

# The Hybrid Curriculum

The acquisition of academic competencies within a university curriculum

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## 1. INTRODUCTION

It was just about twelve years ago, when our faculty was first founded and problem-based learning was then adopted as a leading educational principle (Van den Bosch & Gijsselaers, 1993). The new curriculum was modeled according to the Maastricht example of problem-based learning (Bouhuijs, Schmidt, & van Berkel, 1993; Dolmans, 1994). We were quite impressed by its apparent success at the Maastricht University: Students seemed to learn more and they were able to better connect theory and practice. In addition, by working in small groups, they were able to develop their communication skills, and at the same time, they could quickly built up a network of social relationships. Moreover, the duration of their study was shortened on average.

This article describes the evolution of problem-based learning at our faculty since its first introduction. Over the years with the introduction of problem-based learning, the satisfaction of both students and teachers has been frequently measured, and the stronger and weaker points of problem-based learning have surfaced. At the same time, the faculty's educational goals have been refined and there has been more emphasis placed on the development of students' competencies. Much time has been spent in designing a curriculum, which is considered to be suitable to the acquisition of competencies. Confidence has grown in the belief that problem-based learning is a strong educational principle. However, it should be

<sup>17</sup> The Nijmegen School of Management is the new name of the Faculty of Policy Sciences.

supplemented by other educational arrangements. Our new curriculum, which is based on the blending of several educational principles, has been characterized as being hybrid.

The first section of this article is a description of our various experiences, while working with problem-based learning as it was first implemented. After that, the second section clarifies the students' competencies, Section 3 gives insight in the ultimate goals of our curriculum, the role which problem-based learning can play as well as the limitations themselves present. As a result, criteria for a hybrid curriculum will be defined in the fourth section. The new business administration curriculum, which is constructed according to hybrid principles, is described section 5, while section 6 presents an overview of recent experiences.

## **2. INITIAL EXPERIENCES**

In 1988, the former Faculty of Policy Sciences first introduced problem-based learning. Problem-based learning concerns itself with the acquisition of knowledge by students and at the same time, the ability to apply this knowledge. In the traditional curriculum, the acquisition of knowledge and the application of the knowledge are more separated (Barrows & Tamblyn, 1980).

The experiences were both positive and negative. Many students worked with dedication and enthusiasm within the new curriculum. They mentioned that they had learned a lot and the collaborative work in small groups, supervised by a tutor, was highly appreciated in many evaluative studies. These evaluations also gave evidence that the students had learned to study more regularly and that they had become experts in the finding and editing of information. An analysis of their examinations proved that the students sufficiently understood the content. Several audits spoke in favor of problem-based learning, except for a few isolated remarks concerning the examination system.

With respect to the students' abilities to navigate with facts, concepts and theories, nevertheless feelings of dissatisfaction prevailed. Students were uncritical and they refused to relate bits of knowledge. They also were reluctant to use their acquired knowledge to outline real life situations. One must admit that exactly these features had been used to justify the introduction of problem-based learning.

The decision to carry out several research projects was taken, before a more fundamental revision of the curriculum was made. These projects were aimed at revealing the main characteristics of the learning environment by which learning behavior is influenced. The following characteristics, which

might be relevant, were considered: the content and form of the tasks and assignments, the interventions of the tutor, the method (the so-called ‘seven-jump’), the presentation of the outcomes in ‘logs’ and so forth.

Figure 1 shows the various findings obtained (Van den Bosch & Gerritsen, 1997). In the first column specimen of less well-adapted learning behavior are listed. The second column refers to the characteristics of problem-based learning, which presumably provoke this kind of behavior.

Students' behavior	Corresponding characteristics of PBL
<ul style="list-style-type: none"> <li>• The mechanical application of the seven-jump</li> <li>• The division of the literature between group members</li> <li>• Insufficient preparation at home of the tasks and assignments</li> <li>• Lack of self criticism</li> <li>• Lack of initiative</li> <li>• Hiding behind a lack of information</li> <li>• Focus on examinations</li> <li>• Relying on fellow students' contributions</li> <li>• Students are focused on attaining bits of knowledge which correspond to their learning goals; the reflection on the problem formulation has been neglected</li> <li>• Students recite literally the content of the literature, they found</li> <li>• Students grow tired of PBL</li> </ul>	<ul style="list-style-type: none"> <li>• PBL is justified as a teaching method instead of a simulation of scientific behavior</li> <li>• Tutors who are told that their task is primarily to guide the process, often rigidly refuse to participate in discussions</li> <li>• The large number of problems keeps students from collecting sufficient background information.</li> <li>• Tasks and assignments reflect prior knowledge not the interests of students</li> <li>• Tasks are designed to cover a certain amount of subject matter. The problem formulation is obvious clear</li> <li>• The status given to the formulation and studying of learning goals is over-exaggerated. The discussion of the initial problem formulation deserves more attention.</li> <li>• There is a lack of progression in method and there is a difference in the degree of difficulty between successive courses.</li> </ul>

Figure 1: Less desirable learning behavior of students and characteristics of the learning environment within the Nijmegen School of Management.

Generally speaking, many students (and teachers) doubted the value of problem-based learning after having participated in two or three courses. The main reason for this attitude was thought to be due to the repetition of the procedures. Many students referred to the superficial treatment of problems. While interpreting these findings, the main question we concerned ourselves with was to which extend these problems are inherent in problem based learning and to which degree improvement in the execution of problem based learning is possible. In order to appreciate the inherent



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