Some unrelated points?

'Are we really teaching students to - for example - develop information about medicines that enables patients to act appropriately? An increased focus on reliable arguments, research, theory, and testing might be necessary just to make sure that visual communication performs as intended.'

The AIGA Design Educators conference 'Connecting Dots' in Cincinnati (March 14-15, 2014) provoked many discussions about fundamental issues in graphic design education. Some discussions were esoteric and theoretical, while others were very practical and related directly to teaching. Discussions focused on questions like:

- How can we teach research in the first years of a graphic design curriculum?
- What is the value of a masters degree?
- Do we provide reliable arguments about design decisions?
- Is graphic design education really integrated in academic institutions?
- What is 'best practice' when assembling a balanced faculty?

These points are all related if you look at them from a practical point of view. Professional practice needs sufficiently educated and well trained young designers. Graduates should be able to observe situations, draw rational conclusions, write and present succinctly, and design, test with users, and modify prototypes. And these young designers should be able to do all this within set budgets, on time, and preferably through pleasant collaboration.

To prepare graduates for these activities, education needs to keep up and evolve. This is done in small incremental steps, following the requirements and recommendations from a diverse range of stakeholders. During the Cincinnati conference, the longer term aims of graphic design education became clearer too. If we look a little bit further ahead, than the following six topics come into focus:

1 - **Develop a variety of courses**. There are many undergraduate and graduate programs of study that teach 'graphic design'. The focus of these programs is usually described as 'graphic designers make things that communicate'. Most programs focus on the first parts: 'graphic designers make things' while only a few revolve around the communication between 'readers/users/beholders' and clients. Shifting the focus from 'designers make things' to 'things that communicate' will fundamentally affect all aspects of graphic design education; it will make it necessary to reconsider curriculum structures, the necessity for a foundation course, essential skills, teaching methods, type of projects, and

assessment criteria. Although there is ample space for programs that focus on 'making things', it is worth considering alternative types of graphic design courses that could focus on the provision of a professional service by developing visual arguments that clients can use in dialogues with individual viewers. These courses should be based on teamwork, observations, benchmark testing, prototype development, user testing and implementation strategies. It will increase the options for students who could choose between a variety of educational approaches that more accurately reflect the wide variety of types of practice in professional graphic design.

2 - Engage a variety of educators in each course. Many graphic design departments employ a fairly similar group of fairly similar people: passionate educators with substantial practical experience. It is seen as improper to question the qualities of these homogeneous teams, but this similarity can leave some areas of research and commercial practice untouched. As a consequence, elementary research skills such as observing, interviewing, writing, critical reading, presenting, and testing rarely receive enough attention. And basic practical skills like approaching clients, preparing quotes, and financials are rarely taught either.

This could be remedied by increasing the variety of faculty within departmental teams, and by paying more attention to the education of graphic design educators. A combination of trained practitioners, trained researchers, and trained educators is probably needed to form a complete team. It might also be necessary to have dedicated MA courses in 'graphic design teaching', in the same vein as practitioners can do MA-courswork in design, whereas researchers can complete research masters and doctorates. It must be possible to get a formal education to teach graphic design, and to learn the history and theories of graphic design, learning behavior, curriculum structuring, and individual development.

3 – Consider a variety of theories. In order to discuss processes and results of a professional design activity, it is useful to be able to refer to a range of theories; however, the theories for pedagogy, designing and researching differ. There are theories related to teaching ('experiential learning'?), to research ('empirical argumentation theory'?), and to practice ('performance-based user-centered communication design'?). It is essential to fully integrate and relate these theoretical approaches in education, practice and research, as they provide fundamental starting points for course development, training graphic design educators, and framing research.

4 - Develop reliable arguments. Graphic designers needs reliable data and convincing arguments to prove the commercial-, communicative-, and social-value of visual communication. Much of the rationale that graphic designers currently express is based on personal opinion and experience. Some of these arguments consist of unrelated one-liners and unsubstantiated assumptions. Unfortunately, without more empirically validated data and verified evidence there is not really an alternative. In order to develop reliable arguments, it is essential not to focus on visual results only, but to also look at performance, which requires both a research effort as well as an education effort. Different types of research (practical research, practice based or domain specific research, and academic research) will provide some of the necessary data. If undergraduate students are not introduced to the development of reliable arguments about the performance of visual communication through various types of research, it is unlikely that they will be able to provide necessary arguments in professional practice.

5 - Increase research and publishing. There is a shortage of venues for publishing on topics related to graphic design education and graphic design research. There is a clear need for hardcore scientific journals – and these journals need to actively stimulate and mentor authors – but there is also a need for alternative venues. Different types of research will produce different types of results that could be presented in novel ways that optimally suit practical use. It is necessary to publish 'peer reviewed visual databases' that can be used by practitioners, teachers, and researchers alike. This is a real graphic design challenge: to visualize various types of research results in ways that people can actually understand and use them in their work.

6 - Make continuous education available. The three tier BA-MA-PhD structure might suit graphic design education, but it provides little opportunity for further education during a professional career. Continuous changes in practice make it necessary to re-educate regularly. Similar to 'continuing medical education', it should be possible to enroll in 'continuing design education'. Developments in reading strategies, knowledge acquisition, and visual recognition are examples of relevant topics. At the moment, there are very few opportunities that would suit teachers, researchers, and professional graphic designers to upgrade their knowledge and skills.

These six topics need to be addressed swiftly. If we ignore these issues, there is a risk that graphic design education will remain stagnant in the next decades.

Educators need reliable arguments to function in both research based and practice based institutions. These arguments are needed to show the relevance of graphic design to other departments within their university. They will clarify the aims of courses and programs, faculty-appointments, selection of theories, development of reliable arguments, dissemination of results, and continuing education. Arguments in all six are needed to claim and maintain a more prominent position within academe.

Practitioners directly and indirectly benefit from any increase in knowledge related to graphic design. Both education and research provide practicing graphic designers with arguments that help them to persuade new clients about the relevance and value of graphic design.

However, before any changes in education are introduced, it is essential to record the current situation accurately (programs, contents, structure, results). Graphic design education needs to be continuously benchmarked to make sure that changes can be monitored. Without benchmark data, it is not possible to critically evaluate any progress.

It is surprising that fundamental support for research, theory-development, and education-development receive so little attention and so little funding in the US. The recent proposal of the AIGA Design Educators Community to be heard is a constructive step. The need to have increased publishing venues, a project repository, financial support for video archives, and promotional materials are clear, but we must aim higher in order to exceed the requirements of university environments and professional practice. Connecting Dots remains necessary, but the bigger picture needs to be kept in mind.