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# Benchmarking in the Improvement of Higher Education

ENQA Workshop Reports 2

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# Preface

Benchmarking as a higher education evaluation tool is used commonly but differently throughout Europe. Even the exact definition of the actual term *benchmarking* varies from country to country. A determination to map these various benchmarking concepts and to find common denominators to benchmarking resulted in an active workshop organised by ENQA on 14–15 June 2002 in Finland. European evaluation experts attacked these problems and were able to identify several good principles of benchmarking as well as recommendations for future action. This report, the second ENQA Workshop Report, is a direct result of the experts' hard work.

The Steering Group of ENQA sees benchmarking as one of the increasingly relevant evaluation methods today. As a consequence the Steering Group decided to support this workshop in its annual action plan. The feedback ENQA has received from the participants of the workshop indicates that discussions and group work were definitely among the most active ones in recent ENQA workshops. This is gratifying, because one of the cornerstones of our Network's activities is to bring together European experts to exchange views on supportable evaluation practices.

The number of participants in the workshops has intentionally been limited to about 30 persons per workshop in order to ensure the kind of intensive discussion among the participants, which again leads to joint practical results. This workshop showed once again that this method indeed is a practical one.

I would like to thank the organisers of the workshop who also have written this final report and I hope the reader will find the result worthwhile.

**Christian Thune**

Chairman

ENQA Steering Group

# Contents

<b>1</b>	<b>Introduction</b>	<b>5</b>
<b>2</b>	<b>Benchmarking in brainstorming</b> <i>Asko Karjalainen, University of Oulu, Finland</i>	<b>7</b>
<b>3</b>	<b>Reflections and recommendations</b> <i>Kimmo Hämäläinen, European Network for Quality Assurance in Higher Education; Dorte Kristoffersen, Anette Dørge Jessen, Danish Evaluation Institute</i>	<b>11</b>
3.1	Principles of good benchmarking in the development of higher education	11
3.2	Concrete examples of benchmarking	12
3.3	Recommendations	13
<b>4</b>	<b>Case studies on benchmarking</b>	<b>14</b>
4.1	Creative benchmarking – designing sustainable international cooperation in higher education ( <i>Soili Niinikoski, University of Oulu, Finland</i> )	14
4.2	International comparative evaluation of BSc programmes of agricultural science in four European countries ( <i>Anette Dørge Jessen, Danish Evaluation Institute, Denmark</i> )	19
4.3	Recent developments in benchmarking in the United Kingdom and an overall look at three benchmarking subject statements as case studies ( <i>Fiona Crozier, Quality Assurance Agency for Higher Education, United Kingdom</i> )	23
4.4	Benchmarking in the perspective of a “learning institution” and as a means to search for best practices ( <i>Bente Kristensen, Copenhagen Business School, Denmark</i> )	27
4.5	Benchmarking as a tool in higher education guidance ( <i>Mirja Toikka, Kymi Polytechnic, Finland</i> )	33

# 1 Introduction

## Purposes and target groups

The Steering Group of the European Network for Quality Assurance in Higher Education (ENQA) commissioned a seminar on benchmarking to:

- Establish an understanding of the principles for “good” (true) benchmarking in the development of higher education;
- Provide concrete examples of various benchmarking practices with the view to establish good practices;
- Discuss strengths and weaknesses related to benchmarking in evaluation;
- To reach conclusions on perspectives for European benchmarking within higher education.

The seminar took place in Helsinki, Finland on 14–15 June 2002, and was targeted towards the staff of ENQA member agencies (currently 37), partner institutions and external benchmarking experts. The methods used for the sessions included working groups and plenary sessions. Twenty-six participants from 13 countries took part, and it was attended by a broad range of representatives, which ensured an appropriate geographical balance of representatives from northern, central and southern Europe. Furthermore, ENQA had invited participants with extensive practical experience in benchmarking as well as participants for whom benchmarking is a new working field. In addition to the ENQA member agencies, the participants included representatives from higher education institutions, the European Commission and the newly established Center of Accreditation and Quality Assurance of the Swiss Universities.

## Context and rationale of the seminar

ENQA commissioned and conducted this seminar due to an increasing interest in recent years to apply benchmarking as a tool for quality improvements within higher education in Europe.

The interest for benchmarking in higher education should be understood in the context of the Bologna process, which emphasises the need for more comparison, transparency and visibility of quality in higher education.

Benchmarking does not, however, only relate to the international political context. It should also be seen as a response to the growing competition among educational institutions (nationally as well as internationally) and their search for best practices and superior performance.

Finally, the motivation of ENQA to initiate this seminar should be viewed in the light of the growing diversity in the definition and understanding of the concept of benchmarking, which has raised a need to establish common principles for benchmarking within the framework of the ENQA cooperation.

## Structure

The seminar was structured around three sessions. The first session was facilitated by an external expert and focused on the introduction of the concept of benchmarking and the formulation of principles for “true” benchmarking (as opposed to “false” benchmarking). The session was organised as a mixture of presentations (by the external expert) and intensive group work involving the participants in

the discussions on the concept and definition of benchmarking.

While the first session provided the participants with a conceptual framework of benchmarking, the second session was based on presentations of concrete examples of various benchmarking practices from United Kingdom (two cases), Finland (two cases) and Denmark (two cases).

The third and final session concentrated on reaching conclusions for the future perspectives of benchmarking within the European context and to provide recommendations to the Steering Group of ENQA for future actions. This publication is a summary of the cases, recommendations and conclusions that the participants made on the basis of the cases.

## Issues covered by the cases: United Kingdom, Finland, Denmark

The first case from the United Kingdom provided an overview of the recent developments with benchmarking in higher education in the UK. These developments followed the recommendations of the report of the National Committee of Inquiry into Higher Education (the Dearing report), published in July 1997, concerning a need to develop explicit standards (benchmark statements) for programme approval. As a continuation of this, another UK case gave concrete examples of the work of the Quality Assurance Agency for Higher Education (QAA) concerning the process of establishing subject benchmark statements within three different subject areas (Dance, Drama and Performance; Radiography and Chemistry).

The two cases from Finland viewed the issue of benchmarking from a different perspective, namely from the perspective of the education institutions. In both cases the benchmarking projects were initiated by the institutions themselves. The first case concerned the work of three national polytechnic institutions in the development of a benchmarking system applied for student guidance viewed from the perspective of students. The second case pro-

vided an example of an international benchmarking project initiated by the University of Oulu involving partnership with seven institutions (and seven programmes) in six different countries. The project, which is characterised as "cooperative benchmarking", concentrated on reaching agreements on common standards for good practice through a lengthy process of negotiation between the involved partners.

The first case from Denmark concerned an international comparative evaluation conducted by the Danish Evaluation Institute (EVA) involving BSc programmes of agricultural science in four different countries. The evaluation developed and tested a set of pre-defined criteria against which the four programmes were assessed. From a methodological perspective the outcome of the evaluation is an improved methodological framework for international comparative assessments derived from the methodological lessons obtained during the implementation of the evaluation. From the perspective of the institutions the main outcome is the range of cases for best practices, which the institutions can use to improve their own practices. The second Danish case included a presentation of an extensive benchmarking strategy carried out by the Copenhagen Business School (CBS) involving various types of quality improvement mechanisms. The presentation focused on the learning culture of CBS and the application of both internal and external benchmarking to support the transformative learning at the institution.

## The contents of the report

The report is divided into four chapters. Chapter 1 provides an overview of the overall conclusions derived from the discussions on the definition of the concept of benchmarking, including the established criteria for a good benchmarking project. Chapter 2 deals with the concept of benchmarking itself. Chapter 3 summarises the conclusions and recommendations made for the future perspectives for European benchmarking and Chapter 4 presents the various cases.

## 2 Benchmarking in brainstorming

*Asko Karjalainen, University of Oulu, Finland*

*“Our task is to try to redefine benchmarking by using new concepts and surprising metaphors.”*

During the last decade quality assessment phenomenon called benchmarking has expanded very rapidly.<sup>1</sup> Benchmarking stories are told all over the organisations, also in the public sector. And some stories they are! They are success stories about growing efficiency, great improvements, with an undertone of enthusiasm and promising visions. In those narratives benchmarking is introduced as the modern management tool as well as the most effective quality enhancement method. It seems that benchmarking really works. Why is it so? There may be many practical reasons like “building on the work of others makes sense”, “it can lead to cooperation” or that the method is concrete and well documented (Keehley & al 1997)

It should, however, be self-evident that any method adopted from business life is most likely to fail in defensive organisations like the universities.<sup>2</sup> Surprisingly enough, this seems not to be true with benchmarking. There is an increasing interest to apply benchmarking in the higher education organisations (Schofield 2000). The unexpected reaction compels us to set the philosophical question, what is the hidden nature of the benchmarking process?

What is the secret of benchmarking? In the ENQA workshop, a group of benchmarking experts approached the subject under the heading of “benchmarking philosophy”. Below I will utilise some ideas of our “creative morning session”. To create something new, useful and far-reaching is the task of the reader now. In this article I only give some incentives based on the workshop results.

<sup>1</sup> By using the expression “assessment phenomenon”, I will now underline the importance of reflection. Benchmarking must be tested by creative and critical thinking.

<sup>2</sup> Some further critiques of benchmarking, see for example Gooden & McCearry 2001, Dervitsiotis 2000, Palfreyman 1999.

### Definitions

In the literature benchmarking has many definitions. I have divided these definitions to three categories: practical definitions, existential definitions and metaphorical definitions.

Practical definitions tell, through prose, what benchmarking is or what activities it includes:

*Benchmarking “is the systematic study and comparison of a company’s key performance indicators with those of competitors and others considered best-in-class in a specific function.” (Dervitsiotis 2000)*

*“...is a way of comparing a product or process against others, with reference to specified standards.” (Pepper, Webster & Jenkins 2001)*

Existential definitions try to connect benchmarking with the experiences, emotions and basic processes of the human existence. These definitions bring the method closer to our ordinary living world. They suggest that benchmarking is only a more formalised dimension of our natural everyday interaction.

*“...it is, at bottom, a systematic way of learning from others and changing what you do.” (Epper 1999)*

*“It is actually a matter of imitating successful behaviour.” (Karlöf & Östblom 1993)*

*“Benchmarking is a form of human being’s natural curiosity with which s/he explores the possibilities of cooperation and friendship.” (Karjalainen, Kuortti & Niinikoski 2002)*

*“Benchmarking is a learning process, which requires trust, understanding, selecting and adapting good practices in order to improve.” (One team in ENQA workshop 2002)*

So far there are no really strong metaphorical benchmarking definitions. This indicates that researchers, consultants, managers and other benchmarking users merely see the method as a technical question. Metaphorical definitions, by using metaphorical expressions, could provide new and astonishing perspectives. They could provide a surprising and a revelatory angle to the nature of benchmarking or give a sudden insight to the inner meanings of the method. “State of mind of an organization” is an example of a weak metaphorical expression:

*“...it is the state of mind of an organization which encourages the continuous effort of comparing functions and processes with those of best in class, wherever they are to be found.” (Zairi & Leonard 1994)*

But why would we not develop stronger ones? What if we called benchmarking “the shortcut through the forest of the quality assessment”, “the flower of the organisational curiosity” or “the envious energy between the managers”? Each of these metaphors implies a very different benchmarking concept and process. Metaphors are tools for creating self-awareness. When starting a benchmarking project, why would you not search your thoughts and create your own metaphor? The metaphor matters in our post-modern world of narratives.

## True or false benchmarking?

Benchmarking literature sometimes uses the concept “true benchmarking”. One challenge of our conceptual adventure now is to explore if there is such a phenomenon at all. It is clear that there are numerous types of different benchmarking methods and styles. Here we have some examples of attributes, which the benchmarking experts have given to the benchmarking method. Benchmarking can be:

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– competitive	– benchmark-oriented
– collaborative	– functional
– outcome-oriented	– generic
– bureaucratic	– explorative
– qualitative	– co-operative
– quantitative	– dialogical
– independent	– implicit
– experience-seeking	– explicit
– process-oriented	– academic
– functional	– international
– internal	– touristy
– external	– horizontal
– spying	– vertical
– copying	– ranking-oriented
– creative	– improvement oriented
– visionary	– diagnostic

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A free combination of these attributes can produce a huge amount of variations for methodological framework. At the ENQA workshop, teams tried to define the distinction between “true” and “false” benchmarking. True benchmarking, some said, is always improvement-oriented. Negotiation, collaboration and developing a process for mutual understanding are necessary parts of it. In true benchmarking organisations and people learn from each other and there is dialogue. It has explicit and open goals and the decision-making process is (as) clear (as possible). True benchmarking is always creative. Adapting best practices does not mean the same as copying them.

False benchmarking is rank-oriented or merely explorative without interest in improvement. It has hidden purposes and it may even be spying. Nor is touristy visiting true benchmarking. Fuzzy goals and undefined processes are typical false benchmarking constituents. Performance measurement by using some benchmarks moves into true benchmarking when it defines targets for improvement by identifying best practices and adapting them to achieve continuous improvement in one’s own organisation (see also Fine & Snyder 1999, Palfreyman 1998).

## Paths of benchmarking

But finally, do such qualities as “true” or “false” really exist in the benchmarking sphere? Should we instead use the term “benchmarking-like activities”, which will flourish at the conceptual space of the benchmarking constituents? In that space there are many philosophical paths through which the benchmarking activities flow. I introduce the prototype of the benchmarking space in tabular form (see Table 1).

The table shows that the benchmarking space emanates between the sources and quality cultures. The sources give the reasons and the agents for benchmarking. Quality cultures construct the social context of the benchmarking sphere. It is also noteworthy that all the entities in grey area have the dialectic characteristic to act as the elements of both the sources and the cultures. The same entities form the theoretical forces, which causes the tension for the particular benchmarking method creation. The outcomes and the results of the benchmarking process will create changes on the quality cultures, which have impact on the sources, and the “circle” goes round again.

The table is more of an artistic image than an academic product. There is a lot of unexplained semantics in it, which I leave to the critical reader for creative interpretation. The table draws attention to the fact that benchmarking is not an unambiguous method. It has many different sources and processes, and can lead to multiple results.

The benchmarking process in the higher education context is not the same as in business life or in the public sector overall. It may not even be the same between universities in different continents. There is a great difference between American and European universities, for example. Higher education in Europe is mostly arranged with close contact to research, whereas in the United States there are more teaching universities than research universities. The idea of the scientific community – the quality product of the continental philosophy – with its universal values of truth, collectivity, objectivity and criticism gives mode to the academic action in the European context. Participants of the ENQA workshop were predictably quite critical of the ranking-oriented “benchmarking” activities. Hard values of ranking may be incompatible with the European spirit of the scientific community, whereas the cooperation, discourse and tradition of

Table 1. Benchmarking space

SOURCES						
OWNER	EXTERNAL	INTERNAL			SHARED	CUSTOMER
INTEREST	TO QUALIFY	TO COMPARE	TO IMPROVE	TO WIN	TO COOPERATE	ENERGY
SEEKING FOR	STANDARDS	BENCHMARKS	BETTER PRACTICES	BEST PRACTICES	JOINT TOPICS	TARGET
PROCESS	RANKING	ACCREDITATION	COMPARING		(BENCH) LEARNING	STYLE
OUTCOME	QUALITY PRICES	CERTIFICATES	COOPERATION DEVELOPMENT COMPETITION		ALLIANCE	RESULTS
QUALITY CULTURES						

knowledge are more convenient values for it.

Perhaps there is a kind of social order to “true” European benchmarking. Maybe there were some elements of it present in the workshop. Was the great metaphor very nearly reached? In Finland there is an old proverb, which says, that “*It’s worth fishing for salmon, even if you do not catch any.*” The same, I believe, is true of benchmarking: it is worth trying.

## Final comments

It was a very invigorating workshop. The most inspiring moment was collaborating in teams with people from different universities and different countries. A similar kind of inspiring stimulus may be one of the reasons why stories about benchmarking are mostly enthusiastic. While evaluation processes are often very bureaucratic and paper-based, the benchmarking process can offer more interaction and emotional stimulus, both of which are the most important factors in a meaningful learning process. Getting the benchmarking passport to a strange culture is always a fascinating adventure.

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## 3 Reflections and recommendations

*Kimmo Hämäläinen, European Network for Quality Assurance in Higher Education;  
Dorte Kristoffersen, Anette Dørge Jessen, Danish Evaluation Institute*

This chapter summarises the discussions and results achieved at the workshop, following the defined purposes of the workshop.

The purposes of the workshop were to:

- Establish a understanding of the principles for good (true) benchmarking in the development of higher education
- Provide concrete examples of various benchmarking practices with a view to establish good practices;
- Discuss strengths and weaknesses related to benchmarking in evaluation;
- To reach conclusions on perspectives for European benchmarking within higher education.

The second purpose concerning strengths and weaknesses of benchmarking in evaluation was not discussed separately but incorporated in the discussion on principles for good benchmarking (section 3.1).

For the last purpose, the discussions taking place at the workshop resulted in a number of concrete recommendations for further initiatives that the participants considered relevant to proceed with within the framework of the ENQA cooperation.

### 3.1 Principles of good benchmarking in the development of higher education

The discussion on the concept of benchmarking was a general one and not specifically related to the area of higher education. The participants agreed that there were several basic common elements, which characterise good (true) benchmarking even though the entire concept of benchmarking should be considered flexible.

In brief, the participants arrived at the following five principles for good benchmarking:

1. Benchmarking includes an element of comparison, which is obtained through decisions on common reference points, such as a set of common criteria against which the programmes/institutions are assessed.
2. Benchmarking implies a strong element of learning and a commitment to improve one's own practices. One way to do it is to establish partnerships with a view to select those that one can learn from. The learning element is important in terms of one's commitment and motivation to the process.
3. Benchmarking is an ongoing and time-consuming process that continues even after the specific project has been brought to a conclusion and which aims to contribute to continuous improvements.
4. In order to obtain the learning element in the benchmarking process ownership of the process is crucial. It is important to establish internal ownership of the process among the various parties involved, regardless of the extent to which the project is externally or internally initiated.
5. If ranking is a part of the benchmarking project, there must be agreed and transparent procedures to ensure that ranking can be made as objectively as possible. Ranking procedures can simplify reality in a useful way by using several key indicators without synthesizing them and without classifying institutions into categories. According to the participants, the principles of "good ranking" can be defined as follows:
  - Criteria for ranking should be applied and known to those under evaluation before the start of the self-evaluation. Also, it should be communicated beforehand if the collected information is to be used for ranking or development purposes.
  - Ranking is multidimensional and does not necessarily include formal sanctions (or if there are,

they should be known beforehand).

- Ranking should also be built on qualitative data, rather than sheer numbers, in order to create an open and cooperative process that promotes development of the involved parties first and foremost, and enables the use of ranking as an evaluation tool.

In ranking as in all other evaluation procedures the following question should always be asked: “What is the use of a particular evaluation method to the higher education system and the institutions themselves?” In terms of ranking, a clear advantage would be the introduction of a competitive aspect, which enables the institutions to compare themselves to one another. A disadvantage, on the other hand, would be that ranking could constrain self-critical evaluation and prevent the formation of a learning culture inside the institution.

## 3.2 Concrete examples of benchmarking

The workshop included the presentation of five case studies reflecting various approaches to and dimensions of benchmarking. A full presentation of the case studies are presented in chapter 4 of the report.

Based on the case studies, three distinct dimensions of benchmarking can be identified:

- Benchmarking can be either national or international.
- Benchmarking can be either external or internal.
- Benchmarking can concentrate either on the process itself or on the output, or both.

### National/international

The cases presented at the workshop represent both national and international benchmarking or a mixture of both forms.

National benchmarking in its “pure” form include the cases from the Quality Assurance Agency for Higher Education (QAA) in the United Kingdom, which concern the establishment of subject benchmarks for programmes offered within the context

of higher education in the United Kingdom, and the case from Finland involving student guidance benchmarking at three national polytechnic institutions.

The case of the Copenhagen Business School (CBS) represents a mixture of both forms and includes a broad range of benchmarking initiatives taken by CBS, which involve national as well as international partners.

The case of the University of Oulu in Finland and the second Danish case from the Danish Evaluation Institute (EVA) fall into the category of international benchmarking. The case of the University of Oulu involves seven departments from the University and their foreign partner departments from universities in five different countries. The case of EVA involves the participation of programmes of agricultural science in four different countries.

### External/internal

The distinction between external and internal benchmarking is not unambiguous and involves at least two dimensions; 1) where the initiative was taken from, and 2) the extent to which the project involves external partners.

The case from UK and the case of EVA represent external benchmarking because the initiatives were taken by an agency external to those being evaluated. This does not imply, however, that internal elements (in the form of self-evaluation, for instance) are not included in the evaluation process.

The case of CBS involves both internal and external benchmarking to support the learning at the institution. The term external should, however, be understood differently here as external refers to the extent of involvement of external partners.

Both cases from Finland are examples of a mixture of internal and external benchmarking. They are internal in the sense that the institutions themselves took the initiatives in the projects and external in the sense that external partners are involved.

### Process/output

All cases presented at the workshop included, to a different degree, a process-oriented approach to evaluation and benchmarking. Process is here un-

derstood as an extent of involvement of the concerned institutions/programmes in the formulation of the methods and benchmarks (criteria) applied in the project.

The basic principle of the concept of benchmarking applied by CBS is that benchmarking is a long-term process that is not static but changes over time. Accordingly, the nature of the benchmarking initiatives is to support an internal process for continuous quality improvement.

The case from the University of Oulu also focuses on the process to a large extent. The standards for good practices were developed through the process of negotiation between the involved partners and not prior to the implementation of the project. This is very similar to the second case from Finland involving the three national polytechnics, where each institution concerned identified the process to be developed and the definition of the benchmarking objects.

The process-oriented approach applied by QAA implies the establishment of small expert teams from the concerned institutions to provide benchmark information on standards within the different subject areas. The task of the expert teams comprised two related elements; to create reference points which helped define the nature of awards in the specific subject, and to formulate or articulate the minimum requirements or expectations of performance for an award in the subject.

Finally, the process element in the EVA case was expressed through the involvement of the concerned institutions, who formulated the criteria against which they would be assessed.

### 3.3 Recommendations

The participants at the workshop agreed that the results of the workshop should be continued with the following concrete initiatives:

- Formulating a document outlining the “principles for good benchmarking”, including an explanation of the concept itself. As the concept should be considered flexible the term should be explained rather than defined, so the main focus would be on the understanding of the concept instead of a strict wording that restricts its usage.
- Formulating a document comprising a summary of the benchmarking activities of ENQA member organisations, consideration of benchmarking in terms of the Bologna-Berlin process, and a survey of the various benchmarking criteria currently in use and an analysis of the way they are used.
- Continuing to share experiences on the issue.

## 4 Case studies on benchmarking

### 4.1 Creative benchmarking – designing sustainable international cooperation in higher education

*Soili Niinikoski, University of Oulu, Finland*

#### Foreword

At the University of Oulu, the strategies for teaching development and internationalisation stress the importance of internationalisation of curriculum and the development of active educational cooperation with international partners. The strategies set the goal of creating study options, which are partly or entirely planned and carried out with an acknowledged international partner.

In September 2000, the benchmarking project was initiated on the basis of these strategies. It is seen as a method for achieving the above-mentioned goals. The first phase of the project was to develop an operations model and find pilot departments. Thereafter, we have focused on consulting with the departments and developing new benchmarking methodologies. The project does not have a deadline, as the aim is to produce a tradition of sustainable cooperation between the participating departments.

#### Participants

The benchmarking project in the University of Oulu involves seven pilot departments and their foreign partners:

Table 1. Departments and their partners

Department of the University of Oulu	Foreign partner department
Dentistry	Karolinska Institutet, Sweden
Process Metallurgy	Kungliga Tekniska Högskolan Stockholm, Sweden
Geosciences	Montanuniversität Leoben, Austria
Biology	Stockholms Universitet, Sweden
Marketing	University of Otago, New Zealand
Art Studies & Anthropology	Università Ca'Foscari di Venezia, Italy
Environmental Engineering	Technische Universiteit Delft / Universiteit Twente, The Netherlands

#### Creative benchmarking

The key goal of benchmarking is to improve one's own performance by learning from others. The benchmarking project in the University of Oulu differs from traditional benchmarking in several ways. As we talk about benchmarking, we are not referring to it in a "traditional" sense but we develop the concept a bit further. What we would like to stress are the qualitative and philosophical dimensions of benchmarking, and we have described creative benchmarking with following definition:

*"Benchmarking is a form of a human being's natural curiosity with which s/he explores the possibilities of cooperation and friendship."*

A starting point for developing this definition has been that traditional benchmarking used in business does not fulfil the development needs of universities. Through mapping the concept of benchmarking in the higher education context we have arrived at our own benchmarking model for exploring educational cooperation possibilities by systematic curriculum comparison. "Creative" refers to the ex-

plorative and inventive aspects of the model, which emphasise the idea of discovering something new and creating new ways to cooperate. With creative benchmarking the departments can build cooperation between other higher education institutions.

The goals of the project were to achieve authentic international educational cooperation and to develop new benchmarking methodologies. Our main aim is to investigate benchmarking and its applicability to curriculum comparison and to cooperation-building in higher education.

In creative benchmarking the department of a university performs comparative assessment with foreign partner. The partners gain valuable insight into their own teaching and studying practices in comparison with those of the partner. In an ideal situation it may lead to the development of study programmes that adapt the best practices of both partners.

The tools that are part of this model are benchmarking teams, assessment matrices and workshops, which are discussed below.

## Choosing the benchmarking partners

In the first phase of the project it is important to identify the potential foreign partners. This can be done by reviewing the list of existing contacts in staff and student exchanges for both research and teaching. The participating institutions should have a vision of the kind of development that they want to start in their own department during or as a result of the benchmarking project. Benchmarking for cooperation-building with creative impetus is about symbiosis – both of the participants must be able to benefit from the results.

A balance between the similarities and differences between the benchmarking partners is one of the crucial elements. Dramatic cultural differences might pose restrictions to the comparison, but a certain level of variation makes the comparison fruitful and interesting.

The benchmarking partners need to be open to new ideas, provide creative thrust and be innovative without inhibitions. Creativity is needed to innovate solutions out of familiar and new informa-

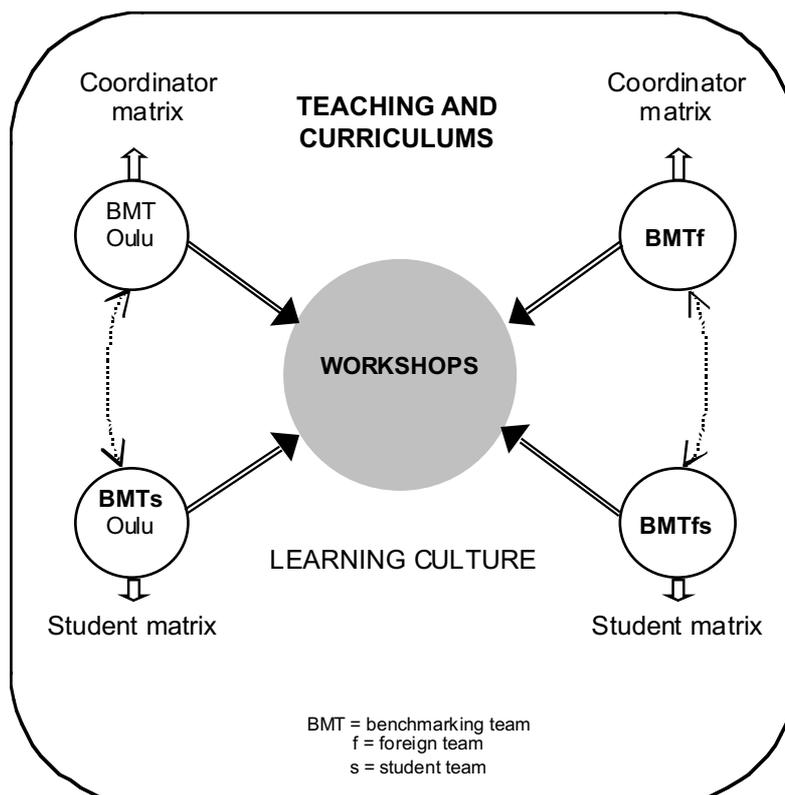


Figure 1. The structure and responsibilities of benchmarking teams

tion. Both partners should demonstrate a genuine will to develop their own procedures, which manifests itself in the commitment and motivation of all who take part in the project.

### Benchmarking teams

After the initial goal setting and the selection of the benchmarking partner, the selection of people for the benchmarking teams should be made. A department participating in the benchmarking project builds two assessment teams with representatives of students and teachers. Each team has four to six members.

The most important task of the teams is to answer the questions of the benchmarking matrices for the bilateral comparison work. Figure 1 introduces the teams and their responsibilities.

### Assessment matrices

The University of Oulu has done systematic quality assessment of teaching since 1994. The matrix was firstly developed to help the departments carry out a self-assessment of teaching. Matrices used in this project are elaborated on the basis of this long-term development work.

The matrices are like qualitative questionnaires, which act as a basis for information retrieval of the departments. The coordinator matrix includes questions on the organisation of teaching, curriculum, teaching methods and quality assessment, whereas the student matrix focuses on finding out what kind of learning culture prevails in the department. Both departments fill in the matrices on the basis of the knowledge that they possess concerning their own department. An essential task of the teams is to define and modify the questions so that they suit the mutual aims of both benchmarking partners and help to establish the knowledge base needed for charting long-term cooperation. The matrices can also be used in their original form. It is desirable that the assessment made through the matrices develops into a shared learning process between the students and the teachers as well as between the benchmarking partners.

The assessment matrices produce qualitative feedback of the departments. Each team answers the questions by collecting their own carefully thought-out remarks in every empty box. By using a short and summarised format we can enhance the comparability of the observations. After the teams

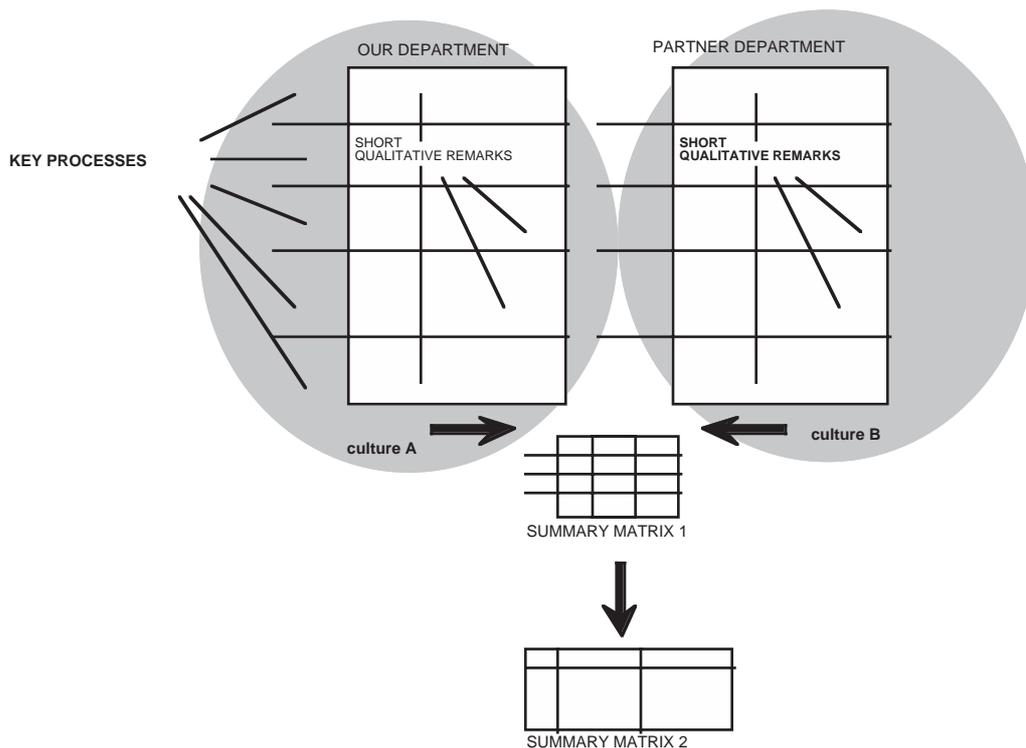


Figure 2. The assessment matrices of the teams, summary matrix 1 and summary matrix 2

have filled in the matrices, they are brought together. The result is the summary matrix 1. It is easier to compare the answers once they are next to each other.

### Assessment workshops

The assessment workshops are two-day events, in which partners get to know each other thoroughly, discuss the collected information, digest experiences and plan future cooperation. It is important to analyse the similarities and differences that come out in the matrices and to understand the reasons behind them. On this basis the likeliness of fruitful and innovative solutions increases and it becomes easier to tackle the question of possible future options.

The first benchmarking workshop is a key to arriving at the areas of cooperation in which the project will proceed. One tool for creating ideas and recording new perspectives is summary matrix 2. This enables participants to compile their observations and ideas about what to learn from the partner and about future cooperation plans. The task of the second workshop is to reach the final evaluation and summary of the project. Since the second workshop is the final stage of the actual benchmarking project, it is desirable that the former activity has already set the foundation for sustainable cooperation. The second workshop concentrates on investigating the opportunities for long-term educational cooperation. If there are ideas or concrete plans about future cooperation, they should be formulated carefully and preliminary schedules should be agreed.

### Project outcome

The preliminary results of the project are encouraging in many ways. The concrete outcome of the project can be divided into three different levels. The *first level outcome* is coordinator and student matrices that both partner departments have filled in. After completion, the partners can start planning workshop 1. The *second level outcome* is the realization of the workshop. The most important task in the workshop is to go through the information produced by the matrices and to list observations and

creative ideas onto the summary matrix 2. In the workshop the partners also start negotiations on whether the experiences and visions for cooperation can include developing joint study options and/or other kinds of long-term cooperation. The *third level outcome* is the sustainable long-term cooperation of the cooperative benchmarking project.

By spring 2002 three departments and their international partners filled in and exchanged the matrices. After only three tests in the authentic environments the matrices are working quite well. In addition, three workshops have been organised. Nevertheless, at this point it is too early to predict what kind of long-term cooperation will result. Lots of concrete plans have been made for the future, but it remains to be seen which ideas will thrive and progress.

The department of Art Studies and Anthropology of the University of Oulu was the pioneer, and in November 2001 it organised the first creative benchmarking workshop. In March 2002, the second workshop was organised between the Marketing Departments of the University of Oulu and the University of Otago in New Zealand. In April 2002, the third workshop was held in Austria, at the University of Leoben, between the Departments of Geosciences. Details of a few developmental ideas from these cases follow.

The preparatory planning for the workshop should be started at an early stage of the project. This gives the participants time for thorough planning and preparation. In our experience, flexibility is the key word. No matter how well you plan an international workshop, something is bound to go wrong (or should be done differently). This can be seen as an aspect of benchmarking for experience. The partners have to be patient; initial contact does not always give the desired response and there may be problems in meeting set deadlines.

The coordinator of the project should draft a tentative schedule for the workshop and ask for comments from his/her partner on the plan. It is important that the partner knows beforehand what facilities you will require and who you would like to attend the workshop (for example, if the Head of the Department should be present). Also, you should

inform the partner about the participants from your department. The schedule should include a detailed timetable so that everyone reserves enough time for discussion.

The experience in Leoben showed how important it is to involve people at different levels of an organisation. This meant the staff of the International Relations Department, experts from the undergraduate studies commission and the Rector of the University. Widening involvement encourages maximal exposure to the project. In addition, it was necessary to negotiate the increase of exchange student and teacher numbers with the representative of the International Relations Department, to ask for advice in proceeding with joint curriculum planning from the Undergraduate Studies Commission, and to secure the support of the Rector for the project.

We have suggested that the students should participate in the workshop and therefore give their opinions about the matters discussed. The role of students is very important. It is desirable that the comparisons develop into a shared learning process between the students and teachers as well as between the partner departments. In the Otago workshop, however, the Otago partner requested that the students' part of the workshop was held only between students to produce honest and open ideas; if the staff were listening, the students might hold back something worth noting. The students have been an essential part of the workshops, eager to join the discussions, and have given valuable insights into the departments' function models.

In all three workshops the discussions were carried out in a very informal manner. This created a relaxed atmosphere, and encouraged spontaneous ideas and creative thinking. It is crucial that someone leads the discussion in the workshop, such as the project coordinator, who can conduct the participants through different steps of the workshop.

It is important that the participants have time to get acquainted with the answers in the matrices beforehand and prepare themselves for the workshop. This ensures that the discussions are intense and that the aims of the discussions are reached more easily.

During the workshop the partners should have enough time to compare the background information collected. They can discuss the answers in the matrices by asking questions on the points that are not understood and discuss them if they need any further clarification. The questions should be thought out before the actual workshop. There should be no stupid questions! It is important to analyse the differences that come out of the matrices and to try to understand the reasons behind them.

The coordinator matrix served as a background for the discussions in Leoben. After two days of exchanging views and meeting with various staff members we could conclude that we had covered nearly all the areas and questions in the matrices. At that point there were only one or two things that had not become clear and that had been asked in the matrices. It was noted, however, that without the information provided in the answers to the questions in the matrices, we would not have been able to acquire the level of concrete ideas which we have now.

The participants carefully pondered the questions in the summary matrix 2 and filled it out together in the workshop. Summary matrix 2 raised surprisingly active and fruitful discussions, and it was and is a well-functioning concrete instrument to guide the participants through the workshop discussions. During the discussions the departments identified some particularly good procedures of the partner, which offered an opportunity to learn and to improve our own performance. The latter part of the workshop was used to make a final decision on proceeding with cooperation activities. At this point, the outlines of the concrete aims were identified and negotiated further.

One way to find a benchmarking partner is to consider the existing links. An example of this approach is the benchmarking project of the Department of Geosciences of the University of Oulu and the University of Leoben. Their cooperation has a long history. This cooperation, however, has been mainly between two staff members of the respective departments. This has established an atmosphere of trust between the departments. The almost effortless concentration on concrete plans during

the meeting in Leoben demonstrated how an existing personal link between the benchmarking departments facilitates the process. It helps in absorbing ideas about cooperation and ensures the commitment of the partners.

After the workshop the partners should investigate and work within their own institutions to prepare the ground for the study programmes or other activities that have been agreed on. It is critical that the partners stay in close contact after the workshop and continue the design of the collaborative process.

#### **Reference**

**Karjalainen, A., Kuortti, K. & Niinikoski, S.** (2002). *Creative Benchmarking*. University of Oulu & Finnish Higher Education Evaluation Council. University Press of Oulu.

## **4.2 International comparative evaluation of BSc programmes of agricultural science in four European countries**

*Anette Dørge Jessen, Danish Evaluation Institute, Denmark*

### **Introduction**

The Danish Evaluation Institute (EVA) considers the sharing of international evaluation experiences as an increasingly important platform for the further development of its national evaluation practice. In this perspective and not least in the light of the Bologna Declaration, with its emphasis on the need for establishing a commonly applicable framework for international comparative programme evaluations, in 2001 EVA decided to launch its first international evaluation involving programmes within higher education in four different countries. The evaluation covered selected agricultural science related BSc programmes offered at The Royal Veterinary and Agricultural University of Denmark, Wageningen University in The Netherlands, Uni-

versity of Hohenheim in Germany and University College Dublin in Ireland.

The evaluation had a status of a pilot project with a strong methodological focus.

In November 2002, the final report, "International Comparative Evaluation of Agricultural Science related BSc programmes" was published. It presented the conclusions, recommendations to the participating programmes as well as the methodological approach, and lessons learned from the pilot evaluation.

### **Background**

The initiation of the evaluation was primarily motivated by recent political developments within higher education in Europe. Since 1999, the European perspective on the quality of higher education has been strongly influenced by the follow-up process of the Bologna declaration of that year. The six objectives of the Bologna declaration and the follow-up process emphasise the need for more comparability and transparency of quality within higher education. The initiation of the evaluation was a response to these general objectives, and not least to the specific objective of promoting European cooperation in quality assurance with a view to developing comparable criteria and methodologies. Similarly, the focus of the evaluation reflects the content of central parts of the Bologna declaration and its follow-up.

### **Objectives of the evaluation**

The evaluation has served two distinct purposes: to support the development of a common framework for international comparative evaluations; and to provide the participating institutions with significant reporting on the quality of their BSc programme(s) within the field of agricultural science.

More specifically, the objectives of the evaluation have been: to develop and test a common methodological framework and common quality criteria for comparative international evaluations within higher education programmes; to establish mechanisms for continuous quality improvement and cooperation between the institutions participating in the evaluation; and, finally, to stimulate discussion

between countries about what constitutes good quality within higher education.

### **Selection and definition of focus areas**

As the project was a pilot with a strong methodological focus, the scope of the evaluation was limited to focusing on only a few aspects of the programmes. This is in contrast to EVA's national evaluations, which usually cover a broader range of aspects related to teaching and learning.

This decision was also based on conclusions drawn from some of the previous international evaluations, which stressed the importance of limiting the number of focus areas when conducting evaluations across different educational cultures.

It should, however, also be stressed that focusing on just a few areas had its limitations too. A narrow range of focus implies that the evaluation has not been able to provide a complete picture of the qualities of the individual institutions, which would usually be detected with an evaluation covering a broader range of aspects.

The three focus areas and the content of the quality criteria associated to each of these programmes have been strongly inspired and motivated by the Bologna declaration and the follow-up process.

The emphasis in the Bologna process on the adoption of common cornerstones of qualifications has influenced the selection of core competencies. The aim has been to support an assessment to determine whether common cornerstones of qualifications exist or should be adopted at Bachelor level within the programmes of agricultural sciences in the four countries.

The selection of quality assurance mechanisms as a focus area was also strongly motivated by the Bologna process, which calls for the promotion of a European cooperation with the aim of establishing comparable criteria and methodologies for quality assurance.

Finally, the selection of internationalisation as the third and final focus area was driven not by one, but a number of elements in the Bologna declaration. These elements include: (i) the establishment of a credit system (ECTS) as a mean to promote student mobility; (ii) promotion of opportunities for

students and teaching staff to study, train and conduct research abroad; and (iii) the development of a comparable programme content to ensure that the degree awarded after the first cycle is relevant to a European labour market (and not just oriented towards a national labour market).

### **Definition of focus areas**

To ensure some uniformity in the understanding of the three focus areas, the areas were defined according to the following definitions:

#### **Core competencies**

Core competencies refer to the primary professional and methodological qualifications that the BSc programmes in agricultural science aim to provide. Professional qualifications include command of basic disciplines and approaches in agricultural science. Methodological qualifications include capacities for critical thinking and problem-solving, the ability to work in (multidisciplinary) teams as well as independently, and communication and presentation skills.

#### **Quality assurance mechanisms**

Quality assurance mechanisms refer to the availability of procedures for systematic internal assessments of the whole programme, parts of the programme and individual courses. In connection with this, assessment methods, and the dissemination of and follow-up on evaluation results are included.

#### **Internationalisation**

Internationalisation refers to the degree of internationalisation in programme content, international cooperation, and the level and scope of international exchange of students and teaching staff.

These definitions formed the starting point for the formulation of the specific criteria and were the subject of discussions between EVA and the institutions.

### **Criteria formulation and application**

In national evaluations of educational programmes in Denmark, as well as elsewhere, quality is often assessed in terms of the extent to which the indi-

vidual programmes achieve their own goals and comply with the legal regulations under which they operate. An approach commonly referred to as the “fitness for purpose” approach.

The goals of the programmes participating in the international evaluation, and the legal frameworks under which they operate, differ. Consequently, the use of the traditional fitness for purpose approach for each programme would not have enabled the intended comparative assessment of how the programmes fulfil common, identical goals. To ensure the comparative dimension, the application of pre-defined criteria was required in order to establish a common framework.

The criteria were formulated with reference to a number of different sources. As previously mentioned, the objectives of the Bologna declaration and the follow-up process have constituted one important reference point for the formulation of specific criteria. Other important sources for the formulation of the criteria were existing international evaluation models using common quality criteria. Finally, the formulation also rested upon the experience and knowledge EVA has gained from the implementation of numerous evaluations of higher education programmes and from the formulation and use of criteria in the assessment of private education programmes.

The criteria for core competencies focus on the formulation of goals, their relevance to, and consistency with programme content, and the extent to which they were developed with regard to the needs and demands of the labour market. Furthermore, the criteria concern the actual content of the programmes in terms of professional and methodological content.

The criteria related to the area of quality assurance mechanisms were primarily formulated to provide a basis for analysis of the comparability of the strategies, systems and procedures for quality assurance at the four institutions.

Finally, the criteria for internationalisation correspond almost directly with the objectives of the Bologna Declaration. This implies that a substantial part of the criteria concentrate on the opportunities for, and extent of, international student and

staff exchange, the application of ECTS and the existence of procedures for credit transfer.

Although criteria formulation benefited greatly from the many different sources and earlier experiences, it was nevertheless vital to take into account the specific conditions, which characterise an international comparative evaluation. Firstly, there are considerable differences between educational cultures, national traditions and regulatory systems within which the individual programmes operate. Secondly, the aim of developing a methodology for international comparative evaluations implied an obligation to ensure that the criteria formulations were sufficiently flexible to allow them to be replicated in other international programme evaluations with a comparative perspective. Thirdly, the variation in programme content, as previously described, represented a significant challenge to the development of commonly relevant criteria that would also provide space for the expression of individual priorities and qualities.

To overcome these obstacles, and to assure a high level of common applicability and relevance, EVA developed a framework for criteria formulation.

The character and content of the draft set of criteria have been driven by the following requirements:

- *Broadness*: To ensure the criteria respect specific national traditions, concerns and priorities, and do not hinder diversity, the criteria must be formulated broadly enough to allow for variations.
- *Uniformity*: The criteria should be the same for all the programmes participating in the evaluation. This ensures that the programmes are assessed on an equal basis, that the assessments are transparent and that a comparative perspective is achieved.
- *Reference to level*: In order to operate with one set of criteria, this set has to be formulated with reference to the BSc as a single level, irrespective of the variations in the nominal duration.
- *Precision*: The criteria must be precise enough to allow an assessment of how they are fulfilled by the individual programmes.
- *Internal consistency*: The set of criteria must be internally coherent.

- *Topicality*: The criteria must reflect present objectives and developments within the area of higher education in Europe.

In terms of the application of the criteria it is important to stress that the assessment has not resulted in any ranking of the programmes. The evaluation did not provide a standard setting and the purpose was by no means to rank the participating institutions in terms of their individual position in relation to pre-defined standards. The assessment rather focused on the strengths and weaknesses of the priorities of the individual programmes in relation to the focus areas in the evaluation. Using the criteria in this way the intention has been to encourage and stimulate the development of the programmes involved in the evaluation.

More generally, EVA finds it central to stress that the methodological approach of the evaluation including the formulation and application of common quality criteria must not be interpreted as an attempt to set up and use an accreditation procedure. Although accreditation requires the use of common quality criteria, application of criteria does not per se imply accreditation.

### **The role of EVA, the expert panel and the institutions**

Following EVA's usual procedure a team of evaluation officers from EVA was responsible for the practical and methodological planning and implementation of the evaluation while a panel of experts, in this case international experts, was responsible for the academic quality of the evaluation including the conclusions and recommendations.

The role of the institutions may in this evaluation be described as one of co-owners in terms of the evaluation process, as they were offered a chance to play an active role in the initial stages of the evaluation. One example was initial bilateral meetings between EVA and each of the institutions, where the institutions were given an opportunity to comment upon and propose changes to the draft project description of the evaluation. Another is the involvement of the institutions in the process of the criteria formulation.

By strongly encouraging an active participation of the institutions, EVA aimed to enhance their commitment and not least the usefulness and relevance of the process and outcome of the evaluation seen from the perspective of the institutions.

### **Lessons learned**

The main lessons learned from the evaluation in relation to the methodological aspects are briefly summarised below.

#### **Focused approach**

The experiences with the application of this focused approach have generally been very positive and have provided the following opportunities for the evaluation:

- More time to consider in depth than otherwise would have been the case, given a broader evaluation scope.
- Provision of focused documentation material and site visits, and thus:
- Provision of a report that contains strict analysis, assessments and recommendations.
- Time savings for all parties involved, especially for those involved in the self-assessment process.

Having commented on the above-mentioned positive aspects associated with such a focused approach, it should also be mentioned that any focus implies that the evaluation can only present a less than complete picture of the qualities of the individual institutions, compared with an evaluation covering a broader range of aspects.

#### **The process of criteria formulation**

The involvement of the institutions in the formulation of the criteria has most likely had a positive effect on the level of commitment of the institutions. The involvement has also proved itself to be a relevant way to ensure that the criteria generally appeared relevant and understandable to the institutions. It must, however, be stressed that even a thorough discussion of the criteria before they are

applied in practice cannot safeguard against later misinterpretations, or ensure that they are fully understandable and consistent.

In particular, the definitions of important terms led to discussions at the individual institutions during the carrying out of self-assessment, despite the fact that they were agreed upon earlier in the process. Similarly, terms that were not supported by definitions led to different interpretations, which in turn had a negative impact on the comparability of the information provided in the self-assessment reports. These experiences illustrate the importance of ensuring a process of criteria formulation that includes a critical assessment of the structuring, understandability, clarity, precision and consistency of the criteria. To minimise the risk of different interpretations the criteria should have been supported by an explanatory document including a glossary and precise definitions and interpretations of key terms.

### **The application of common criteria**

Generally, the application of common criteria facilitated the intended comparative perspective of the evaluation, provided a transparent and conspicuous basis for the assessment of the programmes included in the evaluation and ensured that the programmes have been assessed on equal grounds. Furthermore, it has provided an opportunity to identify best (better) practices.

The application of common criteria has, however, also had other implications. The main implication experienced in this evaluation is associated with the fact that the criteria have exclusively focused on the Bachelor level. The Bachelor level programmes do not have the same status and history in all the four countries in which the programmes included in the evaluation are offered. As a consequence, the criteria related to core competencies in particular were perceived more relevant by some institutions than by others. When formulating and applying common criteria across countries, this and other similar factors are very important to keep in mind.

## **4.3 Recent developments in benchmarking in the United Kingdom and an overall look at three benchmarking subject statements as case studies**

*Fiona Crozier, Quality Assurance Agency for Higher Education, United Kingdom*

### **Benchmarking in UK context**

*“Benchmarking is a subject community making explicit the nature and standards of awards which carry the subject in their title, or in which the subject is included in the programme leading to the award.” (ML July 1999)*

The Report of the National Committee of Inquiry into Higher Education proposed that benchmark information should be used by institutions, as part of their programme approval process, to set degree standards. The Committee was, “attracted to the proposition that standards should be developed by the academic community itself, through formal groupings for the main areas of study.” It envisaged that, “subject associations and professional bodies will play a role in developing benchmarks.” It recommended that, as one of its early tasks, the QAA should “work with institutions to establish small, expert teams to provide benchmark information on standards.” The QAA’s role is that of facilitating the academic community, through liaison with subject associations, to establish benchmarking groups to generate such information.

The task for benchmarking groups was to focus on the award of the honours degree in the first instance. The task comprised two related elements. For the first element, groups were asked to create reference points, which help define the nature of awards in the subject. The image to keep in mind is a map of the territory – the subject territory – bounded by a set of co-ordinates. Within the boundaries defined by the benchmarking exercise, any awards that carry the subject in their title or are in-

cluded in the programme leading to the award can be legitimately located.

Benchmarking, therefore, is not about creating a national curriculum. It is an exercise to provide the means of acknowledging differences and diversity of programmes within agreed limits set by the subject community itself. Inevitably, there are going to be fuzzy boundaries and there needs to be some elasticity in setting co-ordinates. One means, but not the only one, of approaching this part of the task is for benchmarking groups to ask themselves one or both of the following questions:

“What are the graduate attributes and professional capabilities of an award holder in the subject/discipline?” (Thinking in terms of broad-based statements beginning with the words, “A graduate or diplomate should be able to...” would help reinforce the emphasis on learning outcomes). The alternative formulation of the question might be, “What expectations might the outside world have of a graduate or diplomate in the subject?”

These two questions may be helpful for groups to reflect on:

- graduateness (what a degree/diploma signifies); and
- specific attributes and capabilities signified by a degree/diploma in a particular subject.

For the second element, the benchmark groups had to formulate or articulate the minimum requirements or expectations of performance for an award in the subject. This specification of the ‘threshold’ standard was a fundamental feature of the quality assurance developments during the period of the benchmarking exercise. Furthermore, benchmarking groups were asked to produce threshold statements in terms of positive attainments (criterion referenced) relating to the graduate attributes and professional capabilities identified. Groups were also asked to identify criteria in the same vein with respect to the performance of ‘typical’ graduates. Groups inevitably discussed both of these performance specifications in relation to the boundaries of classified honours awards. Articulation of benchmark standards in the final statement in terms of these boundaries was not acceptable.

The task of a benchmarking group is to produce broad statements, which represent general expectations about standards for the award of honours degrees in a particular subject area. Benchmarking is not about listing specific knowledge; that is a matter for institutions in designing individual programmes. It is about the conceptual framework that gives a discipline its coherence and identity; the intellectual capability and understanding that should be developed through the study of that discipline to honours degree level; the techniques and skills which are associated with developing understanding in that discipline; and the level of intellectual demand and challenge which is appropriate to honours degree study in that discipline.

Benchmarking groups found it helpful to be aware of the uses to which their statements would be put:

1. Review: The QAA would use the benchmarking statements in the course of review. The statements would also be a means of determining the fitness of purpose of individual programmes through an institution’s own internal review processes. Accordingly, they should enable broadly comparable standards of attainment to be identified. Institutions should be able to demonstrate how benchmark information had been used to inform the specification of the intended outcomes of a programme, and in calibrating the overall demands of their assessment framework.
2. Public Information: Potential students and employers need information that helps them to understand the abilities that programmes of higher education set out to develop, and the success of the programmes in delivering these outcomes. A benchmark statement could serve as a statement of the nature of the attainment that could be expected of those who successfully completed programmes in the broad fields covered by the statement. It should be expressed in accessible language, and should refer to those intellectual skills that are transferable to employment and other non-academic contexts.
3. Development: Institutions should be able to use the statements to inform the design of programmes.

4. Supporting External Examining: The benchmarking statements would represent an explicit codification of the sort of judgements that external examiners had made when assessing broad consistency of standards between institutions. They should be helpful to external examiners in undertaking their functions; and the section of the QAA's *Code of practice* on external examining would reflect this.

### Phase 1: 1998–2000

There was no prescribed format for a benchmarking statement in during phase 1 of the exercise. The first three statements, in chemistry, history and law, are different from each other, reflecting the different traditions and cultures of individual academic disciplines. At the same time, there are important common features, not least the identification of generic intellectual attributes that are likely to be possessed by graduates generally. Despite the approach adopted, however, it was important that each benchmark statement enabled at least threshold and typical attainment to be identified.

Each of the first three benchmarking groups took a different approach to the position of the main benchmark.

One group took the view that it was appropriately set at a modal point, to reflect an expectation of what might be achieved by the largest group of students in any cohort (the “typical” student). Another group thought it was appropriately set at the threshold of the honours degree classification (the third), to define the basic requirement to be met by all who graduated with an honours degree. The third group stated that the main benchmark should be related to progression, and took the upper second-lower second degree classification border as their starting point, on the grounds that an upper second was required to progress to chartered professional status.

As noted above, a minimum of two main standards of attainment were identified by all groups (although groups could, if they wish, go on to identify others as well, calibrating up or down from these two). The first was the attainment expected of the “typical” student whose results would fall into the

main modal cluster. The second was the threshold, the minimum requirement that must be met by anyone graduating with honours in the discipline. It is important that this requirement had to be expressed positively – as that which must be achieved by the student – rather than negatively.

In addition to these modal and threshold points, benchmarking groups could consider whether it was feasible to define attainment likely to be demonstrated only by those who truly excel – perhaps those comprising the upper decile of the student population in the subject discipline across all institutions. On one hand, this would be helpful to institutions wishing to identify outstanding achievement by reference to a generally recognised yardstick. On the other hand, this would be over-prescriptive, and an inappropriate attempt to standardise achievement that is, by its nature, exceptional. It would assist the debate on this point for benchmarking groups to explore the feasibility of defining such a standard.

Standards were not expressed in terms of degree classification because some benchmarks could be used in respect of modules of provision within multi-disciplinary programmes, which are not themselves classified in the way that a final award might be classified. Also, classification practice varied both between and within institutions, and this was often influenced by the historical expectations of a subject community and expressed through external examiners.

It had been envisaged, before the method for external review changed in 2001, that benchmark statements would be used in external reviews to provide a basis for judgements about whether an institution was applying standards in its subject assessments that were consistent with those applied elsewhere in higher education. In external review in the UK, reviewers do not make judgements about the class of degrees awarded to individual students: that is for the institution and its external examiners to decide. The external reviewer assesses whether, overall, the attainment that the institution is expecting students to demonstrate for each class of degree is comparable with the rest of the sector.

## Phase 2: 2000–2002

For phase 2 it was agreed that it would be useful for the benchmarking groups to base their statement around a format or structure. The headings below were used by the groups as they were developing their statements, and all phase 2 statements were structured in this way:

- The defining principles of the subject.
- The nature and extent of the subject.
- Subject Knowledge and Understanding.
- Subject skills and other skills.
- Teaching, learning and assessment.
- Standards.

### Strengths and weaknesses of our approach to benchmarking

- Bland versus national curriculum
- Narrow perception – checklists
- “Benchmarking statement” – correct terminology”
- Creation/safe guarding of identity
- Written by peer academic community with wide consultation built into process.

- Never been done before – flexible process – developed tighter brief.

### The groups and their approaches

The three benchmarking group examples chosen for the ENQA workshop were chemistry, radiography, and dance, drama and performance. The

chemistry group adopted, in large part, the approach of the professional body for their subject. The radiography group had a three-fold approach: the subject (regulated by a professional body); the emerging Health Professions Framework; and the academic standards required by the discipline. The dance, drama and performance group had no regulatory body. But the group adopted a compromise approach as it had to consider three subject areas, at least two kinds of provision, and higher education institutions that offered standard degrees as well as conservatoires that focused on practice.

The table below outlines common issues, issues for each benchmarking group, and the approaches chosen for their final statements:

	Chemistry	Radiography	Dance, Drama and Performance
Common issues	Using core subject material Writing positively about the threshold level of achievement The “standards” section		
Separate issues	Moving away from the degree classification to describe achievement Academic standards	Writing a succinct document (incorporating professional body requirements, academic standards, the health professions framework, two aspects to subject); Making the statement applicable only to those in first post.	Higher Education Institution versus conservatoire = theory versus practice Three subject areas.
Approaches adopted	The formula?	The blend?	The compromise?

## Future action by the QAA

Since the publication of the phase 2 benchmark statements, the QAA has received requests from various subject areas to facilitate more benchmark statements. Our policy on benchmarking new subject areas is being considered. We may also be involved in the benchmarking of more health-related disciplines. The phase 1 and phase 2 statements will be reviewed in the future to ensure their continuing relevance and appropriateness.

### Reference

[www.qaa.ac.uk](http://www.qaa.ac.uk) – Site map/Benchmarking – links to case studies: Final Phase 1 subject standards statements in 22 subjects (Apr 2000) *Chemistry*. Final Phase 2 subject standards statements in 25 subjects (Mar 2002) *Dance, Drama and Performance*. Dept of Health/NHS benchmark statements (Aug 2001) *Radiography*.

## 4.4 Benchmarking in the perspective of a “learning institution” and as a means to search for best practices

*Bente Kristensen, Copenhagen Business School, Denmark*

A significant “learning feature” of CBS is a continuous quality improvement programme launched in 1994 as an integrated part of the ongoing strategic process. CBS took over the stakeholder definition of the concept “quality” defined by Lee Harvey and Diana Green (1993), and the various learning features can to a certain extent be summarised as follows:

Quality can be viewed	Learning features
- As exceptional	<ul style="list-style-type: none"> <li>• CEMS Benchmarking (1995)</li> <li>• CRE-Audit (1996) and Follow-Up Visit (1998)</li> <li>• EQUIS Accreditation (1999/2000)</li> <li>• The European Centre for Strategic Management of Universities (ESMU) Benchmarking (2000 and 2002)</li> <li>• Research evaluation (ongoing since 1994)</li> </ul>
- As perfection	<ul style="list-style-type: none"> <li>• Staff development</li> <li>• Benchmarking (internal and external)</li> <li>• Quality culture</li> </ul>
- As fitness for purpose	<ul style="list-style-type: none"> <li>• Dialogue with the Business Community</li> <li>• Advisory Boards</li> <li>• Networking</li> <li>• Dialogue with graduates (alumni)</li> <li>• Life-long learning</li> </ul>
- Value for money	<ul style="list-style-type: none"> <li>• External evaluations by the national agency</li> <li>• Performance agreement</li> <li>• Performance indicators</li> </ul>
- As transformation	<ul style="list-style-type: none"> <li>• Continuous quality improvement</li> <li>• Curriculum development</li> <li>• Internal assessment</li> <li>• Benchmarking (internal and external)</li> </ul>

### The analysis of the learning feature: Benchmarking

In the “CBS Performance Agreement 2000–2003” with the Danish Ministry of Research and the Danish Ministry of Education, the aim of CBS is “through systematically benchmarking to be able to estimate the international level of CBS in specific areas and create incentives for continuous improvement”.

An analysis of how the learning feature benchmarking relates to the chosen six interrelated characteristics of a learning organisation is discussed below. The six characteristics are:

1. Learning organisations have mechanisms that enable them, as organic entities, to learn:
  - ii) from their own experiences;
  - iii) the experiences of other.
2. Learning organisations learn for a purpose, including:
  - ii) to enable them to contend with external factors or adopt to their environment;
  - iii) to be more efficient at producing outputs; and
  - iv) to be more effective in producing other or better outputs.
3. Organisational learning is a continuous process of systematic proactive continuous improvement, involving a cycle of enquiry, action, feedback and organisational memory.
4. Organisational learning involves a culture of facilitating / enabling the capacity for employees to increase their learning.
5. A learning organisation develops radical ideas, thinks the unthinkable, experiments and takes risks.
6. There are processes in learning organisations to enable reflection on, or evaluation of, the learning.

### The concept of benchmarking

CBS defines the concept benchmarking as the search for best practices, which lead to superior performance. The key words are “best practice” and “superior performance” (this definition is different from the practice in UK, where benchmarking academic standards is a consequence of the Dearing Report 1997). Benchmarking is a method of improving operations. In essence it consists in looking and learning from others by comparing yourself with them. Performance and behaviour are not static; they change with time. Benchmarking is therefore a long-term process. It is a method that involves the whole organisation in searching for the best practice: not just for *what* is done best, but *how* it is done. Benchmarking rests on two pillars: *hu-*

*mility* to recognise that somebody else can do something better than you can and *wisdom* to learn the lesson, adapt to your own situation and benefit from it.

According to Dill (1999):

- learning from one’s own experience involves the systematic review of programmatic successes and failures in search of lessons to be learned, the use of outside evaluations and consultants as a means of generating useful knowledge, and internal “benchmarking” – seeking out best practices within the organisation.
- learning from others’ experience involves seeking information on best practices from other organisations through carefully planned study tours and “benchmarking”, as well as through ongoing conversations with external “clients” as a means of developing knowledge for the improvement of core processes.

CBS uses the mechanism of “benchmarking” to learn about best practices both from its own experience (internal benchmarking) and to learn from the experience of others (external benchmarking).

### Description of the various CBS benchmarking initiatives

The above table shows that benchmarking is related to several of the used notions of quality. The various procedures (elements of this learning feature) include:

- in 1995, CBS undertook a benchmarking analysis of undergraduate studies at 12 higher education institutions, all of them members of CEMS (Community of European Management Schools). The purpose of this analysis was to review and to develop further bachelor studies at CBS. First, a taskforce designed a questionnaire encompassing all elements considered to be of importance to CBS in connection with the evaluation and redesigning of the BSc programme. The CEMS partners were asked to provide information and data for 16 subject fields. Also, the Danish CBS students enrolled in the CEMS programme at one of the partner-institutions were asked to voice

their opinions, report their experiences at their host-institution and to compare them with those gathered at CBS.

- CRE-Audit 1996 and CRE Follow-Up Visit 1998. Since the beginning of the 1990s CRE has conducted “Institutional Quality Management Reviews”. These have involved peer reviews and mutual visits to the universities participating voluntarily in a cycle each time focusing on a specific issue. CRE itself describes this approach as a kind of “implicit benchmarking”. To make it explicit, CRE further emphasise that the procedure would have to be more strict, especially with regard to the collection and comparison of data and their common assessment. There is no doubt, however, that the audited institution learns and benefits from the experiences of the auditors and their knowledge of best practices at other higher education institutions. With the CRE focus on processes instead of output and pure quantitative issues the audited institutions might prefer the “implicit” to the “explicit” benchmarking.

CBS has recommended a third phase of CRE, based on the auditor’s knowledge of the audited institutions to build smaller pools of CRE audited institutions, which could learn and benefit from mutual benchmarking. CRE has so far not followed this recommendation.

The EQUIS Accreditation 1999/2000. In March 2000, CBS was awarded the European Quality Label. This is another example of “implicit benchmarking”. Accreditation means the approval of external experts (for example Vice-Chancellors, Presidents, Managing Directors, Pro Vice-Chancellors, people with experience in governance and leadership of higher education) and it demonstrates that the accredited institution meets standards within specific areas, such as leadership, policy and strategy, people management, resources, management of processes, customer satisfaction, people satisfaction, impact on society and business results. These standards are set by the organisation EFMD (European Foundation for Management Development). Many business schools belong to this foundation, and it is obvious that in setting these standards the organisation draw on the knowledge of the involved

experts within higher education. Through the dialogue in connection with the visit of the experts (visitation), CBS learned about good practice at the visitors’ institutions or about good practice at former visited institutions. This kind of benchmarking is more similar to the models introduced in the USA and UK.

The ESMU Benchmarking project 2000–2001 covered strategic management, policy and strategy; management of teaching, learning and assessment, and marketing the university. The new project for 2002–2003 will cover management information systems (MIS), internal quality assurance, and student services. It will allow CBS to compare its own practices with the practices of the other participating European universities and to learn about good practices at an international level.

Benchmarking projects within the CBS administration focused on how the administration operates. Both internal and external benchmarking was used.

Benchmarking, both internal and external, is used to support the transformative learning (Harvey and Knight 1996) at CBS. At the beginning of the “From Teaching to Learning” project, the focus was on internal benchmarking, seeking out best practices within the organisation (for example in relation to the induction programme, study environment, group work, and virtual learning environment) and transferring this knowledge to other parts of the organisation. Lately, the project has been extended to include external benchmarking. CBS, through cooperation with the University of Luton, UK and Centre for Research into Quality, Birmingham, has been learning about best practices on integrating transferable skills in the academic curriculum.

### **How do the above examples of benchmarking relate to the six characteristics of a learning organisation?**

#### **1: A mechanism to learn from one’s own experiences and from the experiences of others**

As the definition of benchmarking and the above examples show, the learning from one’s own experiences (internal benchmarking) and from experi-

ences of others (external benchmarking) is the core element of benchmarking.

## 2: Learn for a purpose

In the newly signed “Performance Agreement 2000–2003” with the Ministry of Research and the Ministry of Education, the aim of CBS is “through systematically *benchmarking* to be able to estimate the international level of CBS in specific areas and create incentives for continuous improvement”.

According to its mission, “CBS wants to be among the best institutions of higher education in Europe”, and as one of the strategic focus areas to have an “international profile based on a regional foundation”. As a university, CBS needs an international orientation. CBS wants to live up to its obligations to Danish society and its business community by staying competitive internationally, creating an international environment at CBS and being a coveted collaborative partner for international counterparts.

CBS views the process of internationalisation as a key incentive for continuous quality development, due to the competition that is inherent in international collaboration.

For the CEMS project, the CRE Audit and Follow-up Visit, and the EQUIS Accreditation, the purpose was to learn about the international levels and compare the activities of CBS to this international level. These benchmarking activities have been crucial for the whole strategic process at CBS and lately, in connection with the CBS Performance Agreement with the Ministry of Research and the Ministry of Education, to be able to work out action plans and clear success criteria within specific areas, with focus on efficiency and effectiveness.

With the notion of quality as perfection, it is crucial for CBS to know that its staff, both academic and administrative, has the knowledge and skills to do things in a perfect way. The purpose of the benchmarking projects within the CBS administration, the internal study of recruitment procedures, and external comparison with The Royal Veterinary and Agricultural University, was to learn how things could be done in a more professional way.

As mentioned above, the purpose of the benchmarking projects in relation to quality as transformation is to support the evolution of the transformative learning process at CBS, which enhances and empowers the students (Harvey & Knight 1996).

## 3: Organisational learning is a continuous process of systematic proactive continuous improvement, involving a cycle of enquiry, action, feedback and organisational memory

The question is do the above examples of “benchmarking” lead to innovation and improvement, and consequently to organisational learning at CBS? The link between knowledge acquisition and improved performance is fundamental to a learning organisation.

All of the examples above show that knowledge was acquired. The improvement at CBS, however, differs quite a lot.

The CEMS-project showed how difficult it is to collect the right data from 12 European higher education institutions, i.e. data that can be compared to identify the best practice. The meaning of terms like “lecture”, “undergraduate course” or “cost per student” differ widely from country to country. The user of this benchmarking report, the CBS BSc Study Board, compared the data with the proposed changes of the new BSc curriculum. The conclusion was that the cultural differences and the differences in funding did not make any further changes possible even if the practice in other countries was better than the practice at CBS. The Study Board also learned from the comparison that the level of the academic standard of the new CBS BSc programme was up to European standard. The improvement in this case was a legitimised the changes that had already been agreed.

The CRE-Audit and the Follow-up visit have significantly stimulated and influenced the strategic process at CBS. As a milestone of the ongoing strategic work at CBS, in October 1998 a ‘Strategic Update’ was published. It outlined the main features of CBS strategy and the strategic focus areas and perspectives for CBS between 1998–2002. The

Follow-up visit was not a mechanistic ‘tick the box’ exercise, but the auditors (the same as for the first visit) gave CBS ideas, which helped CBS to move to the next stage of its development. The auditors noticed in the Follow-Up Report (1998), that the first Report (1996) had generated policy discussions and actions that “had accelerated or levered the implementation of change (e.g. the clarification of the role of research centres), were much more focused and clearer (e.g. policy towards teaching and learning), had stimulated new formulations and processes (e.g. approaches to over-teaching; model of evaluation developed by the Evaluation Unit) and had resulted in much more prioritised strategic planning capability”.

The auditors also noticed that the involvement and the responsibility for the improvement and changes was spread over the whole organisation, and that not only internal but also external stakeholders had been called upon to comment on the report and the follow up. In this way CBS tries to be what Lee Harvey calls ‘adaptable’ (Harvey 1997); that is to see developing CBS as a process involving change within the organisation and its environment.

According to Mohrmann and Mohrmann (1997) strategic planning can be a form of organisational learning. The systematic examination of the environment and the determination of organizational approaches to obtaining needed inputs and targeting outputs addresses, at the macro level, the matching of appropriate patterns of activity to environmental conditions, trends and events. Also, Morhman and Morman emphasise that unfortunately, many strategic planning exercises stop short of organisational learning because they only specify the outcomes that are desired and do not identify either the patterns of organizational activity that will have to be established or the organisational design features that will elicit the desired behaviours.

The EQUIS accreditors made three conclusive recommendations in the final report. CBS will probably only follow one of these recommendations, but the report is now discussed in the governing bodies at CBS. The self-evaluation report, with strong involvement of key stakeholders (deans, head of departments, study board directors, students, chairs

of committees etc.), is considered to be an important contribution to the ongoing strategic process at faculty and departmental level. Actions already taken for improvement are, for example, the development at CBS of a global executive MBA to strengthen the international profile of the institution, and a merger of the decentralised administration at faculty level and the central administration to strengthen the efficiency and effectiveness of the administration as a whole.

Through the ESMU Benchmarking Project 2000–2001, CBS learned that compared to the other participating universities it was strong in both strategic management, and management of teaching, learning and assessment. In marketing the university, all the participating universities needed to improve. The internal follow-up on strategic management concentrates on a revision of the overall mission of CBS and better coherence between the strategies of the units at various levels at CBS. Regarding marketing the university, CBS participates in a collaborative follow-up project with some of the other participating universities. The focus of the follow-up project is the marketing of courses and on the recruitment and retention of students. Within the third area, management of teaching, learning and assessment, collaborative initiatives among the participating universities are still considered in order to share ideas and increase awareness of alternative approaches.

The set up of committees, working groups, hearings involve a wider group of staff and test groups for working with new practices and routines. This contributes to the increase of the organisational memory.

The improvements of the benchmarking projects within the administration have changed practices and routines of recruitment procedures. The comparison with The Royal Veterinary and Agricultural University yielded little by way of improvement potential other than, perhaps, suggesting the need to decentralise travel reimbursements. The benchmarking project did, however, provide a psychological boost for the Administration at CBS, because it revealed that they were probably better in most areas than the comparative institution.

The benchmarking initiatives within the project “From Teaching to Learning” have, for example, led to improvement of the first year students’ induction programme. These improvements include the establishment of an induction tutor network and, on some of the Bachelor programmes, the introduction of tutors coaching the first year students during the whole period of their first year study programme. Through the network feedback from the tutors that were involved is gathered and evaluated. The results and experiences are kept in manuals for future students acting as tutors and contribute to the organisational memory.

In connection with the external benchmarking project about “Integrating transferable skills in the academic curriculum”, a study was carried out of “Developments in the students’ planning, implementation and evaluation of group work in the BSc and BA programmes aimed particularly to identify the students’ skills development in terms of their ability to solve complex tasks in co-operation with others”. A major goal of this study was to compare the results between the four sub-populations (BSc first year, BSc third year and BA first year, BA third year). Distinct differences in attitude and practice between first and third year students in each programme were viewed as an indicator of changes in the students’ attitudes and approach to group work during their study years.

The benchmarking project is not yet finished but as a result of the project so far and the learning from the comparison with Luton University, the BA Study Board has changed the curriculum of the BA study programme. The curriculum now clearly describes the aim of the programme in terms of both knowledge and skills, and the assessment of the students during the three-year programme will include both. A steering committee, including students, faculty members, Study Board Directors, the Teaching and Learning Advisory Unit and the Evaluation Unit, receive feedback from surveys, from the two bachelor study boards directly involved in the project, the benchmarking partners and consultants, and from external stakeholders. This multifaceted feedback is crucial for further improvement.

#### **4: A culture of facilitating**

Conditions fostering innovation and improvement are according to Mohrmann and Mohrmann (1997):

- Long-term orientation
- Resource support
- Organization vision
- Management support
- Proximity to decision makers
- Interfunctional networks and teamwork
- Learning connections with the external environment.

The long-term orientation of the use of benchmarking at CBS as a learning mechanism is evident from the above description. The first project was launched in 1994 and since this date benchmarking has been used for innovation and improvement. The continuing systematic approach is secured in the performance agreement with the Ministry of Research and the Ministry of Education mentioned above. Also, new projects in cooperation with the ESMU in 2000 and 2002 emphasises the ongoing work of CBS within benchmarking.

All the benchmarking activities have been supported financially by a fund designated for change, administrated by the President, and strategically supported by top management according to the strategy and vision of CBS. The Vice President has been in charge of supervising the various initiatives, safeguarding the proximity to decision-makers. Through the use of parallel organisations (steering committees, working groups, workshops, seminars and conferences), extensive communication and information sharing have taken place. Relations with external stakeholders have been established through seminars and conferences.

#### **5: A learning organisation takes risks**

Comparing your own institution and organisation with other institutions and organisations, and making the final reports public, to internal and external stakeholders, always involves a risk. The stakeholders learn about the strengths and weaknesses of CBS with the risk that a proven lack of learning,

innovation, process improvements and performance enhancement will damage the image of CBS. CBS is willing to take this risk in order to strengthen the awareness of learning in the organisation.

### 6: Reflection or evaluation of the learning

According to Garvin (1993) we need better tools for assessing an organisation's rate and level of learning to ensure that gains have in fact been made. Garvin also emphasises that organisational learning can usually be traced through three overlapping stages: cognitive, behavioural and performance improvement. Because cognitive and behavioural changes typically precede improvements in performance, a complete learning audit must include all three, and surveys, questionnaires, and interviews are useful for this purpose.

CBS has to develop tools for assessing the rate and level of learning in connection with benchmarking. The critical issue of measurement must in future be much more visible in the CBS context of learning.

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## 4.5 Benchmarking as a tool in higher education guidance

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The student guidance benchmarking in the Kymenlaakso, Mikkeli and Pohjois-Savo Polytechnics approached the problem from the student's point of view. The benchmarks were taken from the Kajaani Polytechnic, the Department of Process and Environmental Engineering at the University of Oulu, and the Department of Chemical Technology at Helsinki University of Technology. The project was led by the Kymenlaakso Polytechnic and directed by its Chief Planning Officer, Ms Mirja Toikka. This article focuses on the good practices of the benchmark units.

This presentation is a summary of a report named *Opintojen ohjauksen benchmarking tekniikan alan koulutusohjelmassa* (Student guidance benchmarking in engineering education in polytechnics) by M. Toikka & S. Hakkarainen (Kymenlaakso, Mikkeli and Pohjois-Savo Polytechnics). Publications of the Finnish Higher Education Evaluation Council (FINHEEC) 5:2002. Edita, Helsinki.

### Background and aims

In benchmarking, each organisation concerned determines the process to be developed. The object of this project was student guidance in engineering degree programmes. The definition of the object was influenced not only by the polytechnics' own experiences and outlooks, but also by a wider national debate. The overall aim in student guidance can be defined as follows: *The aim in student guidance in polytechnics is to help the students to make use of national and international networking between different forms of education, degree programmes and the labour market. Another aim is to promote students' orientation in their respective fields, career choices, individual study plans, professional development and placement in the labour market, as well as their continuing professional education* (Helakorpi & Olkinuora 1997).

The learning path model is one way to look at student guidance as a whole. The path means the

period during which the student is enrolled in the polytechnic and comes under the influence of its education and guidance (e.g. Lehtinen & Jokinen 1996). The path can also be understood as a process geared to “refine” the students. The process generally has a clearly defined beginning and end (Laatukeskus 1998). The student guidance process includes several work phases and often extends across degree programme boundaries. In this project, it was defined to begin with pre-entry guidance and end with graduate follow-up. Slightly modifying Reisenberg’s ideas (1994), we could describe the guidance process as shown in Figure 1 (see below).

The process takes four years on average. In the benchmarking process, the focus is on points 3A and 3B: entrant and on-programme guidance. The following short- and long-term aims were set for the process:

1. To identify points in need of development in the guidance provided in engineering studies.
2. To develop engineering education in the polytechnic and the guidance system based on the experiences and good practices gained in the process (= to plan and develop a comprehensive guidance system).
3. To apply the benchmarking system appropriately.

Identifying the points in need of development particularly entails seeing guidance from the individual (student’s) point of view. The long-term aim set for the project was to plan and implement a comprehensive guidance system, which is seen as part of the overall development of polytechnics. One of the national recommendations made in the FINHEEC evaluation of polytechnic student guidance (Moitus

& al. 2001) is that polytechnics should base their plans for student guidance on their overall strategies. The objective-setting in the benchmarking project supports this recommendation.

### Methods and models

For the purpose of identifying the problematic points in student guidance, a questionnaire was sent to 110 engineering students in each participating polytechnic, which makes 330 responses in all. According to the students, the problems are similar in all the polytechnics. The following development objects were highlighted in the responses:

1. orientation studies / introduction to polytechnic studies (during the first year),
2. teaching arrangements,
3. individual difficulties with studies,
4. progress in studies/supporting progress,
5. guidance to thesis writers,
6. individual study plans – individual learning paths.

Thematic entities were determined in the central development objects, and the benchmarking site visits concentrated on these. Another tool used to identify development objects was a survey of the respective responsibilities in student guidance; the aim was to identify overlapping and areas of guidance which were not assigned to anyone in the polytechnic. These findings were used to outline further development of student guidance. The primary aim for the project was to put the new practices in place and to develop student guidance as a whole on the basis of the experiences and good practices gained in the project.

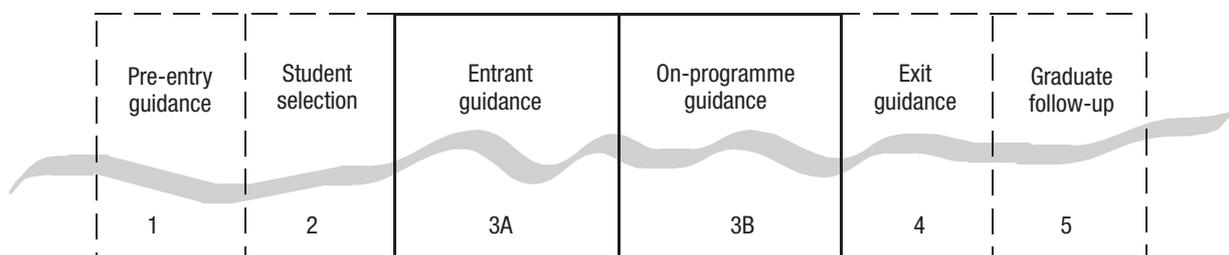


Figure 1. Student guidance process

The benchmarking models were chosen in cooperation with FINHEEC. The background documents included the national student guidance evaluation 2000–2001, which led us to ask Kajaani Polytechnic as one of the benchmarks. Kajaani has made efforts to develop student guidance across the board. In the university sector, the choice of benchmarks was especially based on positive feedback given on entrant guidance. In addition, the University of Oulu has carried out a great deal of pedagogical development. Both university-sector benchmarks, which were chosen by the FINHEEC secretariat and the study affairs offices of the universities concerned, were from the field of engineering. Despite its seeming straightforwardness, benchmarking is a demanding process, in which the choice of benchmarks and sufficient background information play a decisive role. All the benchmarks represented the campus-type study environment, and all the students and teaching staff interviewed represented engineering. In addition, the interviewees included experts on study affairs administration and educational development in each university.

## Good practices in guidance

### Entrant guidance in the Oulu University Department of Process and Environmental Engineering

In the guidance provided by the Department of Process and Environmental Engineering, the benchmarking group especially appreciated the following essential elements

- a good and motivating atmosphere,
- instructions and study guides,
- the student guidance model; responsibilities and counsellors,
- small-group guidance and tutoring, especially as team work,
- core subject analysis and work-load analysis as part of study plans.

At the Department, as in all university units, people are used to academic freedom, and students are expected to take responsibility for their own study progress. The teaching staff consider it important

to give students a sense of accomplishment and to motivate them individually by telling them about their own experiences and giving a realistic picture of the study process. In addition, the interviewees stressed that the most important thing is learning, although the students do not always realise this. Driving this home is an important part of guidance. Students also thought that the Department educated them for “self-guided studies” and made an effort to make sure that “there are people whom to ask”. Small-group guidance, which forms part of the curriculum, also aims to orientate students towards academic studies and to create social networks.

Students with initiative can find a great deal of written information both about the entry stage and about studying as a whole, which clearly explains whom to turn to in study matters. The Department has created a student guidance model, which covers the whole study path up to graduation. Some parts of the model are still new and under development. According to the benchmarking group, one good, already established element in the guidance is the small-group guidance and tutoring system, which gives especially good support to entrants. An interesting new form is mentoring, in which contact persons are sought in industry.

The action models in guidance at the Department fall into two parts: continuing and outreach guidance. *Continuing guidance* is mainly given by the study counsellor, who is the amanuensis of the Department. *Outreach guidance* includes peer tutoring, i.e. small-group guidance; teacher tutoring, i.e. tutors; subject-specific tutoring; guidance for thesis writers; a project called “From perpetual student to graduate engineer”, and mentoring. *Small-group guidance and the tutor system* are established practises that have evolved over 10 years or so. The Department has had a study adviser for a few years. Subject-specific tutoring, the “perpetual student” project and mentoring are new schemes. At the Department, the responsibility for student guidance rests with small-group instructors, tutors and mentors. At the faculty and university levels, guidance is provided by the student services (study affairs, student financial aid) and the head of student affairs.

Small-group guidance starts at the orientation meeting of each degree programme, where students are divided into groups of about 10 members. The faculties provide small-group guidance, which is a curricular course compulsory for all new students. The groups are led by second or third year students, who are appointed by the institute or by the departmental council or degree programme committee in cooperation with subject organisations. The material distributed to students is subjected to the tutors' approval when needed. The tutors are the Department's teachers who are assigned student to guide. Students can turn to them in all questions relating to studies. The tutor is often the student's first link to the Department. According to the benchmarking group, one particularly commendable practice is that the small-group leader and the tutor work as a *team*. The tutor continues the small-group leader's work after the first autumn term.

Since 2000, the Department has used core subject analysis and work-load analysis as tools in individual study plans. The *core subject analysis* helps teachers discover the connections between the knowledge and skills they teach and to accommodate them to the student's learning time, degree requirements and individual study plan. In the analysis the teacher looks at the internal structure of the subject, grouping knowledge and skills into different classes according to various criteria. This clarifies the status of the knowledge taught in relation to other knowledge. An example of the classes are core elements, supplementary knowledge and specialised knowledge. The core subject analysis includes a *work-load analysis*, which looks at the required work in relation to the time at the student's disposal. The students gave positive feedback on these methods and their usefulness in curricular development.

### **Entrant guidance at the Oulu University Department of Mechanical Engineering**

In the guidance provided by the Oulu University Department of Mechanical Engineering, the benchmarking group particularly appreciated the following essential elements:

- development optimism and student orientation,
- study and practical training guidance (“study clinic”) and “seniors”,
- instructions and study guides, especially in the academic year 2001–2002,
- the roles of the departmental study committee and council.

The interviews revealed that the teaching staff are committed to developing teaching and research. Students also pointed out that personality factors are an important element in teaching and guidance. Although students are responsible for their own studies, it is stressed that the university community as a whole is responsible for ensuring favourable conditions for studies. A novice student is provided with model timetables for the first and second years. The student's point of view is also evident in the study clinic and “seniors” activities and in the compositions of the study committee and council. Both students and teachers regarded the help provided by the student adviser and study planning adviser as important. The latter has a variety of tasks, including study progress monitoring.

Since autumn 1999, the Department has provided *teacher tutors* for first- and second-year students. Tutoring means free-form student guidance familiarising students with the Department and its laboratories and personnel. As studies progress, the themes discussed in tutoring change. Second-year students, for instance, get help and advice in choosing their major subject and specialisation. The voluntary teacher tutors mainly meet their groups once a month. The benchmarking group also heard about a teacher tutor who meets his own six-member group once a week. Tutoring is coordinated by the study clinic together with the Chemist Guild. The aim is to provide information about studies at the Department, about the chemical industry and research in the field. Another aim is to enable students to benefit from the opportunities in the field through new contacts.

Guidance for first-year students is also given on two courses: *Introduction to studies* (one credit) in the autumn term and *Introduction to mechanical engineering studies* (1 cr.) in the spring term. These courses include tutoring. Students with initiative can

find a wide range of printed and electronic information. In their interviews, students particularly commended the Department *study guide 2001/02*, which is informative and clear and provides useful information for novice students. The study clinic has four counsellors: two responsible for student guidance, one for international affairs and one for practical training. In addition, students can consult a Swedish-speaking study counsellor, if needed. These counsellors help students with problems relating to studies. They work in close cooperation with the study secretary and the study planning adviser. Students find it easy to approach the counsellors, who are also mechanical engineering students.

The Chemist Guild arranges *small-group guidance* for students. These groups are led by “seniors”. The interviews gave a clear picture of the respective responsibilities of seniors and teacher tutors, who guide the same group of about 10 students. The benchmarking group considered both the small size of the group and the team work a good practice, because both help to know the students better and are conducive to mutual trust.

The benchmarking group paid special attention to the composition (13 members) of the *Department’s study committee*, whose main task is to develop study affairs. The student point of view is well integrated into its activities through the four study counsellors and three annually changing student members. This is an excellent channel for developing student guidance and a vital part of the feedback system (open-ended feedback). Apart from the representatives of students and the research and teaching personnel, the committee includes the study secretary and study planning adviser. The *department council* has 20 members, four of whom are annually changing student members. The council is very representative, including not only researcher, teacher and student members, but also laboratory personnel, the higher education secretary, the study secretary and the planning officer.

### **Overall student guidance at Kajaani Polytechnic**

In the system of student guidance at Kajaani Polytechnic, the benchmarking group especially appreciated the following important elements:

- development optimism and partnerships with business,
- responsibilities in student guidance and the “annual guidance bell”,
- development and follow-up of practical training.

During the site visits, the interviewees particularly mentioned development partnership, which is seen in practice as the development of a campus-form polytechnic, holistic development of the student guidance system and active business partnerships. Development optimism came up in all interviewee groups. As an example the interviewees mentioned the reform of the degree programme on information technology (in 1999). Another example according to the benchmarking group is the action taken to facilitate the track from secondary level training to engineering studies at the Polytechnic.

For students, the strength in guidance is that “you always know who to turn to”. The students can read about the “study path” in the study guide. Student support services on the campus are concentrated into the main building. Supportive services include not only traditional forms, such as the study affairs office and computer, exchange, career and recruitment services, but also the services of ICT adviser / study affairs coordinator.

In the different study fields, guidance is given by *teacher tutors*, each of whom has about 20 students to guide. In the field of engineering there are 10 teacher tutors. The Polytechnic also uses student tutors. Guidance relating to practical training is assigned to contact persons (teachers etc) or the principal lecturer, depending on the size of the degree programme. In the field of engineering, the planning officer at the careers and recruitment service also contributes to practical training arrangements.

The Polytechnic has one full-time study counsellor, who also coordinates student affairs, i.e. plans and develops guidance in the Polytechnic as a whole. She also supervises that decided matters are implemented in the different study fields, organises presentations of the Polytechnic in secondary institutions and informs students about events intended for all study fields. This practice is well suited to a campus-based polytechnic. In Engineer-

ing and Health and Welfare, there are *part-time study counsellors*. For cooperative and development purposes, the Polytechnic also has teams composed of representatives of all units. A *tutor team* has been set up to develop guidance, generate ideas, provide guidance and information, and develop services.

In study planning, commendable practices include *discussions* with students *on their target outcome* and *their development*. The aim of these discussions is to help students in planning their studies and carry out their individual study plans. They also offer an opportunity to discuss future plans and progress in studies. The norm is to hold these discussions at least once each term. One good example/practice is the “year bell” relating to student information, which clarifies the activities and responsibilities in the Polytechnic. The year bell publishes monthly/weekly tables presenting library and information services, ICT services and the use of ICT, international services, information events relating to practical training, specialisation and studies common to all and information search training, as well as the persons responsible for each activity.

In the past two years, the Polytechnic has made special input into developing the system of *practical training feedback and information*, which comprises student information, the training agreement, the training diary, the training seminar, the employer’s feedback form, employer information and the terms of practical training.

According to teachers, they visit students’ traineeship places within 100 kilometres. The careers and recruitment secretary has clarified the system, and measures are taken to systematise information about practical training. The development also includes presentations of companies, for which the initiative came from students.

### Assessment of the project and its usefulness

The project group members have been very positive about the practical implementation of the project. Similarly, the benchmark institutions took a positive view of the site visits. We believe that

the project and its findings will give the benchmark institutions an additional impetus for their work. The good practices in turn provide the Kymenlaakso, Mikkeli and Pohjois-Savo Polytechnics with valuable tools for the development of both engineering and other education.

Based on the project, each polytechnic determined development lines for student guidance, which at this stage are still only indicative. At its best, the benchmarking project will be included in the polytechnics’ strategic planning. The findings confirm the idea that changes are necessary and help the polytechnics identify points in need of development and outline the target state of affairs.

Finding and understanding best practices has required insight into the working of the framework organisation in which the department or study field operates. The benchmarking project has constituted a learning process for the representatives of the polytechnics involved, as it involved both the theory of the benchmarking tool and its meaningful application in practice.

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