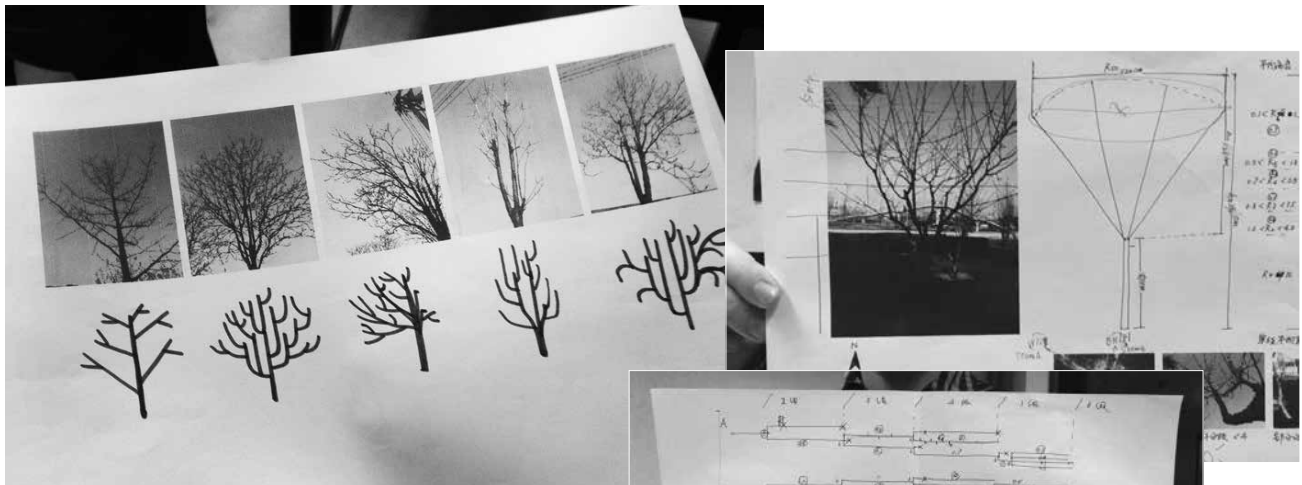


FIGURE 11–13: *The student exploring many design iterations and testing is key. Tsinghua University's Ye Chao's project started with an observation: a tree. She noticed the tree had more branches where sunlight was more prominent during the day. She also noticed places where the tree had been cut by a gardener. She decided to explore how to visualize and chart the growth process of the tree in graphic and mathematical terms.*

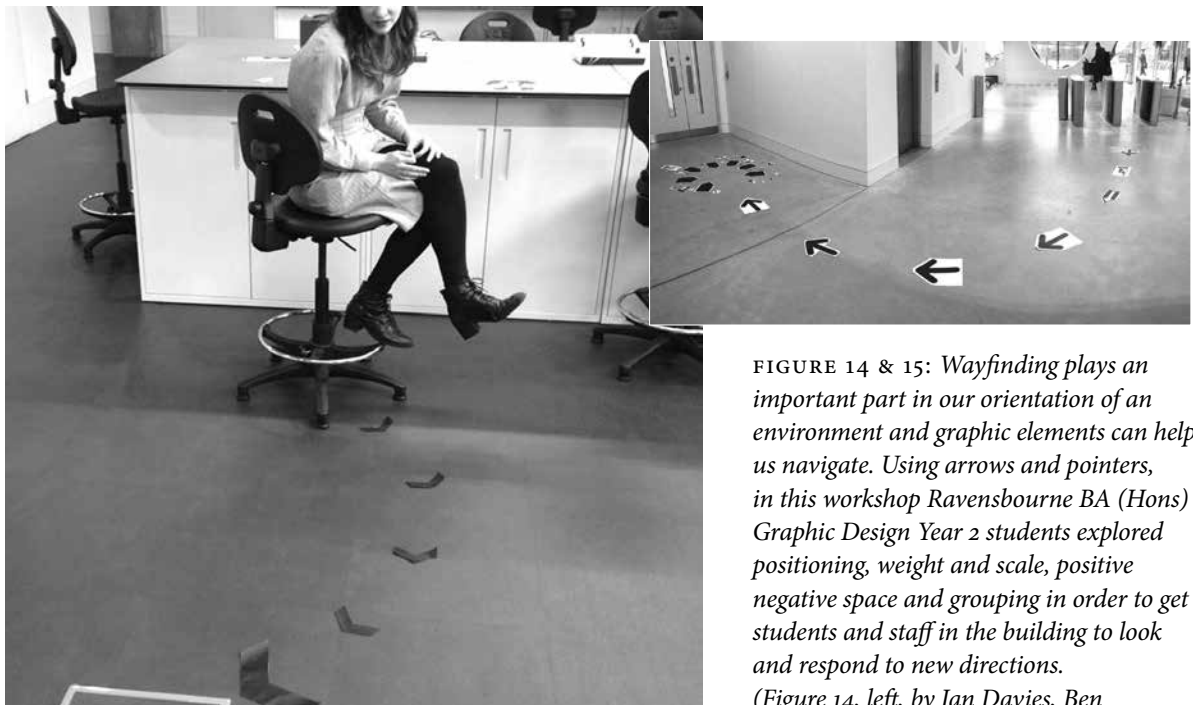


FIGURE 14 & 15: *Wayfinding plays an important part in our orientation of an environment and graphic elements can help us navigate. Using arrows and pointers, in this workshop Ravensbourne BA (Hons) Graphic Design Year 2 students explored positioning, weight and scale, positive negative space and grouping in order to get students and staff in the building to look and respond to new directions. (Figure 14, left, by Ian Davies, Ben Vulliamy, Alicia Welch, Nele Wellens; Figure 15, top, by Isabelle Bjerke, Milly Huynh, Edward Yau)*

REFLECTION/CONCLUSION

We felt there was an opportunity to create a platform for students where they will find practical tools, such as technical glossaries, and process-methods that feed back into the curricula of their course. InformForm's focus on the publishing and exhibiting of student work will allow for more (realistic) critical reflection as the analysis of case studies does not need to refer to professional and/or finished work alone.

This objective refers in an abstract sense to a global model of peer evaluation allowing for critical reflection and understanding of how goals were set (and met). Studio culture is equally important—within a course as well as in industry—and it's this climate InformForm is trying to create on an international scale.

We hope this paper is not considered as didactic tutelage nor by any means as a groundbreaking proposition but instead as findings on the opportunities and possibilities within information design education. Through the setting up of InformForm we've had the privilege to be in contact with a wide range of institutions, universities, and colleges and it is clear we share this sentiment with many academics and students alike.

How we document, access, and understand information and particularly how designers of visual communication can contribute to this has never been more important. We look at the future of information design with anticipation. Informing the student of her field of study doesn't necessarily require a wider range of pedagogical methods. Rather, what's needed is a greater focus on how the student can access a variety of tools and resources, so that they can be used in the practical acquisition of knowledge and skills.

BIOGRAPHY

Mwmcreative (www.mwmcreative.co.uk) is a London-based design & research studio founded in 2004 by Maria da Gandra and Maaïke van Neck after they met via the MA in Communication Design at Central Saint Martins College of Art and Design. *Mwmcreative's* ethos is informed through a dialogue of reflexive practice, teaching, and research. In addition to undertaking client-driven work the studio initiates and produces research projects, workshops, and publications, some of which have been featured in various publications including Eye Magazine and Creative Review.

One such initiative is *InformForm* (www.informform.com) launched in 2010 and an international platform for information design students and their tutors. InformForm celebrates and explores both the practical and theoretical experimentation within the field. Currently Maria and Maaïke are working on the second issue of InformForm which will focus on the visual languages and processes employed in pictorial design in a wide range of contexts such as wayfinding strategies, signage systems, instruction, and data visualizations. For this, they are collaborating with tutors and students from a range of international institutions.

Similarly the publication '*Fog & Conflict: exploring cross-disciplinary and methodological positions in information design*' (da Gandra, Moret, van Neck 2010) is an inquiry into the designer's and social scientist's methodological position and its influence on visual languages.

Alongside studio and research practice, Maria and Maaïke have been involved with various institutions as visiting lecturers; these include Tsinghua University, University of Chester, University of Brighton and Sint-Lukas Brussel. Maria previously taught at Central Saint Martins MA Communication Design for 5 years and Maaïke at the University of Portsmouth BA (Hons) and MA Graphic Design for 7 years. Maria currently teaches BA (Hons) Graphic Communication at the University for the Creative Arts, Farnham and Maaïke at Ravensbourne, London, BA (Hons) Graphic Design.