

OVERCOMING BARRIERS IN A PLAYFUL WAY -

A CONCEPT OF TEACHING

COST AND BENEFIT CALCULATION FOR INFORMATION SERVICES

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Abstract: This presentation will outline a new course for teaching cost and benefit calculation as a continuing professional education experience.

CONTINUING PROFESSIONAL EDUCATION FOR LIBRARY AND INFORMATION SCIENCE PROFESSIONALS: THE GERMAN EXPERIENCE

In Germany, many library and information science professionals lack a specialized, up-to-date methodical background for their day-to-day work in the information field. Most of them try to complement their practical experience by taking part in continuing professional education (CPE) and updating their library and information science methods. Since 1967 until the end of 1991, the "Deutsche Gesellschaft für Dokumentation" (German Society for Documentation) provided such a training at the "Lehrinstitut für Dokumentation" (LID, School for Documentation) in Frankfurt/Main. They offered a curriculum concerning "Information Systems", "Subject Access", "Information Retrieval" and "Information Management". This CPE program lasted thirteen weeks during a year and ended with an examination. It was certificated with the title "Wissenschaftlicher Dokumentar" (Scientific documentalist).

INFORMATION MANAGEMENT AT THE "LEHRINSTITUT FÜR DOKUMENTATION"

As mentioned, modules presented at the Lehrinstitut für Dokumentation included "Information Management", a three-week, full-time course. This course included topics such as "Organizing a Library and Information Service Center", "Development of Information Services", "Evaluation of Services", "Marketing", "Cost and Benefit and Cost-Effectiveness-Calculations," and "Aspects of Information Law".

In the course, theoretical aspects or special methods were taught, alternating with the discussion of practical tasks. A larger project lasting about two weeks enabled the students to bring together knowledge just learned and experience they gathered during their day-to-day work in the information field. For that second reason the students working on the project were grouped in respect to their job experience.

THE INCREASING IMPORTANCE OF BASIC KNOWLEDGE IN ECONOMICS OF INFORMATION PROVISION

During the 1980s, some library and information service departments in Germany were faced with an increasing importance given to economic aspects, irrespective of whether they

belonged to the public or the industrial sector. Therefore, some of the participants had experience in solving problems associated with this situation, but most of them had no experience at all with that topic. In addition, during their day-to-day work, there was (and still is) no time to discuss these problems systematically and extensively. Therefore terms and concepts concerning economics are used in vague ways. These participants in CPE wanted to learn about economic aspects in a compact way. Therefore topics and concepts had to be condensed to their practical relevance in the daily work without losing the theoretical context. Nevertheless there always was a minority of participants who did not want to become familiar with aspects of economics. Other participants initiated strong discussions on the necessity of learning about that topic because they needed extensive information about economics. In most cases, they were convinced by their colleagues. Irrespective of the debate about the inclusion or exclusion of this topic, it remained in the "Information Management" module because of its importance for the profession in the long term.

THE CURRICULUM CONCERNING COST AND BENEFIT CALCULATION

After some less successful experiences with a teaching concept taken from the economic science, the lecturers decided to develop a curriculum which considered the special barriers of the participants. The result was a shortened version of the initial concept completed by two focal points: reduction of the complex economic topic to a very easy-to-learn version of cost and benefit calculation, and overcoming the mental barriers by applying a game-like teaching method. After having tested the concept with five groups the participants and lecturers agreed that the method was successful. Three principles were applied:

- structure
- simplicity
- additional stimulation.

The principle of structure results in a reduction to the important topics of economics concerning the information field. This means that the elements and goals of cost and benefit calculation are different aspects of the topic "cost". Basic concepts such as information need, information requirement, effect, turnover, profit, performance, utility, payoff and efficiency were defined and explained. Their application to services offered by information centers was described and discussed.

Simplicity in this environment means the reduction of the complexity of real situations to examples which are easy to understand. The calculations which are to be done should be simple, too.

Successful learning depends on a high level of inner motivation. That kind of additional stimulation can be obtained if the participants have a high interest in the topic or in the way the topic is communicated. This concept led to the game-like teaching which is described below.

USING A GAME-LIKE TEACHING METHOD FOR CPE: THE CONCEPT AND ITS REALIZATION

Following the principles mentioned above, we developed a game of cost and benefit calculation. The objective of the game was to involve all of the students actively, stimulating them to develop ideas and cooperate in reaching the goal. The method used for that was a workshop where groups of students work together, depending on the knowledge of each other and the output other groups offer. The main objective was to use the cost and benefit calculation as a method to reproduce the relationships between an information service center and external institutions. This means to record the amount and value of input and output for a special information service and to monitor the performance of the production.

During the game, the participants had to manage the cost and benefit calculation of a given situation at an information center. Every group had participants with different information concerning the solution of the problem. The problem could only be solved by communicating with each other and so they had to work on the problem together and had to prepare a common solution. Therefore, all members of the group had to be in place during the workshop. Decisions had to be made by convincing other members of the group. Gradually, the solution to the problem became a strongly discussed process which was, after solving the problem in the team, again discussed in a review during a plenary session.

These are the steps of the game:

- presentation of the concept of the game in a plenary session
- organizing the groups
- distribution and explanation of the worksheets
- problem solving in the groups
- step-by-step presentation of solutions in the plenum
- comparison and coordination of the solutions (feedback in the group)
- discussion of the solutions (feedback in the plenum)
- discussion of the game (feedback concerning the concept).

"Applying the concept" means to be aware that the students had to make decisions on tasks for which they finally were qualified during the course. For that reason they were attended by a qualified person who helped them during the problem solving process by answering questions concerning the cost and benefit topic and the concept of the game. Additionally the attendant had to observe and enhance the process of group dynamics to ensure the success of the game. The whole game lasted about two to three hours, depending on the intensity of the discussion following the game.

IMPROVING AND CONTROLLING THE SUCCESS OF THE CURRICULUM

The discussion following the game plays an important role in improving and intensifying the knowledge gained and applied during the class. The ability to apply the knowledge was tested in two ways.

First the students had to apply it in the two-week project where different managing tasks had to be solved. In this way the students demonstrated if they had understood the topic of economics. During the theoretical lessons an opportunity was given to pose special questions concerning economics. Their theoretical knowledge was widened and extended, and knowledge necessary for solving project tasks was gained.

Second, a test was given at the end of the "Information Management" module. A special exam was created and given to the participants. The exam gave an idea how much of the knowledge they had retained. The results of that test have been encouraging and confirmed the success of the concept.

ABILITY TO APPLY THE CONCEPT ON OTHER TARGET GROUPS

Typically the students of the LID had heterogeneous knowledge in the area of economics and cost and benefit calculations. Additionally, as described above, participants had a different intensity of interest in the topic of economics.

This interest might be achieved and knowledge might be gained by other groups in other disciplines. Therefore, without having tested the concept with other groups than those CPE participants, lecturers are convinced that this CPE concept can be applied to those who need information on cost and benefit calculation and expand the economic background of all.

CONCLUSIONS

This concept of teaching cost and benefit calculation for information services allows an easy-to-learn and game-like acquisition of knowledge about economic concepts. Its success predicts a successful application for other groups planning CPE programs.