THE BACKGRONUND OF INTERDICIPLINARY STUDIES

Nordcode Oslo, May 10-12, 2006

Hilde Østerås Berntsen,
Institutt for Produktdesign, NTNU

The classification of academic disciplines and departments is often thought of as something natural given and the limit between the disciplines are taken as granted. However, academic disciplines are historical constructions that separate different areas of knowledge apart from each other, and the limits between them are therefore continuous in change (Smeby 2001).

In these terms, an academic discipline or subject is defined as a unit of theories, methods and perspectives, used to understand or solve a specific problem or type of question (Smeby 2001). When the first Norwegian University in Oslo was inaugurated in 1813, it only gave lections in four professional studies; Theology, medicine, law and philology, which was a classical scholarship in literary study (Collett 1999 in Smeby 2003).

Later, it has been added a big number of subjects. Some of the new subjects are theoretic orientated disciplines such as philosophy, physics, sociology or economics, others more professional orientated such as dental studies, psychology or different kinds of engineers. Some of the professional orientated disciplines, such as medicine, have managed to establish legitimacy as booth a professional orientated discipline, and a theoretical research discipline (Smeby 2003).

During the 20 century, modern science has evolved to be more and more specialized, and this have resulted in many new disciplines as well as several specialized field within the different disciplines. Today, no philosopher is in control of the entire philosophy or physicist that is in control of the entire physics (Sørensen 2002). This specializing has brought along several challenges, because the different disciplines no longer is capable of solving real problem in the real world. The answer to these challenges is interdisciplinary research.

Interdisciplinary studies

Interdisciplinary research is understood as research where theories ands methods from more than one academic subject or discipline are involved, and where the result of the study is a synthesis between these different theories and methods (Helle-Valle 2000). For the last two decades, interdisciplinary research and interdisciplinary cooperation have been a word of honor within research community (Sørensen 1995, Sørensen 2002, Helle-Valle 2000). Some researchers (e.g. Gibbons), have even clamed that this phenomenon will generate a new and different kind of knowledge production, modus 2, in contrast of traditionally academic knowledge production, modus 1 (Gibbons et.al 1994).

But interdisciplinary research also brings along several new challenges; how do we remain the qualities from specialized knowledge at the same time as we create new knowledge causes by new perspectives from the theory and methods of other disciplines? Is it possible to develop new areas without loosing valuable knowledge on the way?

In the early days of interdisciplinary research, the most common method was to create large teams of researchers from different disciplines. This method was inspires by the so-called "Big science" projects during the 2nd World War, which task was to develop military equipment or weapon, the atomic bomb as an example. More than 100.000 researchers such as physicists, chemists, mathematicians and different kinds of engineers took part in this particular process (Sørensen 2002).

"Big science" demonstrated the potential in big groups of specialists, and gradually the isolated researcher was replaced by the research groups. The exception is within humanistic and social science, where the individual research project still is common.

This has influenced the thinking of interdisciplinary research. For a long time, the ideal was to teach the natural scientist some aspects from the humanities and/ or the social science, and interdisciplinary skill was the researchers' capability to juggle between different kinds of knowledge. Instead of focusing on groups of scientists' total knowledge, the focus was set on individual scientists' total knowledge.

This understanding of interdisciplinary studies is slowly changing. Today, more and more scientists understand interdisciplinary studies as a collective working partnership, where the results of the research gives answers one discipline not could achieve. Still, there are several difficulties attach also to this method. Interdisciplinary projects often cope with several negotiations, and discussion connected to the different disciplines conviction and so called pre-believes. Another common problem is to find interesting professional angles for all involving parts. It may seem easier to coordinate different professional views with superior structure from only one discipline, than to give the different disciplines equal status.

REFERENCES

Gibbons, Michael et.al (1994) *The New Production of Knowledge,* London, Sage.

Helle-Valle, Jo (2000) *Tverrfaglighet: ønsker, retorikk og praksis*. 2000. http://www.viten.com

Klassekampen (13/03/2003) *Oslo er til salgs,* Oslo.

Smeby, Jens-Christian (2001) *Kunnskapens kognitive og sosiale strukturer. En teoretisk og empirisk studie av fagforskjeller ved universitetene.* Rapport 8/2001, Norsk institutt for studier av forskning og utdanning, Oslo.

Smeby, Jens-Christian (2003) *Profesjonsfag, fagdisipliner og tverrfaglige felt*, arbeidsnotat ved Senter for profesjonsstudier, Høgskolen i Oslo.

Sørensen, Knut H. (1995) *Den nye tverrfagligheten – fra polyteknisk generalist til polyvalent spesialist* i Forskningspolitikk, vol. 17, 1995, nr.3, s.6-7.

Sørensen, Knut H. (2002) *Tid for tverrfaglighet, jakten på vennligsinnede spesialister* I Forskning på tvers, redigert av Kathrine Skretting, Trondheim. Tapir Akademiske Forlag