

**Evaluation of the design research
of Danmarks Designskole
2004-2009**

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1. Introduction and summary

1.1 Introduction

This report presents the outcome of an evaluation 2010 of the design research 2004-2009 of The Danish Design School (in this report Danmarks Designskole and the acronym DKDS).

The evaluation of the design research of Danmarks Designskole is part of an evaluation of the design research 2004-2009 under the Ministry of Culture, carried out in 2010 by a Nordic evaluation panel. The Panel has thus evaluated the design research of Designskolen Kolding, Det Kgl. Kunstakademis Arkitektskole and Arkitektskolen Aarhus, besides of Danmarks Designskole. For each of the four educational institutions the evaluation of the design research includes evaluation of the institution's share in Danish Centre for Design Research (DCDR).

The evaluation is included as an item in the *Performance Contracts* for the architect and design schools under the Ministry of Culture. The result of the evaluation is a separate evaluation report of the design research of each of the four schools, together with an overall evaluation report, which summarises the four part evaluations.

The assessments and recommendations, including the overall conclusions, of the Evaluation Panel as regards the design research of Danmarks Designskole are summarised in chapter 1 in the present report. Chapter 2 describes briefly the purpose and process of the evaluation and the evaluation panel. Furthermore the chapter briefly explains the political and regulatory framework for the design research at the institution, including the research strategy of the Ministry of Culture and the Panel's view on design research in an international perspective. Finally chapter 2 contains a factual description of Danmarks Designskole and its design research.

Chapter 3 presents the Panel's assessments and recommendations concerning the research of Danmarks Designskole. These are structured in compliance with the five evaluation topics indicated in the Terms of Reference for the evaluation.

In accordance with the Terms of Reference, the Panel has assessed Danmarks Designskole's research activity in the evaluation period and given recommendations for the future research at the school, with a main focus on the latest years of the evaluation period.

Eight annexes are attached to the report, including the Terms of Reference for the Evaluation, list of background documents and other annexes relevant for the evaluation.

1.2 Summary of the Panel's assessments and recommendations

The research of Danmarks Designskole (DKDS) has, since the school began to invest seriously in research and doctoral education, from 2003 and onwards advanced rapidly. The research presented to the Panel is of very good, and in some areas excellent, quality, in spite of the short history of the research of this rather small design school. The research appears to have relevance both internally and externally – internally in developing especially the master-level education towards a growingly research-based mode and generally in heightening the competence capacity

of the faculty, and externally via dissemination to the research community and other vital stakeholders. Overall we find the ratio between research finances and production satisfactory. In the beginning of the evaluation period we must remember that the research activity was still in incubation and hence the latter years of the evaluation period show more balance in input versus output. We thus find that within the global framework of design research the school has, generally spoken, reached a good international standard.

The school's perception and use of the concept of research is in compliance with the concept of research as defined in the research strategy of the Ministry of Culture, while at the same time the school is moving towards an increased link between the research and design practice. DKDS' 2008-2010 strategy points out the importance of building bridges between research and artistic development, and in depth philosophical discussions about the nature and directions of design research can be found in the school's publications. This strategic direction of the research at the school is very positive. It strengthens the relevance of research both for the development of design practice and as a foundation for design education, and is very much in line with the international development within the field of design research.

Danmarks Designskole has since 2003 formulated several strategies for its research. This signifies a goal-driven activity and, all in all, most of the suggestions in these plans have been implemented. The most recent strategy appears as a logical and more sharply defined continuation of the activity carried out so far. The achievements in the evaluation period, in terms of development of the research activity, are particularly admirable in light of the history of the school and its development of a research activity. The rather small school has had relatively few research finances and a very few years for trying to achieve something that usually takes a quarter of a century.

DKDS has succeeded with establishing a very sound and promising organisation and environment for its design research and for the further development of the research. The school is well on the road in terms of prioritisation of research areas; and addition DKDS' networking and collaboration with other design research organisations and industry are on the right course, although these need to be further expanded and consolidated, particularly on the international arena. The school's broad dissemination of knowledge from the research takes place via several channels and appears very sound in view of the limited resources of the school.

Furthermore DKDS has a good collaboration with, and benefits from the services of, DCDR in several of the abovementioned activities, particularly in the later years, after the re-organisation of DCDR.

Design research is a relatively new discipline in the institutions under the Ministry of Culture, initiated in 2003, and the design research activity of DKDS can mature further in the coming years. Among others the school is still in a process of increasing the links between research and design practice. In addition there are still educational areas, the most obvious being crafts, within which it is relevant for the school to develop a research activity. The small volume of the school's research activity is hampering this development, though. Furthermore the school is still under development in terms of collaboration with external user-organisations and research groups.

The Panel has the following **recommendations** regarding the research of Danmarks Designskole:

- ⇒ In light of the present political focus on design as an important innovation promoter, the basic funding for the school should be better balanced with the political targets for the design research and education.
- ⇒ Serious attention should be paid to the challenges and added values of the anticipated merger between Danmarks Designskole og Kunstakademiets Arkitektskole.

- ⇒ DKDS should continue to pursue and achieve external funding for research but at the same time be aware that it is important to maintain a significant share of basic finances, or self-financing, for ensuring stability of the research activity and coherent development of the research competences. In connection with external financing the school should place main focus on funding of research which contributes to strengthening the focus areas and competences of the school.
- ⇒ DKDS should continue to develop practice-based research, i.e. *research through design*, with focus on strengthening the direct links between research and design practice, and with focus on the development of techniques and methods for design practice.
- ⇒ The school should develop research in further areas, the most obvious being the area of crafts, corresponding to its educational activities. However, at present the rather small research volume constitutes a barrier for implementing further research areas. Development of further research areas should therefore be closely balanced with the research capacity of the school. We see future growth as a positive goal, but attention has to be paid to maintaining the quality and integrity which is now characterizing the research of the school.
- ⇒ DKDS should continue to increase its promising scientific collaboration with research groups, nationally and internationally. This external “volume” in terms of content as well as financing can “expand” the school’s own research capacity. Furthermore such outreach could enrich the still somewhat “academic nature” of the research – this said with respect towards the results reached so far.
- ⇒ The school should continue to expand its collaboration with public and private user-organisations. Society needs design in several sectors, from medicine to social policy, from technology to humanities. This implies that a very large part of design research projects – from media art to fashion – generate knowledge that is needed in a welfare society. On this basis it should be relatively easy for the researchers to find partners both from the private and public sectors.
- ⇒ At a longer term DKDS should build up dissemination of knowledge from research more directly to the core groups of design practice, design-related production and the users.

1.3 Introduktion og sammenfatning

Introduktion

Denne rapport er resultatet af den internationale evaluering 2010 af designforskningen ved Danmarks Designskole 2004-2009.

Evalueringen af Danmarks Designskoles designforskning er en del af den evaluering af designforskningen under Kulturministeriet, der er blevet gennemført i 2010 af et nordisk evalueringspanel. Panelet har således evalueret designforskningen ved Designskolen Kolding, Det Kgl. Kunstakademis Arkitektskole og Arkitektskolen Aarhus ud over ved Danmarks Designskole.

For hver af de fire institutioner omfatter evalueringen endvidere institutionens andel i Center for Designforskning (CDF).

Evalueringen er et af målene i resultatkontrakterne for arkitekt- og designskolerne under Kulturministeriet. Resultatet af evalueringen er en evalueringsrapport for hver af de fire skoler samt en overordnet evalueringsrapport om designforskningen under Kulturministeriet.

Ud over den korte introduktion indeholder kapitel 1 en sammenfatning af evalueringspanelets vurderinger, anbefalinger og overordnede konklusioner vedrørende forskningen ved Danmarks Designskole. Kapitel 2 præsenterer kort evalueringspanelet samt evalueringens formål og gennemførelse. Kapitlet redegør endvidere kort for de politiske og lovgivningsmæssige rammer for designforskningen, herunder for Kulturministeriets forskningsstrategi og Panelets syn på designforskning i et internationalt perspektiv. Endelig indeholder kapitel 2 et afsnit med faktuel information om Danmarks Designskole.

Kapitel 3 omfatter Panelets vurderinger, konklusioner og anbefalinger struktureret i overensstemmelse med de fem evalueringsemner, som er anført i kommissoriet for evalueringen.

I overensstemmelse med kommissoriet har Panelet evalueret Danmarks Designskoles forskningsaktivitet i evalueringsperioden og givet anbefalinger for den fremtidige forskning og dens organisering ved skolen, med hovedfokus på de seneste år af evalueringsperioden.

Der er tilknyttet otte bilag til rapporten, inklusive kommissoriet for evalueringen, en liste med baggrundsdokumenter og andre bilag, som er relevante for evalueringen.

Sammenfatning af Panelets vurderinger og anbefalinger

Forskningen ved Danmarks Designskole (DKDS) har gjort hurtigt fremskridt fra 2003 og frem, dvs. siden skolen for alvor begyndte at investere i forskning og forskeruddannelse. Forskningen præsenteret for Panelet er af god og på nogle områder fremragende kvalitet, på trods af den korte historie for forskningen på denne forholdsvis lille designskole. Forskningen lader til at have relevans både internt og eksternt – internt især gennem udviklingen af kandidatuddannelsen mod en voksende forskningsbaseret samt generelt ved fremme af de akademiske medarbejders kompetencer – og eksternt via formidling til designforskningsmiljøet og andre centrale interessegrupper. Overordnet finder vi forholdet mellem forskningsfinansiering og -produktion tilfredsstillende. Man må huske, at i begyndelsen af evalueringsperioden var forskningsaktiviteten stadig kun i sin vorden, og at de senere år af evalueringsperioden derfor viser bedre balance mellem input og output. Vi finder således, at skolen har nået en god international standard inden for det globale designforskningsmiljø.

Skolens brug og forståelse af forskningsbegrebet stemmer overens med forskningsbegrebet som defineret i Kulturministeriets forskningsstrategi, idet skolen samtidig bevæger sig mod stigende sammenhæng mellem forskning og designpraksis. DKDS' strategi 2008-2010 peger på vigtigheden af at bygge bro mellem forskning og kunstnerisk udviklingsvirksomhed, og i skolens publikationer kan man finde dybdegående filosofiske diskussioner om designforskningens natur og fremtidige udvikling. Denne strategiske kurs for skolens designforskning er meget positiv. Den styrker forskningens relevans for både udviklingen af designpraksis og som basis for designuddannelse og er i høj grad på linje med den internationale udvikling inden for designforskningens område.

Siden 2003 har Danmarks Designskole formuleret flere strategier for sin forskning. Dette dokumenterer en måldrevet aktivitet, og alt i alt er de fleste af planerne blevet implementeret. Den nyeste strategi lader til at være en logisk og mere skarpt defineret fortsættelse af den hidtidige

aktivitet. Resultaterne i evalueringsperioden, for så vidt angår udviklingen af forskningsaktiviteten, er specielt beundringsværdige i lyset af skolens historie og dens udvikling af en forskningsaktivitet. Den forholdsvis lille skole har haft relativt få forskningsmidler og meget få år til at prøve at opnå noget, som normalt tager et kvart århundrede at opnå.

Det er lykkedes DKDS at etablere en meget sund og lovende organisation og miljø for designforskningen og for den yderligere udvikling af forskningen. Skolen er godt på vej for så vidt angår prioritering af forskningsområder. Desuden er DKDS' samarbejde og netværk med andre designforskningsinstitutioner og erhvervsliv på rette kurs, om end disse bør udvides og konsolideres yderligere, især på den internationale arena. Skolens brede formidling af viden fra forskningen foregår via adskillige kanaler og lader til at være glimrende i lyset af skolens begrænsede ressourcer.

DKDS har endvidere et godt samarbejde med og udbytte af CDF og CDF's services, i flere af ovennævnte aktiviteter, især i de senere år, efter omorganiseringen af CDF.

Designforskning er en forholdsvis ny disciplin i Kulturministeriets institutioner, startet i 2003, og DKDS' designforskningsaktivitet kan modne yderligere i de kommende år. Skolen er blandt andet stadig i gang med at øge forbindelsen mellem forskning og designpraksis. Desuden er der stadig uddannelsesområder, med kunsthåndværk som det mest indlysende, hvor det er relevant for skolen at udvikle en forskningsaktivitet; men den lille størrelse af skolens forskningsaktivitet hæmmer denne udvikling. Skolens samarbejde med eksterne bruger-virksomheder og forskningsgrupper er også stadig under udvikling.

Panelet har følgende **anbefalinger** vedrørende forskningen ved Danmarks Designskole:

- ⇒ I lyset af det aktuelle politiske fokus på design og dets potentiale for innovationsfremme bør basisbevillingen til skolen være i bedre balance med de politiske mål for designforskning og uddannelse.
- ⇒ Der bør rettes seriøs opmærksomhed mod udfordringerne og fordelene ved den forventede fusion mellem Danmarks Designskole og Kunstakademiets Arkitektskole.
- ⇒ DKDS bør fortsætte med at opsøge og opnå ekstern forskningsfinansiering, men samtidig være opmærksom på vigtigheden af at bibeholde en væsentlig andel af basisfinansiering, eller selvfinansiering, for at sikre stabilitet i forskningsaktiviteten og sammenhæng i udviklingen af forskningskompetencerne. I forbindelse med ekstern finansiering bør skolen primært satse på støtte til forskningsaktiviteter, som bidrager til at styrke skolens fokusområder og -kompetencer.
- ⇒ DKDS bør fortsætte med at udvikle praksisbaseret forskning, dvs. forskning gennem design, med fokus på at styrke de direkte forbindelser mellem forskning og designpraksis og med fokus på udviklingen af teknikker og metoder til designpraksis.
- ⇒ Skolen bør udvikle forskning inden for yderligere områder, som modsvarer uddannelsesaktiviteterne. I denne sammenhæng er kunsthåndværk det mest indlysende område for at udvikle en forskningsaktivitet. Udviklingen af nye forskningsområder bliver imidlertid hæmmet af det forholdsvis lille volumen af forskningsaktiviteten og bør derfor afbalanceres nøje med skolens forskningskapacitet. Vi ser fremtidig vækst som et positivt mål, men der skal være opmærksomhed på at fastholde den kvalitet og integritet, som i dag karakteriserer skolens forskning.

- ⇒ DKDS bør fortsætte med at øge det lovende videnskabelige samarbejde med forskningsgrupper nationalt og internationalt. Dette eksterne "volumen" af indhold og finansiering kan "udvide" skolens egen forskningskapacitet. Endvidere kan et sådant engagement berige den stadig noget "akademiske natur" af skolens forskning – dette sagt med respekt for de hidtil opnåede resultater.
- ⇒ Skolen bør fortsætte med at udvide samarbejdet med offentlige og private brugervirksomheder. Samfundet har brug for design i adskillige sektorer, fra medicin til socialpolitik, fra teknologi til humaniora. Det betyder, at en meget stor del af designforskningsprojekter – fra mediedesign til mode – genererer viden, som et velfærdssamfund har brug for. Derfor burde det være forholdsvis let for forskerne at finde partnere i både den private og offentlige sektor.
- ⇒ På længere sigt bør DKDS opbygge formidling af viden fra forskningen mere direkte til kernegrupperne inden for designpraksis, designrelateret produktion og brugere.

2. Purpose and process of the evaluation

This chapter presents the purpose and process of the evaluation of the design research of Danmarks Designskole, including a brief introduction to the background for the evaluation and to the evaluation Panel. In addition the chapter includes a brief description of the political and regulatory framework for the institution and the design research. Furthermore the chapter introduces the Research strategy of the Ministry of Culture, including the Ministry's definition of the concept of (design) research, followed up by an international perspective on design research. A brief factual description of Danmarks Designskole and its design research ends the chapter 2.

2.1 Background for and purpose of the evaluation

The evaluation of the design research of Danmarks Designskole is part of an evaluation of the design research under the Ministry of Culture in the period 2004-2009, which is carried out in 2010 and also includes evaluation of the design research of Designskolen Kolding, Det Kgl. Danske Kunstakademis Arkitektskole og Arkitektskolen Aarhus. The evaluation of the design research of each of the four educational institutions includes evaluation of the institution's share in Danish Centre for Design Research (DCDR). The evaluation is included as an item in the *Performance Contracts* for the architect and design schools under the Ministry of Culture.

The Evaluation has been carried through in accordance with the *Terms of Reference for evaluation of the design research under the Ministry of Culture* of 26 January 2010 (annex 1), and in compliance with *Vejledende retningslinier for forskningsevalueringer under Kulturministeriet* (Guidelines for research evaluations under the Ministry of Culture) of 11 January 2007.

In accordance with the Terms of Reference, the purpose of the evaluation has been to establish an unbiased and independent assessment of the design research of the four institutions during 2004 to 2009. The Terms of Reference stipulate that, with basis in the assessment of the period 2004-2009, the evaluation must make status and provide recommendations for the future research and its organisation at the four institutions.

2.2 The Evaluation Panel

The evaluation was conducted by an external evaluation panel of Nordic design researchers, who hold relevant expertise in relation to the design research under the Ministry of Culture. The Panel was composed of the following five members:

- Vice Dean, Professor, PhD **Pekka Korvenmaa (Chair)**, MA Programme in Industrial and Strategic Design, Aalto University School of Art and Design, Helsinki
- Professor, PhD **Lars Hallnäs**, Interaction Design, the Swedish School of Textiles, University of Borås
- Professor, PhD **Sara Ilstedt Hjelm**, Department of Computer Science, KTH, Stockholm
- Professor, PhD **Birger Sevaldson**, the Oslo School of Architecture and Design

- Professor, PhD **Minna Uotila**, Department of Industrial Design, University of Lapland, Rovaniemi.

M.Sc.Eng. Pia Jørnø, independent consultant and science writer, served as process consultant for the Panel.

2.3 Method and process of the evaluation

In accordance with the Terms of Reference, the Evaluation Panel has made assessments of the different design research disciplines and of the design research as a whole, and the conditions and framework for the research, at Danmarks Designskole. The Panel has not evaluated the researchers of Danmarks Designskole individually.

In order to provide assessments the Panel has studied the research and its framework and conditions in a historical perspective (2004-2009). But in view of the rapid development of the field of design research and of the evaluated institution as regards design research, the evaluation has placed weight on the present situation and future trends for the institution and its design research. The Panel's recommendations refer thus mainly to the research and its organisation in the present and coming years.

The evaluation of the institution's research includes assessments and future-oriented recommendations as regards the following five topics indicated in the Terms of Reference:

- The conditions and framework for the research, including the economic framework, resources for research and possibilities for recruitment of researchers
- Planning and organisation of the research, including the research policy/strategy of the institution and its research management and research administration
- Extent, quality and relevance of the research
- The research environment and scientific collaboration with national and international research groups
- Dissemination of knowledge from the research

Under each of these five main topics the Panel has formulated a number of sub-topics, which have formed a supplementary and more specified basis for assessing the design research and its conditions. The sub-topics are indicated in annex 2. Furthermore, for each of the five main topics the Panel has formulated a number of keywords for issues, about which the Panel has enquired information from the evaluated institution. The keywords are presented in a document attached as annex 3.

Reference framework for the evaluation

In the evaluation the Panel has used the Research strategy of the Ministry of Culture as a reference framework for its assessments of and recommendations. The Ministry's Research strategy is summarized in section 2.5.

Furthermore, the Panel has included the political and regulatory conditions for the design research under the Ministry of Culture in its considerations during the evaluation. The political and regulatory framework for the design research is described in section 2.4.

The Panel has thus evaluated the research of the institution in relation to the specific traditions, methods and conditions for the design research under the Danish Ministry of Culture.

In addition, the Panel has taken common international standards and practices for design research into consideration when formulating its assessments of and recommendations. The international standards and practices of design research are briefly addressed in section 2.6.

The Panel has obtained the information from the institution by the following channels:

- Background documents, including annual reports, key data, research strategies and reports, selected scientific publications, etc. A list of the background material from the evaluated institution is attached as annex 6. The Ministry's request for background material is attached as annex 4.
- A self-evaluation report prepared by the institution. The Panel's guidelines for preparation of the self-evaluation report are attached as annex 5.
- Dialogue, including meetings, with management and researchers of the evaluated institution.
- Dialogue, including meetings, with management and employees at Danish Centre for Design Research, in which the evaluated institution has part.

The abovementioned meetings with Danmarks Designskole took place 18 March 2010. The meetings in Danish Centre for Design Research took place 17 March. The order of the meetings, and the participants in them, are indicated in annex 7. Annex 8 shows the overall time and work plan for the evaluation.

The meetings were started with brief introductory presentations by the attendants from the institutions followed by informal discussions and questions from the Panel with focus on information further to, or clarifying, the received written information, and with relevance for the topics of the evaluation.

During March-June the Panel completed the evaluation report, assisted by the consultant. The Panel's internal communication on the report took place in this period via e-mail, telephone and meetings. The completed report was e-mailed to the institution 10 June for commenting. Danmarks Designskole forwarded its comments 18 June by e-mail. The Panel, however, has retained the final decision as to the inclusion or exclusion of the proposed alterations or amendments in this final version of the report, which was mailed to Danmarks Designskole 30 June.

The planning and organisation of the evaluation were drafted in communication between the Panel, the Ministry of Culture and the evaluated institution, with assistance from the process consultant. For planning, organisation and provision of relevant information, the institution had appointed a reference group and a contact person.

2.4 The political and regulatory framework for the design research

Legislation

The legislative framework for Danmarks Designskole and Designskolen Kolding is decreed in the Act on Artistic Higher Educational Institutions under the Ministry of Culture (Order no. 889 of 21 September 2000)¹. This act regulates all the artistic educational institutions under the Ministry of Culture, all of which are based on artistic development and/or research.

Before 1 January 2010 the Act did not include research and research-based education in the objectives of Danmarks Designskole. Nevertheless, since 2003, the school has a right to include research based education in its design education, according to the Order on Design Education at Danmarks Designskole and Designskolen Kolding². Furthermore the Act has been changed so that from 1 January 2010 the objective of Danmarks Designskole is “to provide education on artistic and scientific basis within design, arts and crafts and related fields until the highest level, to conduct artistic development activity and conduct research within the field of design”³. From 1 January 2010, the Act thus includes research and research based education in the objectives of Danmarks Designskole.

However, DKDS’ bachelor and master programmes must also be *accredited* as research based educational programmes before the formal basis is in place for the school being a “higher research based educational institution”. The Bachelor and Master programmes of Danmarks Designskole are thus intended to become accredited as research and art based educational programmes in 2010⁴.

Being a self-owning institution, Designskolen Kolding is regulated differently than Danmarks Designskole. The Act on Artistic Higher Educational Institutions does thus not include research and research based education in the objectives of Designskolen Kolding; and the Act has not been changed as concerns the objectives of DK.

However, like Danmarks Designskole, the tasks of Designskolen Kolding are regulated by the above-mentioned Order on Design Education, which means that DK has a right to include research based education in its design education since 2003.

It is the intention that the Bachelor and Master programmes of Designskolen Kolding shall become accredited as research and art based educational programmes in 2010 concurrently with the accreditation of Danmarks Designskole’s programmes.

With the aim of achieving this accreditation and move forward to legal status as a higher research based educational institution, a number of obligations to conduct research are laid down, for each of the two schools, in the so-called performance contract between the school and the Ministry of Culture. (The performance contracts are further described on page 14).

The two design schools can establish collaboration with a higher educational institution about doctoral education in accordance with the rules decreed by the Ministry of Science, Technology and Innovation on PhD education and the PhD degree⁵.

Until the two schools achieve regulatory status as higher (research-based) educational institutions, the doctoral education of the two design schools is taking place via the Danish Centre for Design Research (see later paragraph in this section). This is implemented by formally anchoring PhD scholars of the two design schools in the two architect schools.

¹ LBK nr 889 af 21/09/2000 med senere ændringer LOV nr 1268 af 16/12/2009

² Bekendtgørelse nr. 617 af 27. juni 2003 om designuddannelse ved Danmarks Designskole og Designskolen Kolding

³ LOV nr 1268 af 16/12/2009

⁴ Jf Den Danske Kvalifikationsrammes typebeskrivelse af grader ved videregående kunstneriske uddannelsesinstitutioner

⁵ Bekendtgørelse om ph.d.-uddannelsen ved universiteterne (ph.d.-bekendtgørelsen). BEK nr 18 af 14/01/2008. Kulturministeriet er pt. ved at få udarbejdet sin egen bekendtgørelse, som kommer til at sidestille ph.d.-studerende ved de kunstneriske uddannelser fuldstændigt lovgivningsmæssigt.

The two design schools' employment of scientific staff is regulated by the directive of the Ministry of Culture on employment of artistic/scientific staff.⁶ Scientific staff members of Danmarks Designskole are formally employed by Kunstakademiets Arkitektskole while the scientific staff members of Designskolen Kolding are formally employed by Arkitektskolen Aarhus.

Multiannual political agreements for the educational programmes and performance contracts of the Ministry of Culture

From 2003 to 2010 included, the higher educations under the Ministry of Culture have been embraced by four-year political agreements. Strengthened focus on design research has been an important political focus area in the whole period.

In 2003 initiative was taken, and funding allocated, to strengthen the design research and establish obligatory collaboration between the two architect schools and the two design schools on a joint competence centre, Danish Centre for Design Research (DCDR). The aim was to establish basis for the two design schools offering research based design education programmes which can become accredited in 2010 as research based Bachelor and Master programmes. Academic lecturer positions and doctoral education in the field of design research should be established concurrently, based on obligatory collaboration between the design schools and the architect schools or other research based higher educational institutions.

As part of the implementation of the multiannual agreements the design and architect schools are governed through performance contracts between the institution and the Ministry of Culture. The performance contract includes a number of targets which are the focus areas for the contract period (2007-2010 at present). The targets are areas which demand particular attention in the contract period in order to fulfil the strategy of the institution. The performance contracts of the two design schools include, among others, targets on research and doctoral education.

Danish Centre for Design Research (DCDR)

The Danish Centre for Design Research (DCDR). The Centre is an organisation under the Danish Ministry of Culture, established as a collaboration between Danmarks Designskole, Designskolen Kolding, Arkitektskolen Aarhus og Kunstakademiets Arkitektskole. The centre acts as an independent centre for the design research that takes place at the four institutions. DCDR is anchored at Kunstakademiets Arkitektskole (KA) in accordance with an agreement between KA and the Steering Committee of DCDR.

The aim of Danish Centre for Design Research is to build and promote design research in Denmark, to disseminate knowledge and building Danish and international networks among research institutions, enterprises and the general public.

The overall management of the centre is handled by the Steering Committee which comprises a Chair (appointed by the Danish Ministry of Culture), the rectors of the Danish schools of architecture and design, and two external, international members (from Oslo and Helsinki).

⁶ Bekendtgørelse nr. 1507 af 14. december 2006 om ansættelse af kunstnerisk/videnskabeligt personale ved visse uddannelsesinstitutioner under Kulturministeriet

DCCR disposes of a pool allocated in the Danish Appropriation Act for design research. The centre's Advisory Research Committee, which is constituted by three impartial design researchers, review the grant applications and makes recommendations about the allocation of grants for specific research projects to the centre's Steering Committee on basis of a set of guidelines.

The centre receives 12-15 grant applications a year. Until 2010 the centre has granted funding for a total of 57 research projects (one of which has never been realised). The total funding budget has been 12 million DKK in 2005-08, 3 million DKK in 2009 and 6 million DKK in 2010-12.

DCCR's annual reports account for the four schools' activities under the auspices of DCCR, so that these reports can be appendices to the annual reports of the four schools. The annual reports of DCCR thus contribute to the two design schools' reporting on fulfilment of the targets of the performance contracts.

The Research Committee of the Ministry of Culture

The objective of the Research Committee is to provide advice and recommendations to the Ministry of Culture concerning the research at the research institutions under the Ministry, including advice on research programmes, research structure and important research political questions. The Research Committee prepares rules and guidelines for research evaluations and their follow-up. Finally the Research Committee administrates the Research Pool of the Ministry of Culture, funding from which the Ministry's institutions can apply for research projects.

2.5 The research strategy of the Ministry of Culture

A working group which was established in 2008 by the Ministry of Culture has formulated the present *research strategy* of the Ministry. The research strategy is published in the document "Forskningsstrategi for Kulturministeriets område" of 1 March 2009.

The purpose with the research strategy is to strengthen the research under the Ministry of Culture. The strategy forwards a number of recommendations, which can be summarized as follows⁷:

- It is important that each research institution of the Ministry of Culture **develops a long-term research strategy**. Each institution is therefore recommended to consider the following at long term – through research strategies:
 - o Which activities support the purpose and objectives of the institution;
 - o Which research activities can and should attain external support;
 - o To which extent there is need for development of new research areas, and how to define the interface with contiguous activities.
- The institutions are recommended to orient themselves towards a **common concept of research** in their strategic planning of the research effort – rather than towards specialist or/and institutionally specific concepts of research.
- The research institutions are recommended to establish a **joint research administrative advice service** with the purpose of building common knowledge on application procedures, quality assurance, networks, reporting of research statistics etc. for solid support of the research of the individual research institution.

⁷ Cf. page 9 of "Forskningsstrategi for Kulturministeriets område"

- The research institutions are recommended to **actively and systematically disseminate their research to universities and industry** in order to **brand themselves as attractive collaboration partners**.
- The research institutions are recommended to establish new networks or expand existing networks to binding collaborative relations across the institutions of the Ministry, including universities and industry, nationally and internationally, where relevant.
- The organization of PhD training within the area of the Ministry of Culture must be adapted in light of the restructuring at the universities in respectively PhD programmes and graduate schools. In this connection it is important to have focus on critical mass in the PhD training.

The concept of research

Particularly as regards the definition of research – or concept of research – the Ministry’s Research strategy finds a need for viewing research and development of the Ministry’s institutions in relation to research and development in the general research community⁸.

As mentioned in the summarized recommendations, the Research strategy finds it essential that:

- the institutions of the Ministry of Culture orient themselves towards a **common concept of research** in their strategic planning of the research effort – rather than towards discipline-specific or/and institutionally specific concepts of research – in order to being able to compete about the central research funds on equal terms with other research communities.

The Ministry’s Research strategy has thus focused on establishing generally accepted criteria for research. The criteria can be derived from the definition of research of both OECD and the Research Committee of the Ministry of Culture, and from the criteria for applications to the funds of the Danish Council for Independent Research.

The Research strategy formulates the criteria in relation to the dimensions originality, validity and transparency as follows:

- **Originality:** *that the research develops new knowledge, insight and understanding*
This may happen through:
 - development of new methods, models, concepts and theories
 - use of existing research results and methods in new contexts
 - creation of new, or significant improvements of existing, materials, products, processes, techniques and methods, systems or services.
 Research projects which can be characterized as experiments (afprøvning) and development may use artistic development competences and reflective data collection competences.
- **Transparency:** *use of relevant methods and construction of theories*
The research must be objectified through application of the methods and theory-constructions which are relevant for the research area in question. Possible methodological deviations or method developments in a research activity must be well documented, well argued and relevant in relation to the standards of the research area in question.
- **Validity:** *Account for the relation of the research to the relevant research areas*

⁸ Cf. page 55-57 of "Forskningsstrategi for Kulturministeriets område"

The relation of the research to the relevant research areas must be accountable, and the research must be formulated in a way which is accessible for peer reviewing.

The Research strategy adds to the above criteria that reflection in written form is a precondition for dissemination of the research results and for assessment of the quality of the research.

Furthermore the strategy emphasizes that the focus on commonly acknowledged criteria for research should not remove attention from the other central tasks of the institutions or hinder development of new areas of research.

As implied in the summarized recommendations of the Ministry's Research strategy, the Strategy finds it essential that the institutions strengthen their research by clarifying their research and development activities, prioritizing the different activities and by working strategically with the organization and financing of the research. The Ministry's Research strategy therefore recommends that the institutions prepare research strategies and plans for their research and development activities in overall and long-term perspective: strategies for activities which support the purpose of the institutions, and current goals, including strategies for the wanted balance between:

- activities which can be acknowledged directly as research and obtain external support (from the Danish research councils, EU's research programmes etc.)
- activities which can be developed into new fields of research, through a particular effort on development of methods, theories and networks, and which can thus at a longer term become recognized as research and achieve support from the research councils.
- activities which are central for the institution and may be integrated in research processes, but which cannot be recognized, isolated seen, as research and therefore not achieve external research funding.

The research strategies and plans of the institutions must furthermore address the extent to which the concrete research projects facilitate establishment of formal collaborations with other research institutions, in order to obtaining scientific (faglig) strength and effectiveness. This may improve the competitiveness of the institutions for obtaining increased research resources nationally as well as internationally.

In continuation of its recommendations on research, the Strategy invites the institutions to initiate similar strategic work with focus on artistic development.

2.6 Design research in an international perspective

Design research is a relatively young research discipline, and the international concepts and methods for this field of research are still in a state of development. Among others, the international discussion concerns the concepts *research into design*, *research for design* and *research by design* (also termed *research through design*), including discussion about the borderline between *research* and *artistic development*.

The current international trend is that design research is moving towards greater complexity in terms of both issues and approaches. In addition the concept of *research by design* is becoming ever more central, because this research field produces unique knowledge not found in other domains. In other words, the design research discipline moves towards approaches where design practice and artistic development is subject for reflection and knowledge production. The concept

of *research by design* comprises several approaches, spanning from reflection and knowledge production based on outside observations of others' design practice, looking at practice retrospectively or contemporarily as in case studies, to participatory research and insider perspective where the designer-researchers use their own practice as a means for investigation and a subject for reflection and knowledge production.

The concepts of Originality and Validity used in the research strategy of the Ministry of Culture works well in relation to the international perception of design research, but the focus on research methodology in the definition of Transparency is perhaps more problematic. While this is of main importance in many areas of empirical and experimental research, it is a rather different matter in, for example, practice based design research, being more explorative in nature. In our assessments in chapter 3 of the design research work of the school we have therefore interpreted the concept Transparency in more general terms of clarity and precision in results.

2.7 Facts about Danmarks Designskole

Brief introduction

Danmarks Designskole is an educational institution under the Ministry of Culture. The school is offering a series of study programmes in design for Danish students and international guest and exchange students.

Since 2003 the school has built up a design research activity. The aim is to be accredited in 2010 as an institution offering research-based Bachelor, Master and PhD education.

Although the regulatory framework allows Danmarks Designskole to conduct research based education, the school has not had legal status as a higher research based educational institution. Therefore, the researchers of the school have been formally employed by Kunstakademiet Arkitektsskole, and the formal graduation of PhDs has been conducted by institutions with status as university or higher research and art based educational institution.

Purpose/objectives of Danmarks Designskole

Pursuant to the legislation concerning artistic higher education institutions under the Ministry of Culture, cf. Act no. 889 of 21 September 2000, the **objective** in the evaluation period of Danmarks Designskole has been to provide education within arts and crafts, design, and related fields, and to contribute to the dissemination of knowledge about methods and results within the profession.

Furthermore it is the **objective** of Danmarks Designskole to strengthen both general and specialist design research in Denmark, in compliance with the political multiannual agreement on the Ministry of Culture's educational programmes, and the requirement of the school's performance contract 2003-06 with the Ministry that the design programme be raised towards university level in accordance with the Bologna Declaration's 3+2 educational structure.

Danmarks Designskole's **vision** is to develop the school into a design university which by means of a new design programme, research, and artistic work will become a recognised player, both in Denmark and internationally, in the education of designers and the development and utilisation of new knowledge for the design profession.

Organisation overall

Danmarks Designskole's education, research and development is organised in five centres, namely:

- Centre for Communication Design
- Centre for Spaces, Furniture and Industrial Design
- Centre for Glass and Ceramics
- Centre for Textiles and Fashion (Beklædnings- og Tekstildesign)
- Centre for Design Theory and Method.

The five Heads of Centre report directly to the Rector of the school. **The daily management** is conducted by the management group, headed by the rector and including the Head of Research and the other Heads of Centre.

A business panel is established by The Danish Ministry of Culture and Danmarks Designskole in order to strengthen the contact between the educational programme and the business sector. The panel is appointed and consists of 7 external key partners. It provides the school with advice and counselling in regard to activities within education and business relations.

In 2009, the total number of employees was 114 (total number of persons employed converted into fulltime employees).

Beyond the evaluation period, i.e. 1 January 2010 Danmarks Designskole merged with *Glas- og Keramikskolen at Bornholm* under the Ministry of Culture.

Danmarks Designskole will be co-located with Kunstakademiets Arkitektskole on Holmen, during 2010, and a merger between the two schools is on the agenda of the Ministry of Culture – based on a political proposal for establishing larger and more sustainable professional environments.

Organisation of the research

The design research at Danmarks Designskole is mainly carried out in Centre for Design Theory and Method. All permanent faculty members are affiliated with this centre. It is managed by the Head of Centre who is also the Head of Research. In this centre the research is organised in five clusters, each of which includes a Head of Cluster and the researchers which are conducting research within the area of the cluster.

The five research clusters are the following:

- Cluster for Fashion Design Research
- Cluster for Co-Design Research
- Cluster for Design Spaces Research
- Cluster for FormLab/Practice-Based Design Research
- Cluster for Design Philosophy

The three last-mentioned clusters are still under development.

The Centre for Design Theory and Method and the clusters are newly established. Until the end of 2009 the school's researchers were organised as a separate entity with the institutional label "the research group" ("forskergruppen") and headed by a Head of Research.

Danmarks Designskole is a partner of the Danish Centre for Design Research (DCDR).

The table below shows the research staff year by year of the evaluation period. In the end of 2009 the school's research staff comprised 7 Associate Professors, 4 Assistant Professors/Postdocs, 8 PhD scholars and 2 research assistants. In the evaluation period the school has graduated 5 PhDs.

Table 1. Research Staff at Danmarks Designskole 2004-2010

	2004	2005	2006	2007	2008	2009
Professors	0	0	0	0	0	0
Associate Professors (lektorer)	3	6	7	8	9	7
Guest designers (gæstedesignere)	2	3	3	4	2	0
Senior researchers	1	1	1	1	0	0
Assistant Professors 1 (adjunkter)	0	0	0	2	1	0
Assistant Professors 2 (adjunkter/postdocs without teaching obligations)	0	0	0	0	3	4
PhD Scholars	4	4	6	8	8	9
Administrative and technical personnel	2	2	2	2	2	2
Other research staff	0	0	1		2	2
Total	12	16	20	25	27	24

The research activity

In its research activities, Danmarks Designskole aims at using an overall concept of research as defined in the Research Strategy of the Ministry of Culture. The school conducts research ranging from basic research to applied research.

The school's research strategy 2008-2010 says that:

“the overriding aim of research development is for the Danish Design School:

- *to be able to have its research evaluated at the highest level in accordance with international standards*
- *to be able to document that a steadily increasing part of the training is based on research*
- *to have at its disposal a well-integrated and vital research environment involved in setting standards both nationally and internationally within design research.*

The Research Strategy and Plan for 2008-2010 focuses on three essential elements that will remain pivotal to development over the next few years. These elements can generally be characterised as “necessary”, “pragmatic” and “visionary”.

“Necessary” is the research basis for teaching which is an essential element in course accreditation.

“Pragmatic” is the development of relationships with society and business. Here this Research Strategy and Plan for 2008-2010 focuses directly on building industrial research collaboration and greater intra-institutional research projects with a view to increasing the critical mass and ensuring social relevance.

“Visionary” concerns the role of the researcher. Compared to design research carried out at many other institutions, research at the design school stands out due to its advantageous proximity to the actual field of design. Therefore research at the Danish Design School also concerns itself with the way in which synergies between theory and practice are rendered visible and converted into specific collaboration projects – not least in relation to training.”

The research unfolds through a number of projects and is published via scientific publications and conferences. Furthermore Danmarks Designskole disseminates knowledge from the research at a popular level via magazines, websites, etc. The following table shows the publication activity of the school for the period 2005 – 2009.

Table 2. Publication activity of Danmarks Designskole 2005-2009. (Source: re-ad.dk)

	2005	2006	2007	2008	2009
1.1 Forskningspublikationer	10	25	17	18	30
1.1.A Artikler i peer-reviewed videnskabelige tidsskrifter	1	7	6	7	18
1.1.B Artikler i videnskabelige tidsskrifter, ikke peer-reviewed	2	4	4	2	1
1.1.C Videnskabelig bog, monografi	3	2	3	3	4
1.1.D Bidrag til videnskabelig bog, monografi	4	12	4	6	7
1.2 Review, videnskabelig anmeldelse, editorial, kommentar/debat	1	1	4	1	0
1.3 Konferencebidrag	2	3	5	8	14
1.3.A Konferencebidrag: artikel, paper - ikke peer-reviewed	2	3	4	5	13
1.3.B Konferencebidrag: poster, abstract	0	0	1	3	1
1.4 Videnskabelig rapport, bidrag til videnskabelig rapport	0	1	1	1	0
1.5 Working paper/arbejdsrapport/preprint	1	2	0	0	0
1.6 Øvrige forskningsbidrag	0	0	0	0	0
1.6.A Patenter	0	0	0	0	0
1.6.B Opfindelser	0	0	0	0	0
1.6.C Andet, lyd og billedmedie, software, musik, mv.	0	0	0	0	0
2.1 Formidlingspublikationer	18	13	9	6	13
2.1.A Artikel i tidsskrift/avis	5	3	3	4	1
2.1.B Kronik i tidsskrift/avis	1	0	0	0	0
2.1.C Anmeldelse i tidsskrift/avis	0	1	1	0	0
2.1.D Forskningsformidlende bog/antologi/rapport	1	3	2	0	1
2.1.E Bidrag til forskningsformidlende bog/antologi/rapport	11	6	3	1	11
2.1.F Leksikonartikel, kommentar	0	0	0	1	0
2.2 Øvrige formidlingsbidrag	4	15	29	65	52
2.2.A Mundtlig forskningsformidling	1	3	1	5	2
2.2.B Deltagelse i faglige udvalg, råd og nævn	2	4	10	15	13
2.2.C Deltagelse i formidling via TV, radio o.lign.	0	0	9	26	26
2.2.D Andre formidlingsbidrag; software, udstillinger, databaser, musik mv	1	8	9	19	11
3. Undervisningspublikationer	0	2	4	2	2
3.1 Lærebog	0	0	0	0	0
3.2 Kompendium/Forelæsningsnoter	0	1	4	2	2
3.3 Bidrag til lærebog/antologi	0	1	0	0	0
3.4 Lyd- og billedmedie	0	0	0	0	0
3.5 Andet undervisningsbidrag	0	0	0	0	0

1.1.A includes peer reviewed articles in scientific journals as well as peer reviewed conference articles.

The educational activity

Danmarks Designskole is offering a series of study programmes, covering different approaches to design. The study structure is modular with a range of courses that the students can combine within the school's areas of specialization. The education is built on three major study elements: design projects, design tools and design theory/methods.

The study programmes include visual communication, fashion design, industrial design, branding, furniture design, spatial design, textile design, design for digital media, ceramics, glass design and design for film and TV.

The purpose of the education is to give the student technical knowledge, methodical ability, and professional competency in the design profession's disciplines in preparation for occupation as a designer, including as a craftsman.

The aim is to develop the student's aptitude for aesthetics, innovative shaping, and problem-solving in an alternation between concrete approaches focusing on the materials and theoretical approaches, so that the student is qualified to solve concrete, theoretical and abstract design assignments alike.

The education at Danmarks Designskole is a five-year higher education programme, divided into a 3-year basic programme and a 2-year advanced programme. In the evaluation period the student population has varied between approximately 570 and 660 students, including 90 students from abroad. The school enrolls about 110 students and receives more than 50 exchange and visiting students every year.

Danmarks Designskole has partnerships and collaborations with several educational institutions in Denmark and around the world. In total, the school has some 55 exchange agreements with other educational institutions. Furthermore the school has formal educational partnerships with DEA, The Danish Business Research Academy, www.dea.nu; DIS, Denmark's International Study Programme, www.dis.dk; and IDEA, International Danish Entrepreneurship Academy, www.idea-denmark.dk.

Financing

The costs of Danmarks Designskole are indicated in table 3 below, specified in research, education and administration, buildings and library, for each year of the evaluation period. DKDS' total cost budget for 2010 is 96,6 million DKK, of which the budget for research and development is 9,2 million DKK. The increase in total costs from 2009 to 2010 is due to the merger with Glas- og Keramikskolen at Bornholm.

In the evaluation period the research costs have constituted 8,3 % of the total costs, equivalent to 15,7 % of the total cost excl. administration, buildings and library, i.e. 15,7 % of the sum of costs for research and education.

Table 3. Distribution of costs, total for DKDS, 1000 DKK

	2004	2005	2006	2007	2008	2009	2004-2009
Administrat., buildings and library	31.698,9	38.478,8	35.696,8	36.114,4	38.797,3	38.657,8	219.444,0
Research (R)	3.961,1	5.978,7	7.045,0	6.753,2	6.855,3	8.216,0	38.809,3
Education (E)	31.785,7	38.736,2	32.658,0	34.594,9	33.252,8	35.036,9	206.064,5
Total costs (T)	67.445,7	83.193,7	75.399,8	77.462,5	78.905,4	81.910,7	464.317,8
R costs as share of T costs (%)	5,9	7,2	9,3	8,7	8,7	10,0	8,4
R costs as share of E+R costs (%)	11,1	13,4	17,7	16,3	17,1	19,0	15,8

Table 4 shows the total basic as well as external financing for DKDS. Please note that the distribution of the financing per year follows the school's *spending* of the financing.

Table 4. Total basic and external financing for DKDS, 1000 DKK

	2004	2005	2006	2007	2008	2009	2004-09	Budget 2010
Total basic financing	63.228,4	78.163,0	70.955,3	71.698,8	72.690,2	71.745,8	428.481,5	86.868,1
Total external financing	4.217,3	5.030,7	4.444,5	5.763,7	6.215,2	10.164,9	35.836,3	9.700,0
Total	67.445,7	83.193,7	75.399,8	77.462,5	78.905,4	81.910,7	464.317,8	96.568,1

Table 5 shows the basic and external financing for the *research* activities. Also in this table the distribution of the financing per year follows the school's *spending* of financing.

Table 5. Financing of research, 1000 DKK

	2004	2005	2006	2007	2008	2009	2004-09	Budget 2010
Basic financing of research	3.359,6	4.940,5	5.072,0	5.047,1	4.526,9	4.693,5	27.639,6	6.061
External financing of research	601,5	1.038,2	1.973,0	1.706,1	2.328,4	3.522,5	11.169,7	3.100
Total financing of research	3.961,1	5.978,7	7.045,0	6.753,2	6.855,3	8.216,0	38.809,3	9.161
External as share of total financ. of R (%)	15,2	17,4	28,0	25,3	34,0	42,9	28,8	33,8

Table 6 shows the funding for research from the main external sources. Besides DCDR and the National Strategic Research Council (DSF), other external sources include a number of private foundations and foundations of various ministries.

Please note that the numbers in table 6 are indicated as the total grants by the year of approval. The amounts in the table below are thus not directly comparable with the amounts in the table above.

Table 6. Funding from external sources – grants by year of approval, DKK

	2004	2005	2006	2007	2008	2009	So far, 2010	Total
Total	2.445.000	1.500.000	2.325.000	2.295.000	3.586.791	3.524.653	6.436.727	22.113.171
DCDR	0	0	300.000	872.000	370.500	1.813.485	600.000	3.955.985
DSF	0	0	0	0	0	0	4.019.328	4.019.328

DCDR: The foundation of the Ministry of Culture administered by DCDR (Danish Centre for Design Research)

DSF: In 2010 Danmarks Designskole, in collaboration with DTU, the Technical University of Denmark, has been granted 4.019.328 DKK from the National Strategic Research Council (DSF).

3. The Panel's assessments and recommendations

Overall

The research of Danmarks Designskole (DKDS) has, since the school began to invest seriously in research and doctoral education, from 2003 and onwards advanced rapidly. The research presented to the Panel is of very good, and in some areas excellent, quality, in spite of the short history of the research of this rather small design school. The research appears to have relevance both internally and externally – internally in developing especially the master-level education towards a growingly research-based mode and generally in heightening the competence capacity of the faculty, and externally via dissemination to the research community and other vital stakeholders. Overall we find the ratio between research finances and production satisfactory. In the beginning of the evaluation period we must remember that the research activity was still in incubation and hence the latter years of the evaluation period show more balance in input versus output. We thus find that within the global framework of design research the school has, generally spoken, reached a good international standard.

The school's perception and use of the concept of research is in compliance with the concept of research as defined in the research strategy of the Ministry of Culture, while at the same time the school is moving towards an increased link between the research and design practice. DKDS' 2008-2010 strategy points out the importance of building bridges between research and artistic development, and in depth philosophical discussions about the nature and directions of design research can be found in the school's publications. This strategic direction of the research at the school is very positive. It strengthens the relevance of research both for the development of design practice and as a foundation for design education, and is very much in line with the international development within the field of design research.

Danmarks Designskole has since 2003 formulated several strategies for its research. This signifies a goal-driven activity and, all in all, most of the suggestions in these plans have been implemented. The most recent strategy appears as a logical and more sharply defined continuation of the activity carried out so far. The achievements in the evaluation period, in terms of development of the research activity, are particularly admirable in light of the history of the school and its development of a research activity. The rather small school has had relatively few research finances and a very few years for trying to achieve something that usually takes a quarter of a century.

The school decided first to follow a policy of recruiting researchers and doctoral candidates with a research-based education from the university sector. While this brought research capacity instantaneously it is evident that it at the beginning led to a certain distance between the research community, which was mainly founded on "external" research disciplines and thus "external" research methodologies, and the faculty, which were founded in a traditional environment of craft and design education. It is, though, evident at the time of the evaluation that this situation has begun to change and that doctoral candidates are now also rising from the school's own group of design students. A mix of staff trained in the academe and staff coming from design education is preferable, with a growing tendency of recruitment from the school's own ranks or from other design schools, in Denmark as well as abroad. Design research can only mature into a relevant activity if rooted in the design practice and education, serving both and being able to foster a culture where research is an integral part of the school's daily activities and mission. We find it positive that Danish Design School is on the way towards such a culture.

Design research is a relatively new discipline in the institutions under the Ministry of Culture, initiated in 2003, and the design research activity of DKDS can mature further in the coming years. Among others the school is still in a process of increasing the links between research and design practice. In addition there are still educational areas, the most obvious being crafts, within which it is relevant for the school to develop a research activity. The small volume of the school's research activity is hampering this development, though. Furthermore the school is still under development in terms of collaboration with external user-organisations and research groups.

3.1 The conditions and framework for the research

The regulatory framework has entailed a barrier

The fact that DKDS has not had *legal* status as a higher research based educational institution in the evaluation period has implied a barrier for the school's development of its environment and competences for design research:

DKDS has thus not been allowed to employ researchers itself. Instead the employment of the researchers is formally conducted by Kunstakademiets Arkitektskole (KA). Effects of this are extra time and resources (for both DKDS and KA) for dealing with employment issues.

Another consequence is that DKDS has not had many chances for offering any full professor positions. Establishment of each full professor position under the Ministry of Culture entails a so-called "stillingsnummer" ("employment number"). There is a limited number of "employment numbers" which are allocated to the higher educational institutions under the Ministry, meaning that e.g. KA has a limit for how many full professor positions it can establish. According to DKDS, the school has not been able to achieve any of these positions/numbers via KA.

We find staff at DKDS which is competent for a full professor position, and we find it somewhat strange seen from an international/Nordic perspective that there has not been established a professor position at DKDS.

Therefore, and in view of the research qualifications of Danmarks Designskole, we welcome the aim of the school achieving accreditation and subsequent legal status as a higher research based educational institution in 2010. This change will improve the school's possibilities for meeting its aim of establishing a full professor position in 2010.

Financing - stable basic funding but no separate basic funding for research

The Panel finds it positive that the basic funding budget from the Ministry of Culture has been stable in the evaluation period, and that DKDS has had free possibility for distributing the basic budget on research, education administration and other costs. DKDS has prudently exploited this opportunity by allocating a rather stable budget to research, in average 8,4 % of the total costs (corresponding to 15,8 % of the costs for education and research, i.e. excl. costs for buildings, administration etc., see table 3).

In comparison, the basic research funding to the Danish universities constitutes between 29 and 47 % of the total turnover in 2009⁹. The accounts of the universities show that the research costs constitute between 22 and 52 % of total costs in 2008¹⁰.

The Panel finds that the stability in the basic funding to Danmarks Designskole has established some basis for the school's long term planning and development of its design research

⁹ The University Evaluation 2009, Evaluation report, annex 7, table 6, p100,

<http://www.ubst.dk/publikationer/the-university-evaluation-2009-evaluation-report/Evaluation%20report%202009.pdf>

¹⁰ http://dkuni.dk/politik_debat/statistik/testside/universiteternes_statistiske_beredskab/, table B. Omkostninger, 2008

activity. In addition, the rather low budget share for research at Danmarks Designskole has been acceptable for a design school still in its early stages of creating a research environment.

However, we have also observed that the level of basic funding has not been raised to any significant extent in connection with the initiation and development of the research activity. The school's basic financing of the research activity has thus been, and is, taken from the amount of basic funding for the education activity, and there is of course a limit for how much of the present budget can be taken from the education part without the education activity suffering significantly. Thus, with the present basic funding system there seems to be only little opportunity to adequately raise the extent of design research to a level similar to the university sector, without cutting significantly in the education activity of the school.

We thus find the present funding level/system, where the research is financed on the cost of reduction of the education activity, in opposition to the present political focus on design (and thus designers) as an important area for future innovation. The present basic funding is insufficient for maturing the research base to "full university standard and level" concurrently with ensuring the present education of the present number of students.

In light of the present political focus on design as an important innovation promoter, we therefore recommend the basic funding for the school to be better balanced with the political targets for the design research and education.

Good possibilities for external funding, but basic funding is necessary for ensuring stability of focus areas and continuity in research competencies

Additional to Danmarks Designskole's internal allocation of basic funding income to research the school has achieved increased external funding for research. In the evaluation period the total external funding for the school's research has constituted about 29 % (11,2 million DKK) of the total research costs 2004-09 (38,8 million DKK).

One of the significant external funding sources has been the Ministry of Culture's foundation administered by DCDR. It appears to have been relatively easy to achieve funding from this foundation, including funding for activities for development of the research environment. In view of the still low share of basic funding for research, compared with the Danish universities, the Panel finds the Ministry's "DCDR-foundation" important for the future maintenance and further development of the design research of DKDS.

We highly appreciate DKDS' achievement of external financing, and we find there is room for further increasing the ratio of external funds. However, we also wish to emphasise the importance of a continuous significant basic funding for the research. A certain stable core volume of the research activity is crucial in order to secure continuity in work and attracting further external funding through new applications, as well as for stability in PhD supervision and for developing the link between research and research based education. Furthermore, basic funding is typically necessary for conducting more experimental basic research, research that is essential for the development of research skills and also for the development of design practice itself.

Thus, basic funding which is without pre-demands or restrictions is critical for ensuring stability in terms of research focus areas and for continuous development of the research competences.

Co-location of DKDS and KA may create good synergies and result in better premises for DKDS

The Panel has observed that DKDS will be co-located with Kunstakademiets Arkitektskole from spring 2010. The Panel commends this soon co-location. It can advance collaboration with the design researchers of KA, facilitate synergies between the two research groups and create benefits by sharing access to workshops and laboratories.

Furthermore at present the physical environment of DKDS, which is an important part of the infrastructure for the research at the school, is hampered by the inflexibility of the historical premises. Although the premises, a former hospital, have architectural merits they do not well

serve the needs neither to privacy nor to workshops. This situation will apparently be improved upon the move of the institution to Holmen, into newly renovated spaces.

Merger between DKDS and KA has pros and cons and serious attention should therefore be paid to risks and added values when initiating the merger

The Panel has observed that a merger between Danmarks Designskole and Kunstakademiets Arkitektskole (KA) is on the agenda of the Ministry of Culture. The Panel finds both advantages and disadvantages of such a merger:

An important advantage could be that the design research community would become larger and thus stronger with potential for greater impact in the overall research community. At present DKDS has a very small volume of researchers compared to most universities and research institutions. The DKDS research environment is in other words vulnerable, which could raise a concern as to whether it can be adequately developed and maintained while having the present small volume.

In addition, the view on design research at KA appears to have a very solid foundation in a practice-based tradition, while DKDS has accomplished a very solid foundation in research methodology with a still increasing linking of the research with design practice. Therefore a merger holds a clear potential for that both schools could benefit and increase their international research profile in terms of *research through design* of very high quality and in line with the international trend in the field of design research.

Seen from a historical perspective the merger would also make sense as KA earlier seems to have had the responsibility for higher education in design (furniture design, industrial design and graphical design). So, merging the schools seems reasonable from the perspective of strengthening both research and education in design.

The challenges have to do with differences in culture and status between the two schools. We have a concern that things can go very wrong here, and it is therefore important to carefully mapping the potential differences and risks and how to avoid them when initiating the merger.

Furthermore it is crucial to ensure a strong state-of-the-art management, and a clear organisational and communication structure, for achieving an efficient and effective merged organisation for design research and education. To this comes the considerable effort of staff and administration necessary for completing any merger, while measureable positive effects of mergers typically emerge at long term only.

It should also be taken into consideration that there is a risk for a change of balance between research volumes in Copenhagen and the two design research and education institutions in Århus and Kolding.

Serious attention should thus be paid to the challenges and added values when the merger is initiated.

3.2 Planning and organisation of the research

Research strategy – the development of the research of DKDS in the evaluation period has been very well carried through

Since the initiation of the research activity in 2003, Danmarks Designskole has developed its research organisation from a first phase of recruitment of researchers and consolidation of the research (2003-06), through a second phase of establishment of focus areas (2005-08) to the present third phase with formation of research clusters (2008-10). The first research plan contained no specification or prioritisation of research areas, whereas the present, third plan has prioritised five research areas organised in the five clusters.

The Panel finds this development from “free choice” of topics to selected topics organised in clusters sound and logical. In this way the prioritisation of design research areas has developed concurrently with the maturation of the research needs and competences of the school. Today the cluster formation constitutes a very promising organisation of the research, and it has provided the research group with significant strength for successfully completing the coming co-location with Kunstakademiets Arkitektskole. We wish to emphasise the importance of the clusters not becoming individual “silos”, and appreciates therefore the school’s awareness of this risk – reflected in the setup of the clusters as open “units” with a rule that any researcher must be member of one or more clusters.

Two clusters are already well established and professional, namely the Fashion Cluster and the Co-design Cluster. The three other clusters (Design Spaces, FormLab/Practice-Based Design Research, and Design Philosophy) are still under development and can at present be characterised as project teams rather than clusters.

Considering the small number of researchers at DKDS, the Panel finds it very ambitious to aim at as much as five clusters, but due to the open setup of the clusters it is a reachable target.

The Panel finds that Danmarks Designskole is still in a transition process of finding its research identity, and that there are still areas within which it is relevant for the school to develop a research activity. The most obvious is the area of crafts, within which DKDS has had a long and strong tradition – apparently the school does not place much focus on crafts research at present. However at the same time, the prioritisation of research areas should be carefully considered due to the small volume of the school’s research activity, and at any time this development should be closely balanced with the research finances, and hence capacity, of the school. At the meeting with DKDS, the school informed that it will start focusing more on arts and crafts research after the co-location with KA.

Research strategy – the school’s definition of the concept of research

The Panel finds that the concept of design research used by DKDS is – and has been during the evaluation period – in compliance with the concept of research as defined in the research strategy of the Ministry of Culture.

In early strategy documents (Danmarks Designskoles plan for forskning och kunstnerisk virksomhed) the notion of research follows, in a rather narrow sense, the OECD definition, and makes a sharp distinction between research and artistic development work.

Later strategy documents open up for a more broad view (Research Strategy and Plan 2008-2010, Mål og udviklingsområder for forskning ved Danmarks Designskole, 2009-2010). The school’s research strategy for 2008-2010 “aims at elucidating the discussion about the concept of research without compromising the inevitable demands on academic habitus with which every form of research has to comply. However, the purpose is to create the greatest possible synergy between forms of research and forms of practice related to the field of design.”¹¹

Although the school has not yet fully implemented the practice-related concept of research in all research areas, we highly appreciate the strategic move, during the evaluation period, from a rather conventional definition of the concept of research to, now, a concept of research where bridges are built between research and design practice.

Furthermore, in-depth philosophical discussions about the nature and directions of design research can be found in the school’s publications. This clear focus on theoretical and methodological foundations – reflected in the school’s research and internal and external discourse on the topic – is a very valuable asset of the school. It strengthens the relevance of research both

¹¹ Flux – Research at the Danish Design School. 2009. Page 5
http://www.dkds.dk/media/forskning/publikationer/flux2009/DKDS_FLUX_2009.pdf

for the development of design practice and as a foundation for design education and is very much in line with the international development within the field of design research.

Research strategy – successful, systematic and transparent development of the research competencies

As regards the profile of the research staff, DKDS has gone through a deliberate development. Due to the novelty of design research as a discipline in Denmark and several other countries, it was difficult to recruit researchers with experience in design research in the beginning of the evaluation period. Therefore the school employed a small number of senior researchers from other science areas, mainly humanities and technical science, thus without experience in the field of design research but with high expertise in the “art of research”. Since then, this senior staff has functioned as methodological “midwives” for a second generation of researchers. The second generation has not had much access to tutoring from design research experts, but has nevertheless built up expertise within the field of design research. At present the school is on the brink of educating a third generation – of design researchers who have been taught by the second generation, and thus by design researchers. The initial disadvantage of lack of expertise within *design* research, due to the short time of existence of the design science discipline in Denmark, is thus dissolving concurrently with progress of time and emerging of new generations of design researchers.

The Panel finds that this systematic and strategically planned development has been expedient and has resulted in a considerate and increasingly consolidated research activity which is still in positive progress. The present research staff, including the PhD scholars, has a mixture of backgrounds (in design, humanities, technical science, etc.). The number of PhD scholars (6 in end of 2009) is acceptable compared with the number of “senior” researchers (7 associate professors and 4 assistant professors/posdocs in end of 2009), but with the present staff there *is* room for initiating further PhD projects.

The present staff composition still holds a gap between research and design practice and artistic development work, and between practice-based design research and “design research” with “borrowed” foundations from other research disciplines. This is more visible in some areas than others. But the direction the school has taken in the latest years, in recruiting new PhD students with experience and educational background in design practice, is very promising and contributes to fulfil the school’s aim of conducting research through design.

As mentioned in section 3.1, DKDS has not had easy access to employing professors before 1 Jan 2010. The Panel finds it positive that a part of DKDS’ recruitment policy for the near future, when/if becoming accredited as an institution with research-based education, is to establish at least one professor position.

We also find it positive that DKDS today focuses on recruiting candidates who can strengthen the cluster(s), and that the school is aware at a longer term – when the clusters become more consolidated – to recruiting candidates who have a potential for forming new clusters.

Research strategy – good relation of the research to education

The senior researchers teach 50% of their time which creates a good foundation for research based education and a strong channel between the students and researchers. This is very positive and shows that the school has a clear determination to develop research on broad front and link that to research based education. Also younger researchers have teaching obligations.

The relation of research to design practice in education seems clear and very good in the area of CoDesign, and for example the PhD students of the Fashion Cluster appear to have visibility to the school’s education activities. In other areas it has been difficult for the Panel to assess the actual links between research and education on basis of the received information. Nevertheless, the school’s statement “from research-based education to education-based research” reflects that there is genuine will to make theory and practice, research and design talk together in the future.

The clear determination to further strengthen the links between research and education is also confirmed by the present aim of engaging the master students further in the research activities. This aim may not only strengthen the links between research and education but also add a welcomed resource to the rather small research environment of the school.

Research strategy – both basic and external funding are important

As mentioned in section 3.1 DKDS has obtained external funding for research, a total of about 29 % of the total research costs in the evaluation period.

The major external source of DKDS' external financing is the foundation of the Ministry of Culture administered by DCDR. The Panel has got the impression that this funding is less demanding in terms of self-financing and resources for applying and reporting than many other external foundations. The Panel finds the DCDR funding essential for the hitherto and future development of the design research at DKDS, and recommends therefore the school to continue pursuing funding via this channel.

The Panel notes that DKDS' researchers have not succeeded with achieving funding from the national Independent Research Council or the EU framework programmes. This may partly be due to the fact that design research has been a discipline under development in the evaluation period, and as such it may have had difficulties with meeting the demands for scientific quality and complying with the overall, commonly accepted concept of research. We commend, though, that the school has achieved a larger grant from the national Strategic Research Council in 2010.

We welcome DKDS' present plans for intensifying its attempts for achieving funding from external channels, including from the Danish research councils and the EU framework programmes, concurrently with the increasing maturity of the design research of the school. With the present ratio of external financing related to the total research costs, there is still room for pursuing an increased share of external funding. Concurrently with increase of the share of external funding in relation to basic funding, though, it is important to increase focus on research which contributes to strengthening of the research environment and competences of the school.

Good management structure and procedures

The Panel praises the professional and committed research management of Danmarks Designskole. The governance structure for the research has gone through several changes during the evaluation period, but there has always been a director of research with an overall responsibility of the activity, and the research has always been enjoying the backing of the leadership of the school. This has evidently helped to "defend" the building of the research community, especially in the early years. Being aware of institutions with less favourable conditions we commend this legitimization and support of research by the leading strata of the school.

The professional management skills are among others reflected in the excellent, transparent research strategies, which are well accomplished so far. The good management is also shown in the high degree of involvement of the research staff in the strategic planning and organisation of the research at DKDS. For example the clusters have clearly been created in a bottom-up process. The internal communication also takes place via a collective research meeting every second Friday, where various research themes are discussed and experiences exchanged, as well as papers of younger colleagues are presented and discussed.

The school's research management approach is thus in scope with the tradition of work places in Denmark and with best practise for management of knowledge-intensive organisations such as research institutions. Furthermore, at our meetings with DKDS, PhD scholars expressed that they feel well supported by the research environment of the school. This implies that also the school's management of its doctoral education is working well.

Despite its continuous growth the size of the research community of Danmarks Designskole is small, as in all the units under this evaluation. The size as such is not a crucial criterion for success, though, and the community shows both focus groups and diversification. Coherence and internal communication functions well within the group – how much there is

communication with the rest of the school is difficult to judge on the basis of the material received and site visit. All in all, the whole research community – which, a positive nota bene, includes the rector – seems to share an ambition to move forward, holding a common will where individual researchers both have enough space to develop their own research agendas but where at the same time the individuals' agendas adhere to the general vision. We see future growth as a positive goal, but attention has to be paid to maintaining the quality and integrity which is now characterizing the work.

Finally we wish to mention the material which the school has delivered to the Panel in connection with the evaluation. This clear and well structured material is an additional sign of a competent management of the research.

3.3 Extent, quality and relevance of the research

Quality of DKDS' research overall

Overall, the Panel finds the achievements of the school, in terms of its design research, very good and even demonstrating excellence in some areas – particularly in view of the short history of the design research and the rather small volume of the activity. Generally taken, it can be said that the overall quality of research of Danmarks Designskole meets the international standards of research in general and of design research in particular.

As indicated in section 3.2 the school's research complies with the concept of research as defined in the Research Strategy of the Ministry of Culture. In this context we applaud the later years' research publications that go far in the direction of explorative and practice-related research methods – thus complying with the current international academic trends within the field of design research. In the evaluation period, the research of the school has held a certain academic rigour and normative practices. This is understandable because the bulk of research in the evaluation period is produced by staff with university background combined with lack of background in design practice.

We therefore find it positive that the school's research approaches are on the way to be further widened with developments and investigations into explorative and practice-related research methods, and we recommend the school to continue in this direction. This will help to further develop research by design, help engaging even more the practitioners at the school and open fruitful and motivating vistas especially in the recruitment of doctoral candidates from the school's own student population.

Research priorities

The research at the school spans from humanities research via social sciences to design theory, design methodology and practice based design research. The broad span in research at the school is positive in the sense that it covers large areas of the design space, as well as a big diversity in research methodologies; from scholarly studies in the humanities to experimental design research. Furthermore, the research publications show high-level research in the two largest focus areas, co-design and fashion. Also the smaller strands of design history, philosophy with theory, anthropology-based inquiries and discussion on craft show consistency, quality and originality.

But as implied in section 3.2 it is also problematic, since it may well be difficult for a small environment to manage sufficient in-depth research in several areas which are rather different in nature. The school's strong focus on research methodology is one way to build a common in-depth platform.

Extent of the research

DKDS has managed to achieve a reasonably good publication record during the evaluation period, particularly in view of the short history of the research activity at the school. According to the statistics at the website re-ad.dk¹², the school has published 100 research publications in total in the period 2005 - 2009. Of these, 39 have been in peer reviewed journals, while 27 have been conference papers (not peer reviewed).

According to its self-evaluation the school does not measure its research production by bibliometrical indicators. In line with this choice of the school we wish to point out that there could be reasons for caution in formulating bibliometrical targets in the future, as there internationally are some indications that bibliometrics can be challenged in favour of a closer look at the content of research and the impact of the research results as such¹³. A too strong focus on numbers of publications, citations, impact rates of journals etc. increases the risk of mainstream research production and discourages new innovative research initiatives with high risk for no results, or breakthroughs which counteract and abolish the hitherto knowledge in an area.

All in all we find that the extent of the research compared to human resources is very good and can even be considered as demonstrating a zest and ambition overriding the limits of budget and staffing. The small but growing number of senior researchers and doctoral candidates are performing well in the light of comparing input and output. Further strength could be achieved by increasing external research collaboration both in content and funding and especially in multidisciplinary projects with links to the “real world” of design and its context. This outreach could also enrich the still somewhat academic nature of the research – this said with respect towards the results reached so far.

Relevance of the research for education and users

The concrete relevance of the research for the educational programmes has been difficult for the Panel to assess hard to measure on basis of the information received. However, as indicated in section 3.2 there are good links between the research and the education in a number of ways and areas, and the school shows a strong determination to further strengthen the connection between research and education. All in all we have got a clear picture that the school has a sincere and feasible plan to further integrate the research into especially the last years of the design education.

It is a relatively new development that the researchers at Danmarks Designskole collaborate with enterprises in the research. In the light of that it takes time to build up a professional research activity, the Panel does not find this surprising or negative. At present the researchers, particularly the Co-Design Cluster, have built up good external collaboration with both industry and public organisations.

The Panel finds this development positive and recommends the school to continue expanding its collaboration with public and private organisations. Society needs design in several sectors, from medicine to social policy, from technology to humanities. This implies that a very large part of design research projects – from media art to fashion – generate knowledge that is needed in a welfare society. On this basis it should be relatively easy for the researchers to find partners both from the private and public sectors.

External funding from industry to the research of DKDS is very low or non-existing. However, in the case of Denmark, this is neither surprising nor an illustration of low relevance of the research for industry. In general private companies’ share of financing public research is very low in Denmark compared to its neighbouring countries, including Finland, Sweden, Norway,

¹² re-ad.dk is a joint research database/webportal for Designskolen Kolding, Kunstakademiets Arkitektskole, Arkitektskolen Aarhus, Danmarks Designskole and Center for Designforskning (Danish Centre for Design Research (DCDR)).

¹³ Cf. Deutsche Forschungsgemeinschaft Press Release No. 7 | 23. February 2010. “Quality not Quantity” – DFG Adopts Rules to Counter the Flood of Publications in Research

www.dfg.de/en/service/press/press_releases/2010/pressemitteilung_nr_07/index.html

Germany and UK¹⁴. There is thus a Danish tradition for a high share of public funding of research, and combined with the high level of Danish taxes, this implies that publicly financed research is considered to be a public good, from which the Danish enterprises may benefit. The expectation of high public financing of research is underlined by the particular industry structure in Denmark, which is dominated by small and medium sized enterprises with only a few large companies. The small and medium sized enterprises have less tradition and much less means for financing university research than the large companies.

Research in design theory and methodology

Design research cannot in the long run flourish and develop on "borrowed" foundations from other research areas, with a reference to its interdisciplinary nature. Theoretical and methodological work is thus of key importance for the development of design research as an area of research in its own right. Theory and methodology then concerns the further development of both foundations for design research, as well as foundations for design practice itself. Research on theory and methodology at the school covers both these aspects and is, in our opinion, strong in international comparison. Work done in this area ranges from in depth philosophical discussions on general foundational issues to the development of participatory/co-design methodology, and the introduction of computational methods in ceramics.

This clear focus on theoretical and methodological foundations is, in our opinion, a very valuable asset of the school, and could be developed to further strengthen the identity of research and education.

The development of concepts and methods that bridge analysis and design practice is a key issue in developing design practice through research. The idea to have a centre for theory and methodology going across all subject area centres is in that respect a good idea.

Research work in the area is well published in international journals and conferences, and has good visibility through conferences such as CEPHAD, special issues of research journals such as CoDesign, and through international networks and seminars.

Besides development of methods for design practice work on methodology at the school include, among other things, discussions about the role of the design experiment in design research. As this connects design research of today to strong traditions in the development of design practice (artistic development), i.e. Bauhaus, Ulm etc, it is an important component in developing research based education in design.

From the point of view of philosophical discussion, it is interesting to note the presence of profound work in the tradition of analytical philosophy. Recent influence of philosophy in the design research discourse has been strongly dominated by continental and pragmatist philosophy. There are clearly aspects of analytical philosophy that are valuable in foundational and theoretical work and a broader philosophical landscape will open up and sharpen analysis and discussions within the area of design research.

The Fashion Cluster

¹⁴ The University Evaluation 2009, evaluation report, section 5.4.1.

The Panel finds that fashion design research is a strong, promising area at DKDS. According to the research areas presented in recent publications and projects, the research staff of the Fashion Cluster is highly qualified and productive. The researchers explore, generally speaking, the aesthetic, material and legal connections between fashion, global markets and the human body.

The cluster appears well established, with a good production, with PhD students who appear to have visibility to the school's education activities.

Compared with the challenging research area of the cluster, the size of the active research staff of Fashion Cluster is quite small. The small volume holds a risk for the future continuity and coherent development of the research competencies of the cluster. In this connection we wish to commend the cluster's deliberate focus on continuity by relevant PhD education. In small units like the Fashion Cluster it is also important to maintain a very clear and focused strategy while aiming at long-term national and international research activities. The research capacity of the staff could thus be "expanded" by further developing the links with foreign institutions and supervisors, but it is important that the cluster keeps focus on collaborative projects which comply with its strategic focus areas.

The Panel appreciates that the fashion cluster, like the research overall at DKDS, has gone through a deliberate development from competences based on "borrowed" foundations towards research competencies which are increasingly related to design practice, by incorporating researchers, and educating PhDs, with a background in practical fashion design. The cluster's fashion research needs to mature further in that direction. At present it is still conducted with a somewhat conventional and theoretical perspective with methodologies "borrowed" from research areas other than design research. The cluster would benefit from linking the research to design practice to a higher extent and focus more clearly on research based on design practice. As indicated in other parts of the evaluation report, the international trend is moving towards research through design where the research is strongly related to the design practice. A development in this direction would therefore strengthen the international scientific profile of the cluster. Defining and analysing fashion in socio-cultural context is theoretically and empirically demanding, but fresh viewpoints could open interesting intellectual perspectives. The relation of the research to design practice and how design face research should be better defined in the material at present. It would be worth focusing on how the research on fashion and the new knowledge produced could be implemented into the design process. The practical/aesthetical knowledge is important for the development of a design-based research, and would clearly distinguish the cluster from fashion research done at humanistic faculties.

The Panel has observed that the Fashion Cluster plans to increase focus on scientific publication. This is a laudable plan, and if combined with further focus on developing methods and theories on practice-based fashion research, it can strengthen the international research profile of the cluster significantly.

Furthermore an increased focus on practice-based fashion research can be well combined with increased collaboration with user organisations. Although luxury as phenomena is rather contemporary, of relevance for innovation of industry, and the research on luxury seem to flourish in the institution, the Fashion Cluster still has insufficient collaboration with private companies and other user organisations. We therefore recommend the cluster to pursue further collaboration with external partners in the research projects.

The Co-design Cluster

The Co-design cluster works within the field of participatory design and design anthropology with methods based on experimental design research, for exploring possible futures by means of

design. The co-design cluster is an excellent research group that is well centered in the field and has made significant contributions to the knowledge development in user-driven innovation.

The publication record of the cluster is very good with articles in research journals, peer reviewed conferences, books and popular media. The cluster consists of two senior researchers, one post doc and two PhD candidates. The researchers have a background in design, engineering and interaction design, that is, from disciplines that hold a creative, problem solving and user focused foundation central to design thinking. The senior researchers have a background in engineering and ICT, but their work is increasingly building a new identity that is increasingly based in design practice, with a stronger focus on contextualization, experiments and materials.

We also wish to applaud the Co-design Cluster for its large network both nationally and internationally. In addition the senior researchers are very active within the research community especially on the Nordic level. The network in Denmark will be even stronger with the recent 5-year grant to establish a research network with anthropology (university) and innovation (technical university).

The group works with research projects, usually with a number of partners from industry, society and academia. Some of them have a strong focus on solving problems or creating product innovation, but some have a more theoretical and networking goal.

The group is active in arranging seminars, conferences, summer schools and of publishing and disseminating their research in different contexts. Compared to other design research groups, where some are more theoretical/conference oriented and some are more product/exhibition oriented, we place them in the middle. They publish at conferences and journals rather than in exhibitions but their work has a practical and experimental foundation in design practice.

In general the theme of co-design has high scientific relevance, because it is at the core of design research, investigating the design discipline as a reflective profession and focusing on design practice. Co-design research has thus a high relevance to the common international development of design research as a distinct discipline.

Furthermore, co-design or participatory design has a high relevance for creating innovative and user driven solutions for the future. EU has recently published a study about "Design as a driver of user-centered innovation" which concludes that design has the potential of becoming an integral part of European innovation policy and a building block of a policy model that encourages innovation driven by societal and user needs. The Nordic Council has on similar grounds launched new research and cooperation programmes, for example "living labs" where stakeholders in social innovation work together to solve pressing issues. Methods and theories for co-design and user driven innovation are therefore of high relevance for society.

The Co-design cluster has the capacity to grow to a slightly larger group. This is of course depending on financing but DKDS should consider to supporting this development with some basic financing.

The deep knowledge of the cluster, on co-creation methods and experiments as a vehicle for knowledge production in design research, could be useful as resource for the other clusters at Danmarks Designskole and potentially for Danish design research at large. The teaching that is done by the seniors could thus to a higher degree be used for PhD courses in design research methods and theories, an activity that the Panel finds insufficiently covered today in the Danish design research environment.

3.4 The research environment and scientific collaboration with national and international research groups

The research environment of DKDS has a good working atmosphere

The Panel has a clear impression of DKDS' researchers being highly motivated and well articulated and showing a good insight in the aims and strategies of the school. Even though the disciplines of the school are very diverse, there appears to be a high trust capital and a good working atmosphere, and apparently a very low level of conflict, very high respect for each others' areas. As implied in previous sections this is supported by a sound and well established tradition and procedures for internal communication which gives good possibility for bottom-up influence on the development of the research activity and for exchange of knowledge in the staff and between staff and management.

External scientific collaboration

– National collaboration is well established, and international collaboration is emerging

DKDS collaborates, in its research projects, with both the other schools conducting design research under the Ministry of Culture and with several Danish universities.

Like the collaboration with industry, it takes time to build up collaboration with other research environments, and it is not surprising that the present collaboration is mainly with Danish institutions and that some of DKDS' research groups have progressed further than others. However, significant international collaborations are emerging, among others in the Co-design Cluster, which among others has established collaboration with Norwegian and Finnish researchers. The Panel also welcomes the Fashion cluster's collaboration with an EU initiative and its general focus on internationalising.

Furthermore we acclaim the school's important contribution to the development of the international discourse on the concept of design research, both by hosting international conferences and by the school's research in design theory and methods as mentioned in section 3.3

As indicated further above, we recommend DKDS to continue its promising development towards increased scientific national and international collaboration, which can support the school's own research capacity.

3.5 Dissemination of knowledge from the research

Scientific dissemination and dissemination via education and collaboration with private and public organisations is addressed in previous sections. As described above, the scientific dissemination of the research is mainly channelled through conference papers and articles in scientific journals. In addition, knowledge from the research is disseminated via the educations of DKDS and via the described collaboration with public and private organisations.

This section thus concerns the broad, popular dissemination of knowledge from the research. The Panel has not had access to comprehensive statistics on the full picture of broad dissemination of the school's research, but the statistics and dissemination on the website re-ad.dk together with information from the school show several dissemination actions, where DKDS' researchers present knowledge on the research to a broad audience.

For example, several of the researchers appear ad hoc in the daily press, and DKDS presents knowledge on the research in written publications and on the internet. Another example

is the recent publication FLUX which provides a genuine presentation of the design research conducted at the school.

All in all the Panel has got the impression that DKDS conducts sound and appropriate dissemination of its research knowledge to a broad audience, in the light of the limited resources of the school. Furthermore the Panel welcomes the collaboration about dissemination between the four design research schools and the Danish Centre for Design Research (DCDR), which is implemented via re-ad.dk and DCDR's webmagazine MindDesign, particularly in view of the limited resources of DK.

The Panel recommends that DKDS at a longer term builds up dissemination more directly to the core groups of design practice, design-related production and the users.

3.6 Benefits for DKDS of DCDR and DCDR's services

It is the clear impression of the Panel that the research of DKDS has benefited from the services of DCDR, particularly since the re-organisation of the centre in 2007. According to DKDS, the centre plays an important role for consortium building within design research.

More specifically, the following activities and services of DCDR have been supporting and promoting the design research activity of DKDS:

The Coordination Committee which meets once a month and comprises the heads of research at the two design schools and the schools of architecture as well as the DCDR's director and research coordinator. The Coordination Committee constitutes a platform where the four schools meet and discuss their design research activities. It has promoted good collaboration and exchange of experience between the four schools, which in principle are competitors, as regards design research.

DCDR's services for **facilitating networking** between the design researchers of the four schools have been important for building a network between the design researchers of the four schools. Particularly the annual seminar held in August is an excellent facilitator of networking between the researchers and a source for exchange of experience and inspiration.

The **funding of research** from a foundation of the Ministry of Culture, administrated by DCDR has been a valuable support to developing the research environment and skills of DKDS. Particularly the fact that the foundation provides funding for activities for preparing new, and developing existing, research activities has been beneficial for DKDS, which is still in a period of maturing its design research activities. The funding, particularly of activities which develops the design research, appears to be important in the coming years also.

The **PhD courses** established by DCDR have been valuable for DKDS. There have been only few courses so far, but they have been very helpful for the PhD scholars of DKDS, since they have been some of the few PhD courses in Denmark which focus on *design* research and method.

The Panel finds there is need for increased focus on establishing PhD courses, specialised courses, in collaboration between the four schools, for example in DCDR.

Three employees from DKDS have graduated, and one further is to graduate, from the **Master's Programme**, a vocational training programme of DCDR, in the period 2004-2009. Two of these have continued as PhD scholars at DKDS. The programme has thus contributed to the

development of the scientific/academic skills of DKDS' teachers and researchers in the field of design research.

DCCR appears to work genuinely on **broad/popular dissemination** of the design research. This includes the webmagazine MindDesign which publicises popular articles on the design research of the schools. The centre has also established **contact to industry** via the Danish Design Association and Danish Designers. The Panel thus finds that there, via DCCR, is work in progress for making knowledge from the design research accessible for industry.

Nevertheless, as mentioned in previous sections, we find that there is further need to expanding and concretising the dissemination to, and collaboration with, industry, carried out directly by the researchers of DKDS, whereas the role of DCCR should be contained to disseminating and collaborating with industry at the general level, as it is done now.

Furthermore DKDS spoke well of DCCR's **scientific dissemination**: The scientific journal Artifact, which is established and published by DCCR, appears highly relevant and successful. It has been ranked no 9 of 173 design journals in an international study on comparative rankings of journals in design and design research, carried out in 2008 by Dean Ken Friedman and his colleagues at Swinbourne University of Technology in Melbourne and Royal Melbourne Institute of Technology.