

# Innovation hybrid challenges education system

**Seven of Denmark's largest companies take innovation into their own hands – New interdisciplinary study programme in innovation is created – 180° Academy is practical rather than academic and user-driven rather than technology driven – The initiative gains international recognition**

IN JUST A FEW WEEKS, SEVEN OF THE BIGGEST PLAYERS IN DANISH BUSINESS AND INDUSTRY WILL LAUNCH A NEW INNOVATION AND CONCEPT INITIATOR STUDY PROGRAMME AND, IN JUNE 2007, THE FIRST GROUP OF STUDENTS WILL START THEIR CLASS. It is companies Middelfart Sparekasse, Lego, Danfoss, Nokia, Gumlink, Bang & Olufsen and Novo Nordisk who have taken the initiative to found and invest in the new educational institution, the so called 180° Academy (One-Eighty Academy). The study programme is the only one of its kind in the world and is, according to its founders, a break from the traditional innovation concepts in Denmark. It is practical, interdisciplinary and radically user-driven. And it combines humanistic methodologies together with design and business thinking. Above all, it is about people, not technology, as is confirmed by Microsoft's well-known design anthropologist Anne Kirah, who is Director of Development for the programme. "The aim of the programme is to help students remove their mental blinders and be able to look beyond a company's own production-related comfort zone. It is about breaking away from the focus on technological possibilities and learning instead about the future needs of the consumer," says Anne Kirah. According to its founders, the establishment of the Academy is a direct result of the acute need in Danish business and industry, to learn new user-focused innovation methodologies. And businesses do not believe that existing university-level innovation study programmes meet their needs. The Academy has hit a sore point in the Danish innovation strategy: the very gap between what companies want and what the state education system actually offers. The education programme also raises a number of fundamental questions as to what the recipe for effective innovation should be, particularly as the programme is a radical change to existing areas of study within the education system. Larry Keeley, one of the world's leading experts in innovation and Director of the strategy and innovation company Doblin Inc. is impressed with the ideas behind the Academy. He highlights that the Academy satisfies an obvious international demand for professionals who respect and understand each other's way of working within the innovation process: "I am impressed with 180° Academy's interdisciplinary programme which combines humanistic knowledge with design and business. Companies all over the world have a need for these types of skills. This type of education reflects the underlying need for identifying and solving complicated problems with advanced answers."

**A sore point**

**New privately managed study programme in innovation breaks away from the old subject areas. Interdisciplinary approach is better at meeting the needs of the business world.**

**High expectations**

**Danfoss hopes the study programme can lay the foundations for future market concepts.**

**A hybrid education**

The three phases of the innovation process

Collect	Create	Commercialise
Students learn and try out the ethnographical methodologies for collecting knowledge and data about consumer life patterns.	Through analysis of life patterns and participating in design and prototype development, students learn to use collected data to create their own design.	Students learn to communicate their knowledge about consumer needs and innovation processes internally within their company and to external stakeholders for marketing purposes.
User-driven		Technology driven

**Figure 1:** Students at the 180° Academy will work within the three phases of the innovation process- collect, create and commercialise – in an interdisciplinary course. The study programme is not planned as a linear progression.

Source: 180° Academy.

**Background**

Plans for the 180° Academy began on the basis of a study carried out by a government research and development centre (FORA), amongst companies in one of Denmark's growth regions in 2005<sup>1</sup>. The report highlighted that there was a surplus of technological knowledge which companies were not taking advantage of. The Danish Business Counsel's report for user-driven innovation in 2005 told the same story. It concluded that nationwide only a few companies have systematic methodologies in place for meeting user needs. The government agency report for the growth region firmly recommended that an education centre be established in the area with this particular focus. This recommendation started a longer process of analysis whereby Gumlink, Middelfart Sparekasse, Lego, Danfoss, Bang & Olufsen and later Nokia and Novo Nordisk together decided to start a concept maker education programme.

Company chairman Mads Kjær from Kjaer Group is one of the global business leaders who has already reserved his place in class at 180° Academy: "I believe, quite simply, that a programme such as this one can help our organization reach its growth target. Acting as guinea pig and following the programme myself, will show the rest of the company that this is something we all need to have a look at." Kjaer Group has created a growth business by selling transport solutions to developing countries. An interesting feature of the company is that 22% of employees are joint owners.

**International model**

180° Academy follows the MBA model, where the instruction is planned to meet the needs of part-time students to fit around a student's job. See also textbox. The Academy's course contents have been inspired by some of the world's leading design and innovation schools. These include the Stanford Institute of Design, led by IDEO founder David Kelley and the Institute of

<sup>1</sup> Trekantområdet is a known growth region between 3 cities in Jutland.

Design at the Illinois Institute of Technology, where Larry Keeley teaches. Features of the programme can be summarised in the following four points:

#### **TECHNOLOGY SHOWDOWN**

The programme breaks away from technology driven innovation and concentrates instead on applying ethnographical methodologies for systematic collection of knowledge and data about life patterns, so as to identify needs that companies have not yet uncovered.

#### **CROSSING BOUNDARIES**

The education is interdisciplinary and trains students to operate in all areas of the innovation process from data collection and needs analysis to design development and development of prototypes and, finally, to commercialization of the product. See also figure 1.

#### **EXPERIENCE RATHER THAN THEORY**

The programme is practical. Students are not examined or assessed according to academic performance, but rather from practical experience with innovation.

#### **AN OPPORTUNITY FOR SUPPLEMENTARY EDUCATION**

Basically, the education programme has been privately funded and is aimed at employees and managers who already have several years of employment experience. The seven companies financing the programme plan to let at least one of their employees take a course at the Academy. Danfoss actually expects to send a broad range of employees on the shorter courses of study: "Usually, our finance people come from business schools, our engineers from the Technical University of Denmark (DTU) and arts people from the universities. The majority will continue to do this. But we also need people who can combine subjects from science, economics, anthropology and ethnology. Combining different disciplines in one study programme is remarkable. It gives a new mindset and prepares us to look at the world and people's patterns in a different way. It could be the foundation for future market concepts and markets," underlines Torben Fich, head of training and professional development at Danfoss. Mads Kjær from Kjær Group is convinced that this programme can give him a new network as well as tool set for generating a different and better innovation than previously: "We need an education that not only focuses on the creative aspects but also on the technical as well and that works both the creative and the innovative aspects into a business plan," explains Mads Kjær.

#### **Out of the comfort zone**

Anne Kirah, the Academy's Development Manager, is known internationally as a heavyweight in radical user-driven innovation. Normally a senior design anthropologist at Microsoft's customer design centre, Anne Kirah is currently on leave so she can spend time building up the Danish education programme together with the seven other companies involved. Through her work with Microsoft and other organizations such as Boeing, Anne has learned that the majority of companies are desperate to learn what consumers will demand in the future. She believes that even the IT giant would be teetering on the edge of bankruptcy within just a few years if the company didn't constantly try to renew itself. According to Anne Kirah, traditional, technology driven

innovation is a relic from the industrial revolution. This type of innovation is no longer sufficient today in an era when a product's lifecycle is becoming shorter and shorter. There is a constant need to know and adapt to consumer needs. "The majority of companies make technology driven innovation. They are more concerned about making modifications to a product they already know. They have tunnel vision. How can you get any new ideas if you only ever look at existing possibilities and at what your competitors are doing? You cannot be innovative from within your own comfort zone. At 180° Academy we will teach students to open their eyes to completely new markets, by analysing people's needs," says Anne Kirah. During their course, students will be introduced to the traditional, ethnographic, participant observation methods, whereby they have to go out and observe people in their everyday lives before even attempting to put words and thoughts together as to which products they are likely to need in the future. Students will then be thrown into a creative design phase, whereby they first have to analyse the data they have collected, learn various tools for idea development, and get to know the development of prototypes so as to finally be in a position to work with the actual commercialisation of the product.

### **Failed to keep up**

While Danish companies are demanding practical, radical, user-driven innovation and education which teaches students to work across different subject areas and at all levels of an organization, the state education system is mainly divided into subject specific institutions. Innovation is currently included in courses such as the University of Southern Denmark's (USD) Product Development and Innovation, Industrial Product Design at the Aarhus School of Architects, Executive MBAs at the Scandinavian International Management Institute (SIMI) and Copenhagen Business School, Entrepreneurial Leadership at the Technical University of Denmark (DTU), Leadership and Innovation in Complex Systems at Copenhagen Business School and Learning Lab Denmark together with degrees in technology leadership at DTU and the University of Aalborg, Denmark. They are academic courses centred around their respective subjects. The gap between what companies demand and what the education system can offer is therefore enormous. Even the researchers and scholars of public institutions acknowledge this fact. But they also observe that as academic institutions they cannot meet the companies' needs for a both interdisciplinary and practical education. Henrik Henlau is lecturer of innovation at the Copenhagen Business School and has been observing the development of innovation in companies for the last 20 years. He agrees that there is a need for a study programme that meets the ever increasing demands for innovative approaches and methodology development. "This initiative is ingenious. This is exactly what we have been looking for. In Denmark we've been surviving on being extra cautious. Not innovative. There have been no developments in innovation in the last 20 years. Combining businesses with education is exactly the right thing to do. If the businesses are not involved, then it just won't work." The criticism of the existing innovation courses and their inability to keep up with customers' needs is further fuelled by several companies. "If I was sitting in the state education system and was developing new and existing courses, then I would look more

closely at this particular initiative. The programme has been created based on real needs from businesses. And it's food for thought that companies out there can't find the components they need from other programmes," says Rasmus Anderskov, a consultant from the Confederation of Danish Industries. Head of Research Policy at Danish Commerce and Service, Jannik Linnemann, believes that 180° Academy has hit the nail on the head by building a bridge between user-driven and technology-driven innovation. He also believes the current education system has quite simply failed to keep up. This concept initiator programme provides something that the state education system has been unable to deliver. We have an education system that doesn't think as a whole but is instead divided up to cater for the public-sector and private-sector labour markets. The tertiary study programmes have not been good enough at staying alert and picking up on the needs and trends of our society, it appears we slept through that lesson" states Jannik Linnemann.

### **180° Academy**

The first 25 students are due to start at the innovation Academy next summer. Target groups are company and public institution employees as well as managers and self-employed. The Academy expects to attract at least half of its students from abroad.

**Where:** Courses will take place in Middelfart and abroad.

**How:** Admission requires minimum of a bachelor's degree or similar, but other criteria may also carry more weight. Admission follows individual interviews.

The Academy has 3 programmes:

**1. Master Practitioner Programme.** A supplementary training programme in concept development for employees with several years' experience. Course duration is 15 months. Students will work with actual problems from their own and other participants' companies. Students are examined on their practical abilities to solve actual innovation tasks in their own company. Teaching is in English and course fees are DKK 220.000.

**2. Executive Programme.** A supplementary training programme in methodologies and theories for executives. Course duration is 3 months. Students do not have to work on an actual project. Teaching is in English. Course fees are DKK 125.000.

**3. Insight Programme.** A programme that provides practical orientated insight into methodologies and theories. The course is divided into 5-6 modules. Target group consists of Danish SMEs. This course is a shorter and less extensive version of the Master Practitioner Programme. Teaching is in Danish and all modules take place in Denmark. Course fees are DKK 45.000.

### **Thirsting for knowledge**

**Business and industry need to perceive the world and people's life patterns in a different way.**

### **Becoming more receptive**

**Criticism of the existing education system for not being receptive to new society trends and needs.**

### **A hybrid**

Essentially, 180° Academy differentiates itself from both previous Danish innovation courses and US examples in that it is not academic. Choosing to market itself as a practical course was not completely intentional or unambiguous. On the one hand, the investing companies want students to learn how to carry out innovation processes in real life situations and not to

become lost in theory. On the other hand, there has also been a desire to give the Academy some of the technical balance that an academic institution gets from its research environment. The fact that 180° Academy has ended up providing a practical education has just as much to do with the problems of finding places in the Danish state education system as it has to do with being a deliberate choice. 180° Academy's hybrid status inside – or rather outside – the Danish state education system means it also represents a break from the current education system's structure. The Academy's mission is to further educate leaders and employees with employment experience. This type of education is typically classed as an academic Master's programme. 180° Academy has since insisted that it does not offer an academic education but a practical one. The Academy does, however, want to work with some of the academic institutions that offer courses in innovation. Established programmes such as the Kaos Pilots proved long ago that practical and academic education can work together. However, several sources from the world of academia with whom Mandag Morgen have spoken, think otherwise. They believe that it will be difficult to work together with this type of education, given that students are not examined according to academic criteria. Helge Elbrønd Jensen, head of faculty at The Technical University of Denmark (DTU), is unimpressed with the practical and user-driven focus chosen by 180° Academy. Despite the fact that the university offers several courses in innovation, he doesn't want to let go of DTU's strong position as a science-based institution. He has doubts collaboration with a concept initiator education will work. "It is going to be difficult to work with the Academy because it does not provide an academic education. The anthropological angle is only relevant to us if part of the course includes technology or technological solutions", says Helge Elbrønd Jensen. Both Henrik Toft Jensen, a lecturer at Roskilde University and a member of the Danish Advisory Board for Technology and Innovation and Anders Drejer of the Strategy Lab at the Aarhus Business School, are sceptical about working with the Academy, if courses are not taught on an academic level. On the other hand both Henrik Toft Jensen and Anders Drejer do believe that there is a need for more innovation courses. "Denmark is behind when it comes to initiating. We must therefore have more education. That is the way we can keep the education system up to date, because new study programmes will cannibalise and kill those programmes that don't keep themselves up to date," he says.

***The new study programmes will cannibalise and kill the programmes that don't keep up to date***

*Anders Drejer,  
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#### **Academic aversion**

**Universities remain hesitant when faced with the new innovation study programme. They prefer academic level education.**