

DESIGN EDUCATION: STUDENT AND MARKET EXPECTATIONS

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In recent years the two main design schools in Denmark (Danmarks Designskole¹ and Designskolen Kolding²) undergo many changes. The overall goal for both is to obtain status as a university, and they will be evaluated in this regard in 2010. Transforming a vocational school with long handicraft traditions into a research based institution for higher education is demanding. Danmarks Designskole is in the middle of this process, many activities are initiated, both employees and students are involved, and from outside representatives from various design professions. The design process has many stakeholders with various interests and opinions. The aim is not to design a computer system, a service or product but re-designing curriculum, work procedures, self images etc. which support educating designers of the future. This paper reports on two investigations that have been carried through as part of the change processes at Danmarks Designskole. A questionnaire explore the present students reasons for wanting to become designers and their expectations to the design education and future jobs. Eight focus groups including representatives from various design professions discuss what skills and competencies that are expected from future graduates. The main issues to be discussed here are views, demands and expectations from various stakeholders and the consequences they (might) have in the process

of transforming a vocational design school curriculum into a curriculum for a 'design university'.

The first section gives background information about Danmarks Designskole, the initiation of the change process, and curriculum concerns. Then the research approach is described. From section 3 to section 6 the results from the investigations are discussed. First if a vocational education still is expected? Then views about if Danmarks Designskole should educate specialised designers or design generalists. Section five give examples of expectations to the design education and in section 6 profiles of graduates are discussed. Section 7 reflects on the research approaches which is followed by conclusions.

A DESIGN SCHOOL IN TRANSITION

Background: From one line to many

What today has developed into Danmarks Designskole originated in 1875 as the School of Drawing for Women in the Danish Women's Society. Since then the vocational school has changed name several times and other Danish design schools with different profiles has emerged in Denmark. In 1990 the school merged with the School of Industrial Design and the School of Interior Design and was named Danmarks Designskole (The Jubilee Book, 2000).

The school has two institutes. The Institute for Product Design offers five lines of specialisation: Pottery and Glass Design, Fashion Design, Textile Design, Industrial Design, and, Furniture and Spatial Design. The Institute for Communication Design offers three lines of

¹ www.dkds.dk

² www.designskolenkolding.dk

specialisation: Visual Communication, Digital Interaction Design, and Production Design. For many years each line of specialisation has been responsible and organised the teaching as found best. The technical language, traditions, priorities etc. varies and therefore Danmarks Designskole can be viewed as a school with many schools inside.

The number of applicants has been around 1200 for some time. Out of these 105 are enrolled. To be considered the applicant need to have a qualifying exam like for instance a General Certificate Exam or Higher Preparatory Exam. Students who do not have a qualifying exam can be admitted through an exemption on the basis of a motivated application, which has certain requirements. For everyone the selection is based on evaluation of a home assignment, entrance exam and interview. When applying everyone need to decide which lines of specialisation they want to have. At present 650 students from 20 countries are enrolled. The students mainly come from Denmark, Sweden and Norway. The teaching is in Danish.

Demands from the Ministry of Cultural Affairs

In 1999 Danmarks Designskole changed status from being a self-governing institution with a board of directors to a state institution under the Ministry of Cultural Affairs with a rektor magnificus. The Ministry of Cultural Affairs decided in 2003 that Danmarks Designskole should strive to achieve status as higher educational institution (status as a university), which gives the right to educate bachelors and masters in design on the same level as for instance the Danish Royal Academy of Architecture. The evaluation will take place in year 2010.

For the Ministry of Cultural Affairs one of the main goals of achieving status as a higher educational institution is to decrease the relatively high unemployment rate for graduates. With this follow the demand that the students during their education shall collaboration with relevant firms and organisations. The students shall also be encouraged to spend a semester as a trainee in a firm and/or spend a semester at another educational institution.

Curriculum concerns

In 2003 the curriculum for the first three years of the new design education was set. The first one and a half years of the 'bachelor curriculum' all teaching activities are common for all students. Each full semester give the students 30 ECTS points. The teaching is divided into three main categories, which is

evaluated separately. Design projects encompass 14 ECTS points with two projects per semester, and are viewed as the core of the education. The two institutes alternate in defining the projects and teachers from various lines of specialisation function as tutors etc. Employees holding a Ph.D. degree mainly teach general design theory (7 ECTS per semester). Design tools (9 ECTS per semester) covers for instance teaching in various IT-programmes, drawing, materials, colour and introduction to various workshops where the students can produce prototypes etc.

During the last one and a half years of the 'bachelor curriculum' the students are mainly at the chosen line of specialisation. This mean that design projects and design tools focus on learning the terminology, aesthetics, materials and how to design and experiment with form within each area. General design theory is taught as common courses for all students in semester four and five. In the sixth semester a bachelor design project is carried out within the line of specialisation.

Since 2003 the curriculum has been modified several times which has resulted in frustrations and critique from both students and employees. When it was time to design the curriculum for the 2-years master program the rektor magnificus therefore made a commission for a thorough investigation, which should result in a report with recommendations to the management. I the following some of the concerns that exist among teachers and students are accentuated to give the background for why the students were asked to fill out a questionnaire and why representatives from various design professions were invited to take part in focus groups in relation to designing the 'master curriculum'.

Many within the teaching staff have mixed feelings about the changes made and the ones to come in order to achieve status as a design university. They are worried about what will happen with the good workmanship, which for many years has been the pride of each line of specialisation and the school in general.

There are conflicting views about if the potential users of a design should participate in the design process or not. There have also been many discussions about if Danmarks Designskole should create a series of profiles of graduates as examples. The idea being that profiles could help the students create images about possible futures as graduates, and that people from the trade could both get insight into the content of the education and be part in revising profiles along the way.

As the education now have increased the focus on general design theory and the students are required to make written assignments in parallel with conducting various design projects several teachers and students express worries about that there are not enough time for absorption and learning to design within the chosen line of specialisation. The discussion circle around if Danmarks Designskole shall educate design generalists with broad knowledge about design or design specialists with deep knowledge about a more narrow design field. Disagreements are also expressed about if graduates need to demonstrate that they can produce their designs themselves or if it is sufficient to be able to create design concepts and instruct others about details concerning for instance materials and production process. In order to clarify what to focus on it seemed relevant to explore what the market want but also what the students expect from their education.

The employment of people with a research background has been frustrating for many. A small number of teachers were dismissed in order to finance the new staff. Some worry about their own positions and the possible loss of vocational knowledge in favour of more theoretical knowledge. At present neither of the employees holding Ph.D. degrees is affiliated to any line of specialisation. Thus the changes in the teaching staff have caused that each line of specialisation have fewer teachers than before. The number of students on each line varies and some lines have only very few. When the resources for teaching depend on the number of students it can be critical to keep the quality and the broad spectra of topics that has been the custom. Still all lines of specialisations want to exist, as an individual line of specialisation and it seems important for them not to reduce their area of expertise. Few teachers are interested in uniting some lines. An important question is if these opinions come to terms with the skills and competences that are expected if the most important stakeholders namely the students and representatives from the market are asked.

RESEARCH APPROACH

Getting to know the students

Questionnaires are frequently used as research approach when involving many people in investigations. In order to ease the analysis the questions posed are time and time again very specific and to be answered by multiple-choice schemas with pre-defined answers. Often when students are involved in surveys they are solely asked to evaluate the

education. Even though we chose to use questionnaires our investigation was also different than usual. In present inquiry we wanted to get to know our students background, why they chose to spend five years at our institution and how they wanted to use their education afterwards. Thus the scope was broader. In order not to influence the student's answers the questions were open and they were to be answered in free text.

The questionnaire included three main topics. The first posed questions like: What was your occupation right before you became at student at Danmarks Designskole? Do you have a high school diploma (general certificate exam/ studentereksamen)? If yes, with what specialization? Do you have other educations? If, yes please specify. The next section concerned the education at Danmarks Designskole including questions like: Why did you want to study at Danmarks Designskole? What expectations did you have to the education? Does the education so far agree with your expectations? Why/why not? The last section about the future included questions like: What kind of job would you like to have after finishing your education? Why? What competences do you use in your future work? Are you working together with other people? What are their competences/ educations? What is your role and responsibility? The questionnaires were filled out in the spring 2005. We got 152 answers primarily from Scandinavian students. Two thirds of the answers were fill in handwriting and the last third were digital.

The data were analysed by 13 employees and students (Brandt, 2005). We wanted to use a bottom-up approach. It seemed important not to use pre-defined categories from the outset but to let the data be grouped according to the content. The questionnaires have therefore been analysed using the KJ method where all answers are printed on paper and cut into pieces with one answer per piece, then collages are made by grouping answers where the content seem to somehow overlap (Kawakita, 1982). (see example of collages in figure 1).

For instance three different students wrote the following to the question why they wanted to study at Danmarks Designskole: "... I wanted to study here because of the interdisciplinary approach and because of the schools standards", "I wanted to develop my graphical competence and very much to be introduced to a lot of theory about graphical processes and theories. Moreover I wanted to pry into motion graphics", "Because of the possibility to work interdisciplinary with images, graphic, moving images, web-pages – visual communication in general!"

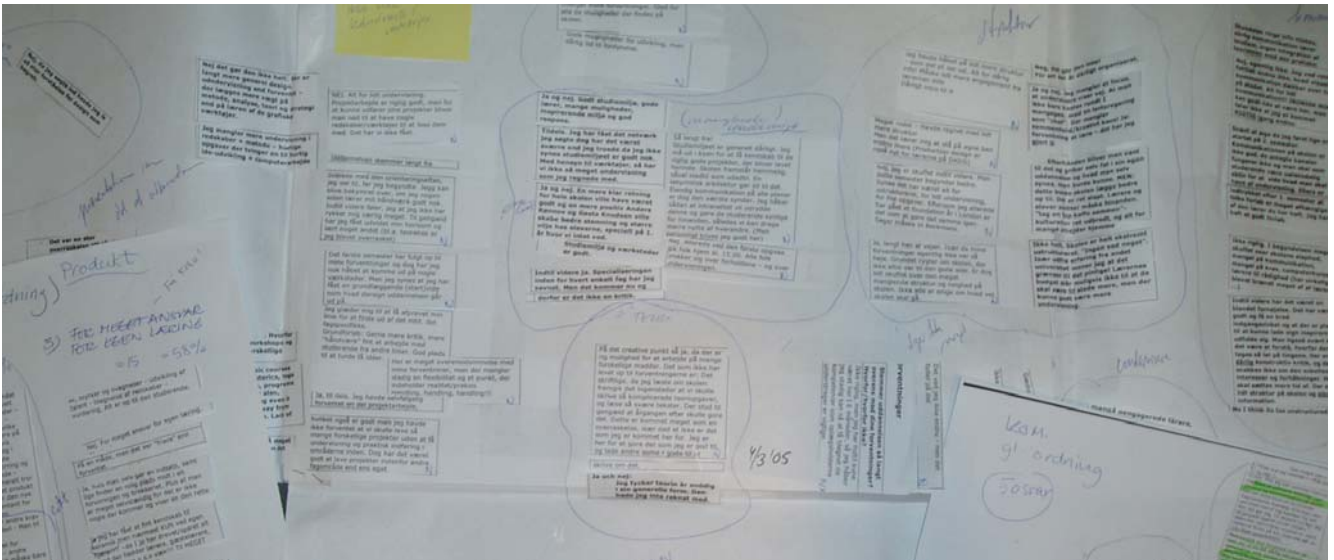


Figure 1: Extract from collages with KJ-analysis of the students answers of questionnaires.

Focus groups with representatives from various design professions

During the autumn 2005 we involved 41 people who represented the design professions in eight focus groups (Blomberg et al. 1993). Each focus group concerned one of the eight lines of specialization at Danmarks Designskole. It was a three hour session involving 4-6 persons representing the design trade, 2-3 teachers from the line, the leader of the institute, 2-3 students to make notes and video record the session plus a facilitator leading the meeting. Some of the people representing various professions within the design field were former students.

In each focus group the objective was to discuss the present curriculum, and the skills and competences that the students need to possess in order to get design assignments as graduates. In advance the participants received a short written introduction to the line of specialization and a series of profiles of graduates and what kind of jobs they were expected to be prepared for. During the focus groups mainly open-ended questions were asked. Even though that we in advance tried to set the agenda for the meetings by sending information about the line of specialisation etc. we were curious to know what they found most important to talk about and how they reacted on the other guests views and opinions. The discussions during the focus groups was therefore not very structured and varied from group to group. The author facilitated six of the sessions and has been responsible of analysing all data and writing the report that summarises the results. A draft version was distributed to participating colleagues

together with an invitation to suggest changes. The report that summarizes the results is based on analysing the video-recordings and the summaries made by the students (Curriculum, 2005).

IS A VOCATIONAL EDUCATION STILL EXPECTED?

Neither the students or the market initiated the educational changes but it is interesting to examine their reactions. Do they expect or want a vocational education with focus mainly on learning the handicraft within a specific line of specialisation?

There are no variations in relation to the student's reasons for wanting to study at Danmarks Designskole between the institutes and if they follow the new or old curriculum. Therefore all answers are covered as a whole. The investigation shows that a little more than a third (36%) are concerned about learning the good workmanship, which has characterized the school for several decades. The students are specific about what trade they want to master and appear clear about their choice. All lines of specialisation are mentioned in this regard. Some of the students argue by saying that they are into arts and crafts but not everyone. Still it seems that this group of student's study at Danmarks Designskole because they want a vocational education.

The reminding group of students (64%) are more open about what the design education can offer and what kind of jobs it can lead to. In general they are not very specific about their interests but stress that they want an education where they can develop their creative abilities.

They express openness towards learning new methods and are interested in cross-disciplinary collaboration, which they argue will increase their chances on the labour market. They wish to achieve both theoretical and practical design competences, and strengthen how to document and argue for their design solutions. Some of the students already hold another design education and have experiences as practicing designers. Their reasons for wanting a longer design education can be summarised in the following quote from one of the students: "I want to be among the people who create the ideas instead of being the ones to make them come through". In essence it seems that for almost two thirds of the students a vocational training is not regarded as sufficient.

When asking people working within various design fields the majority seem to welcome the change of the design education. Repeated across several focus groups the arguments for this were for instance that Denmark needs to educate high quality designers with a solid and also theoretical background in order to compete with designers from other countries. The increased international competition cause that many Danish firms are ready to have the work done abroad if necessary.

Also focus groups about lines of specialisation that traditionally educate arts and craft designers appreciated the expansion of knowledge and competences that the new curriculum provide. For instance within the focus group on Ceramics and Glass design the participants emphasized that it is very difficult for new graduates to get jobs in Denmark, and therefore they encourage the school and the students to search for other types of trades where the competencies can be used. For instance a participant said:

"The company Boss and Fjord have done something different. They work as consultants in companies where they for instance do interior design with a focus on creating brands or support a culture through physical things. They walk in and investigate if there are physical things that could have some qualities at this specific company or organisation"

In general the focus group participants demanded Denmark's Designskole to think internationally when re-designing the 'master' curriculum. They stressed that the design candidates need to know what is cutting edge both historically and present internationally within their field. It is expected that the school constantly follow the international development by

having both teachers taking part in conferences and events around the world and reading international design magazines. The students should know about other cultures or know techniques for how to fast gain insight into other cultures. There were two main reasons for this. The candidates should be able to design for people with different views on aesthetics, and they should know the design field's terminology sufficient enough in English to be able to communicate with for instance production units in other countries.

From both investigations it seems that a traditional vocational education is not expected by the majority. More theoretical knowledge is expected in both studies. The focus groups also highlights the need for internationalisation including knowledge in English.

SPECIALISED DESIGNERS OR DESIGN GENERALISTS?

The present 'bachelor' curriculum and the invitation to spend one semester at another educational institution, and another semester as a trainee in a firm leave two and a half years including the final exam project to specialisation within a line of specialisation. As mentioned many teachers from the various lines of specialisation believe they do not have sufficient time to teach all that is needed. During the focus groups we asked the participants specifically about if Denmark's Designskole should focus on educating specialised designers with a deep knowledge about a narrow design field or design generalists with broader skills and competencies?

Across the focus groups the attitude to this question varied. The main arguments for engaging designers with a broad knowledge were that a design education can bring along many different assignments and careers. For the potential employers it was important to know what to expect from new candidates. They favoured that everyone had a broad common education with for instance basic knowledge about design processes, technical skills like drawing and could use a number of relevant IT programs. It was important to know that graduates could work within various fields and with various media. On the other hand it was also found important to have a speciality, so that the individual designer had something special to offer. Seen from the candidate's point of view it gave self-esteem to work in depth and have experiences within a more narrow design field. It was found important to have both self-esteem and an identity as designer. Theoretical and practical knowledge from another design education abroad or

gaining practical knowledge by spending time in a design firm were also put forward as bringing along both self-esteem and a good preparation for the working life.

In the focus group on industrial design the topic led into a discussion about if the students should focus on what they in the outset were good at or if it was essential to develop other skills and competencies as well. CJ argued that it is important not to be too idle and focus on the short-term results but be conscious about what is needed in the long term. He said:

“I disagree with the point made that one shall only cultivate ones strong points. I believe that one shall practice the sides that are needed in order to be able to do what one want to do .. [...]. Especially I think about the schools that are characterized by group work. There is the tendency that some falls into one role and always do what they are good at, and hereby only know a little part of the trade. There is a risk that they do not cover a field, which is wide enough.

I believe that CJ point to a pitfall that is very easy to fall into as a student, and that this is something that the institutions need to be aware of and try to prevent by the organisation of the curriculum. At Danmarks Designskole today the students each semester often get new teachers guiding and commenting on their projects. Where this way of manning the various teaching assignments between the staff can bring about a variety in feed-back on the work done, which can be positive, it might fail to see if some students are not challenged enough and chose the easiest way through the education.

In the focus group about production design the participants often mentioned the Scandinavian model and the “foreign” model, which referred to two different ways of working. Today the production design specialisation is based on the Scandinavian model which is characterised as a broad base where the designers need to be able to do a little bit of everything. This is in contrast with the “foreign” model for e.g. film production outside Scandinavia where the budgets are much bigger and with this also the team. This leads to a larger degree of specialisation for the production designers. In general the focus group participants supports educating generalists within the field. Besides design competences they also stressed the need for knowledge about how to make budgets and project management. What might be lacking in this discussion

is if we are to educate designers for the national, Scandinavian or international market? And if we chose to focus on Denmark or Scandinavia the question is if it is possible to get a job afterwards?

When discussing educating design specialists within a narrow design field as opposed to designers with more general knowledge it seems that it is not a question of either or but probably both. The centre of gravity will vary from field to field and according to situation, and the individual designers abilities, goals, and ambitions. This gives certain demands on the curriculum. It has to be structured so that it is easy for students to change between the various lines of specialisation or that courses across the lines should be offered through out the education. At the same time it should be possible to get a specialisation with deep knowledge within a narrow field. Regardless of choice it is important that progression takes place and that everyone are challenged. On the other hand critical mass is important in order to provide teaching resources. Thus the structure and content of the curriculum can become quite complex, but only if resources are allocated to do so. What has not been discussed is the length of the common part of the ‘bachelor curriculum’.

EXPECTATIONS TO THE DESIGN EDUCATION

In the questionnaire the students were asked: “What expectations did you have to the education?” It refers to their expectations to the education before they became design students. About forty percent (40%) answered the open question with expectations about the setting, study environment and the quality of the teaching. The people from the focus groups mainly focused on what skills and competencies to expect from graduates, but some also had views of how to obtain these during a design education as will be seen in the following.

Educational setting

It seems natural that students are not only concerned about their skills and competencies several years ahead. They are the ones to spend five years full time following the curriculum and many seem ambitious and aware that it might have consequences for their job opportunities. Not surprisingly they expected competent teachers, qualified teaching at the highest professional level. They want the teachers to be interested in both the trade and in the students work, and they shall be able to give critical feedback to the students. They expected a good overall structure of the curriculum with progression, design projects that are manageable and have clear goals. The

work pressure was supposed to be high and likewise with the quality of their work. They wanted to be challenged both creatively and intellectually. The study environment was expected to be both creative and very social. They stressed the need, liberty and time to get absorbed in various topics and want the possibility to experiment a lot.

When asking representative from the trade many think that our graduates work much too slow and are in this sense not prepared for how the labour market really is. Another critique from the focus groups was that the students are not able to work on several projects in parallel.

Common skills and competencies

For the students the general expectation was to be trained in all disciplines necessary in order to get design assignments as graduates. Half of the students from the Institute of Communication Design highlighted expectations about achieving common and fundamental skills and competences. For example they mentioned: Typography, layout, graphical design, IT-knowledge drawing, design history, theory, idea generation, presentation techniques and focus on the design process as such. Nine percent (9%) of these also expected to leave the education with a good workmanship.

Almost half of the students from the Institute of Product Design expected common and specific competences as for instance knowledge about design processes, working methods and how to master various materials. Approximately 14% of these had high expectations in relation to obtaining line specific competencies. For instance comprehensive knowledge about ceramics and glass were mentioned. Others mentioned fashion design. General skills like drawing, how to give form, creative thinking, how to explore form in relation to the body, and knowledge about materials were also highlighted.

Across the focus groups several people mentioned that skills like how to draw up a budget, project accounting, intellectual property rights, project management and the like were missing in the present curriculum.

Be able to argue for design solutions

In several focus groups the participants made comments about that educating designers today demand more skills and competencies than earlier. The

competition has increased both nationally and internationally, which for instance entail that designers have to be even better in presenting and making arguments for their ideas or solution. From their point of view the students need to learn how to be more professional about decision making during their design projects. To be good they need many experiences which were highlighted in some of the focus groups and which are exemplified by a quote from JB from the focus group on fashion design:

“Today it is very important to be able to argue for an idea .. [...] .. it is necessary to be professional about why one takes a decision. The more experienced one is the easier it is to make decisions, and the better as designer. The most prominent obligation for the school is to increase the students field of experiences!”

It is also expected that graduates have sufficient theoretical background, which can be used to clarify if their ideas can be realised in a project.

Experience with user-centered design?

If learning user-centered design approaches should be a common skill for everyone is difficult to answer. The reason is that Danmarks Designskole covers eight lines of specialisation where some by tradition is mainly into arts and crafts and educate designers who are to create design pieces that more often are exhibited at galleries and museums than actually used. As opposed to these there are lines of specialisation where learning approaches for how to learn about the context of use and how to involve users actively in the design work is viewed as essential knowledge which have the same priority as learning techniques for idea generation and concept development. In the focus group on digital interaction design SF stated the need like this:

“Everything about users has to be taught from day one. They need to be able to decode the users needs. Here at Danmarks Designskole the desire to be an artist is dominating – but not enough if one wants to be something else. [...] .. It has to be part of the common knowledge”

It seems obvious that for lines of specialisation like industrial design and digital interaction design user-centered design is at the core of the designers competencies where it for other lines are more at the fringe. In relation to developing curriculum it is necessary to investigate more if these kinds of skills and competencies belong to the common teaching during the

first one and a half years or later where the students follow one of the lines of specialisation or both.

Can collaborate with various professions

Both students and representatives from the focus groups highlight the importance of being able to collaborate with people within various professions. Five percent (5%) of the students seem very open for cross-disciplinary collaboration when answering the question about expectation to the design education. To the question about if and whom they collaborated with in future work the majority of the students mentioned other professions. The variation might have to do with the open question and not providing pre-defined multiple-choice answers. They expect that they as part of their design education collaborate with relevant institutions or companies. They also welcome collaboration with co-students from other lines of specialisation. This seems to be in conflict with experiences put forward by some people in the focus groups. These people critiqued Danmarks Designskole for educating too many graduates who are rigid about their own ideas and not very good at listening and adjusting the design solution according to the circumstances.

People from the focus groups stressed that it is important for the school as such to teach the students that the project and making the client satisfied is what counts as opposed to the individual person engaged in a specific project. "The goal is to fulfil needs and to make clients happy by of excellent solutions" as one person expressed it. If this is taken serious it put demands on the content of the curriculum. It does not seem enough to just establish possibilities for collaboration. The students need skills and competencies about how to organise collaboration, how to inquire into cultures and identify market mechanisms.

Both students and representatives from the various design professions mention networking as important. The students expect a design education that supports collaboration with people outside the school. It is also found important after the education in relation to get work assignments. Within the focus groups it was found essential both in order to solve various assignments but also as something that can inspire and give energy. Both groups agreed that it should be part of the education's responsibility to assist the students in establishing networks.

Both investigations provide insight into what is expected from the (new) design education. Much of above illustrate market needs of today. But several people within the focus groups also stressed that what they expected most of all of a 'design university' was generation of new knowledge and ideas, which could help developing the various design professions. Time and again across focus groups it was mentioned that it was important to be more ambitious and aim higher than just satisfying present market needs.

PROFILES OF GRADUATES

Within the school some believe that profiles as examples of graduates is a good idea, but simultaneously many are reluctant because they worry that the profiles will be rigid and not leave room for alternatives.

When summarizing the focus groups across the various meetings there seem to be a general agreement about that creating profiles are a good idea and welcomed by the design professions. For the professions it is important that there are certain skills and knowledge that all graduates have. At some focus groups they commented that the profiles that were sent out were to diffuse and seemed to incorporate everything. The recommendation was to focus more and narrow the educational possibilities. For instance said AE at the focus group for production design:

"It is a good idea to create a number of profiles as examples. If it is about making someone to something it is necessary to focus. There are so many things to learn so if the school wants to do everything then you do not have a chance".

As mentioned across the focus groups the participants are clear. They believe that creating a series of profiles within each line would be advantages for both students and the design trade. The majority also agree that the school need to focus more, and they request to give up something. The argument is that if one wants to do too much the possibility to work in dept with something disappear which results in graduates with too little (line) specific knowledge and experiences.

In many ways this is in line with the teacher's point of view. The teacher's main solution however focuses solely on getting more time at the lines and less on common and general knowledge and abilities. To take the recommendations from the design trade as face value seems very difficult to comply with. Right now the situation at the school is that neither the rector nor any of

the lines of specialisation want to suggest any changes. It is not difficult to understand that each line wants to maintain status quo. But the situation simultaneously seems indefensible as the consequence might result in a five-year design education that newer get further than to introduction courses.

REFLECTIONS ON THE APPROACHES

It seems obvious to involve students and representatives from various design professions in discussions about developing curriculum, as they are the most important stakeholders for a design education. The question is if the chosen research approaches were sufficient? It seems relevant to use questionnaires if the goal is to involve as many students as possible in the investigation. The open questions to be filled out in free text seem to give a more accurate image of our students, their reasons for studying design and expectations to the education.

What have not been discussed here is if for instance the common part of the education for all students should be shorter than one and a half years. It seems important to investigate and consider, but present investigations do not give any clear direction. Still summarising investigations like the questionnaires seem to be a good starting point for creating dialogue about how to constantly improve the education.

Conducting the focus groups was very engaging for all parties involved both internally and externally. Internally the summaries were a good foundation for the curriculum discussions. Several guests said they would be happy to do more. The loose structure and very open questions complicates analysing the data, and makes it more open for interpretation. The experience in general was also that more time for discussions would have been preferred. What also seemed challenging was that it appeared that some of our guests did not know the school, curriculum and issues of concern in general and at the line of specialisation very well. Some participants were former students and they sometimes referred back to their own experiences as students and hereby did not reflect on the present situation. Other reflections were made on the basis of graduates they meet and perhaps employed for assignments. There is no doubt that the investigations have been worth while but in stead of focus groups I would suggest organising events where all participants were on more equal terms, and try to find ways of staging the dialogue so became more detailed.

CONCLUSIONS

This paper has addressed what design students expect from their design education and what the market expects from design graduates. It is based on two investigations carried out at Danmarks Designskole; a questionnaire filled out by 152 present students and 8 focus groups involving in all 41 persons representing various design professions. The main reason for conducting both investigations is that Danmarks Designskole is in the middle of a change process from being a vocational design school to (hopefully) achieve status as 'design university' in 2010.

Re-designing curriculum, work procedures, self image etc. is challenging. Therefore it seemed relevant to involve the two most important stakeholders in the change process namely the students and representatives from the design trade. Both questionnaires and focus groups had very open questions. The drawback from a research point of view is that data analysis is very time consuming.

The majority of the students and the people attending the focus groups do not expect a vocational education. The students expect for instance more general knowledge on design theory, design processes, design history and more. Within the education there should be room for deep specialisation within one line of specialisation, but also acquiring broader design skills and competencies by picking subjects from various lines of specialisation. People from the focus groups find it important with a broad common basis for everyone as it give hint to what can be expected from various students independent of which line of specialisation one belong to. It is recommended to have some kind of specialisation as it gives self-esteem and a sense of 'uniqueness' that can help when searching for job.

Both students and the representatives from various design professions demand high quality teaching within relevant topics. For the trade it is important that graduates can work both individually and independently, and that they are able to collaborate with others (including people having other competencies. They stress that the increased competition highlights the necessity of having the ability to argue better for ideas and design suggestions. It is a necessity to think internationally and prepare the students for what is expected in a real life work situation. As examples are mentioned the ability to be inventive, work fast and with several projects in parallel.

For some lines of specialisation it is important to acquire experiences with user-centered design approaches, where the investigation does not say anything about if it is necessary for all students. The design institution should give the students the possibility to choose between obtaining a relatively narrow specialisation and a broader span of tools and knowledge to base the design on. In general the school is recommended to creating an education where all students learn about the design trade from an international perspective and that all students get a broad basis with knowledge and tools about idea generation, concept development, collaborative design processes including users.

The majority of the participants from the trade encourage the school to focus more. It was recommended to reduce the number of areas that the education in general and the lines more specifically wants to include in the curriculum. It was believed to be a good idea for each line of specialisation to create a series of profiles as examples of design candidates to help student imagine what kind of career they want and what kind of competences that are needed. People from the focus groups also welcomed the initiative.

The investigations have been important as part of the change processes that Danmarks Designskole is in. In the future it is recommended to use approaches that support dialogue on more equal terms for all parties involved.

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