

The introduction of problem-based learning in the Faculty of Policy and Administrative Sciences: a management approach

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Introduction

Problem-based learning (PBL) is regarded as a valuable attempt to improve the quality of higher education (Schmidt & de Volder, 1984). It is an innovative instructional method presenting various theories as an instrument to understand and explain problems. Since 1988, the Faculty of Policy and Administration Sciences (FPAS) of the University of Nijmegen (the Netherlands) has pioneered a curriculum based on problem-based learning. The principal idea is, that learning should be organized around problems which are related to the profession, rather than around subjects which are centered around academic disciplines. Considerable efforts have been made by this faculty to design a curriculum and employ innovative teaching methods which intend to achieve multi- or interdisciplinary education, to encourage self-directed learning, and to provide students with an adequate background to analyze problems encountered in the professions of policy and administrative sciences.

This contribution seeks to describe the process through which the faculty became aware of the need to develop new ideas in teaching (in particular problem-based learning), adopt or reject them, and to institutionalize these ideas.

The Faculty of Policy and Administrative Sciences

The Faculty of Policy and Administrative Sciences (FPAS) is the result of a merger in 1988 between several established faculties, departments, institutions and programmes concerning policy and administrative sciences. The creation of this faculty was a response to changes in societal need (society wanted graduates trained in various aspects of policy and administrative sciences) and to external pressures (a serious decline in student enrolment for some programmes in policy sciences combined with lower budgets).

External pressure and 'culture management'

External pressure and internal culture management serve both as antagonist as well as mutual supportive conditions. Many innovations in university institutions are the result of external pressure (for example, negative judgments of external review committees, decreases in student enrolment or in governmental financial support. External pressure also played a decisive role in the curriculum innovation of the FPAS. The decision in favor of a new curriculum in which PBL was to play a major role, was made in a period when FPAS had interim management. The University of Nijmegen introduced interim

management for FPAS because of earlier problems with the existing programmes and problems raised as a result of the fusion. Teachers were compelled by the interim management to accept PBL as new teaching method. Teacher training was obligatory for staff members to learn the basic principles of PBL. From a perspective of university organizations, this is an unusual and unconventional process of decision-making. However, this didn't result in protests or faculty dissent. A great number of staff members realized that the possibility to keep their jobs depended largely on the increasing amount of student enrolment, due to the attractiveness of the new programme.

Innovations characterized as 'threat-response' will only last as long as the threatening conditions are present or can be cultivated. If a decision-making approach still continues to be top-down in the long term, staff members will not feel responsible for the transfer of the innovations. They hide in their research activities or frustrate the entire process. In a university with its typical vague hierarchical structure, staff members have nearly unrestricted possibilities to follow their own preferences or to minimize efforts in realizing faculty based goals.

For all this reasons management of the FPAS had to make great efforts to get support from staff members, not based on coercion but on shared values. Staff members are required to see that the innovations are not only necessary adaptations to external pressures, but may have values in their own right. Because of proceeding in this line, a considerable number of staff members started considering innovations as a challenge and an opportunity to promote the institution, and to a certain degree also themselves. Of course, as long as people behave in a rational way, innovations cannot be 'sold' as toothbrushes. Educational innovations in a university context have to be as convincing as research activities. Educational qualities of innovations need to prove that they are worthwhile. In this respect, the presence of 'models', for example other university institutions that can be characterized as successful adapters, is not without importance. Models can be considered as successful, when their more superficial aspects are rejected and replaced by home-made modifications.

Outline of a new programme

The new programme consists of four years divided into two cycles. The first cycle (year one and two) contains a broad introduction in policy and administrative sciences. These years are organized around courses with central themes from these sciences. They have a multidisciplinary orientation. The second cycle, the final two years, comprises courses with a more disciplinary character. The management of the programme follows the structure of the curriculum. The first cycle is embedded and coordinated by a relatively autonomous institution called 'School for policy and administrative sciences'. The second cycle is organized by the individual departments of the faculty.

Analytical frameworks for innovation and change in Higher Education

Classical innovation theory heavily relies on the idea of stages or phases in innovations: adoption, implementation, dissemination (Hill & Friedman, 1979; Kozma, 1985). However, Kozma (1985) showed that a considerable overlap and ambiguity exist between these stages, and that innovation is evolutionary (new instructional practices are built on past practices). According to Kozma these stages are not easily to distinguish. A clear

point of adoption or implementation is rarely discernible. This seems indicative for the most characteristic aspect of instructional innovation: new educational practices are based on past practices. Whenever instructors employ new teaching methods, these methods are embedded in earlier teaching experiences.

An obvious question is which conditions have a major influence on innovation processes. Literature on change and innovation suggests that the most pervasive factor is the unique organizational structure of higher education (Bess, 1984; Kozma, 1985). Kozma (1985) points out that academic organizations are characterized by their perpetual inability to strike a wholly satisfactorily balance between the requirements for individual autonomy and academic freedom on the one hand, and the necessity for organizational efficiency, accountability and control on the other hand. The organizational looseness, or lack of instructional accountability, accounts for the personal character of many innovations in higher education. Dependence on a variety of personal preferences of instructors leads to unclear choices in decision processes. Innovations outreaching the level of individual instructors, for example rearrangement of course contents at a programme level, are particularly vulnerable for failure and resistance to change. At a programme level it is difficult to operate on a basis of a variety of individual, and therefore inconsistent, preferences that can be described better as a loose collection of ideas than a coherent structure (Cohen, March & Olsen, 1972).

A second condition is external pressure (Lindquist, 1978). Declining student enrolment, external reviews, changes in higher education policy and finance, changes in public expectations, are generally seen as relevant external forces. Innovations are apt to occur whenever these external forces grow stronger. They are more important than internal forces to invoke educational change.

A third condition is funding or the availability of additional resources. Innovations require time and or other resources. Lack of resources, as Kozma (1985) points out, is one of the most frequently given reasons for not adopting an innovation. Instructional change is only possible if change doesn't cost anything. When costs are incurred, faculty members have to spent time on obtaining additional resources. These activities undermine the possibility for following individual preferences that make part of the goals set in the academic career. Individual preferences normally lie in the field of research. Research activities are the most rewarding activities in an academic career. Implementing innovations in education implies that faculty members have to undertake activities that are not perceived as a valuable contribution to their own career. Consequently a feeling of being hindered by educational innovations in the pursuit of academic career will emerge which ultimately leads to rejection or non adoption of new ideas (Oldham & Kulik, 1984).

The analytical framework as described above leads to several practical implications. First, powerful management is needed to create coherent structures in a faculty. Coherent concerning the intended educational goals, methods and evaluation and assessment. Second, external pressure is needed to legitimize the actions undertaken by the management. External pressure provides management a basis to change the balance between individual autonomy and faculty control in the favor of faculty control. Finally, management should try to use external pressure for adopting new ideas and to create a faculty wide approval (corporate identity). This part of management decisions may be described as "culture" management: management of affective goals which influence the culture within a faculty in favor of willing to change education. Normally management decisions focus on organizational structure variables (funding, roles and functions of departments).

Because of the overwhelming importance of the first of the above mentioned implications - powerful management - the FPAS introduces the 'University School' as organizational principle. In the next section we make some remarks about the appropriateness of the School concept.

The 'University school' as organizational principle

In our discussion about the school concept we differentiate between three aspects:

- * the School as an organizational entity
- * the School as an institution
- * the School as a focus of innovation

Organizational entity

The school concept is related with the idea of project teams ex article 40 according to the Dutch law on higher education. Daily co-ordination of the programme is done by a programme director and his staff. A council provides the director with complimentary advises and ensures the quality of the programme.

The foundation of an autonomous entity was motivated by the necessity to guarantee a comprehensive curriculum in an environment that was characterized by antagonism and heterogeneity. In fact, this situation turned out to be a matrix organization, entailing its characteristic possibilities and problems. The relative simple recruitment of teaching staff can be considered as an advantage: faculty members spend their time in their own divisions and in the School. Problems may occur when staff members identify themselves mostly with their own divisions. Nowadays, 30 percent of the total staff of the School is a full-time member of the School staff. These members have specific tasks as communication trainers, tutors or laboratory assistants.

Institution

The School is responsible for about 1000 students. For this group it operates as a professional organization: it organizes the curriculum, including the examinations, registers the students, and gives information to potential students. A support staff of 10 persons is employed to achieve these goals.

The student library ('study landscape') constitutes a major element of the equipment of the School. Here, students find the necessary literature, personal computers and video-recorders. The student library and its adjacent territories function as a meeting place for the students. Although the place is sometimes heavily crowded, students find enough room for intellectual and for social activities.

Focus of innovation

Without the presence of a School, the development of a coherent programme in the first cycle had probably not been possible. This programme is based on the principles of problem-based learning: multidisciplinary oriented courses and small group tutorials. The choice for problem-based learning as principal instructional method was a top-down decision. The management of the School was equipped with enough power to introduce a number of supportive activities, like compulsory training, participation in programme committees, new roles in teaching etcetera. At the same time, the distance between the

management of the School and the teaching staff was small enough to discuss the innovations and even to modify them, in the case of important resistance. The presence of the School also facilitates research about the learning activities of the students.

Merits of the concept 'University school'

The foundation of a university school could be desirable when one or more of the three following conditions apply:

- * a specific programme lacks a clear organizational structure; for instance: several departments share their responsibility for a programme
- * a unifying philosophy of education needs to be developed
- * a professional organizational entity is needed.

However, the concept of a university school has many aspects and each aspect has its own variants. We'll discuss these aspects and variants in the following.

Delegation of power

To prevent school management from being a paper tiger and just fulfil the role of another piece of university bureaucracy, existing organizational entities (faculty, departments, disciplinary sections) must delegate power to the school management. In addition clear definitions must exist about the role the school may play within a faculty organization. The FPAS has good experiences with installing a director having responsibility for daily affairs and a board, responsible for the long term policy. The units or departments that delegated power to the School are represented in the board.

Delegation of staff

To operate in an efficient way, and to prevent competence conflicts with other units within a faculty, financial resources needed for teaching and organizational activities should be allocated to the School. Having an own budget available, the School negotiates with the disciplinary sections in the faculty to obtain educational expertise. Of course, this practice requires an adequate description and accounting of teaching tasks. The FPAS has developed an extensive 'credit list' of required teaching-tasks and teaching roles. The budget of the School and the prices are defined in hours of teaching load. For example: a lecture taking place for one hour is credited as 4 hours teaching load; a tutorial amounts to 50 hours teaching load. Consequently, many university teachers participate in the School programme to gain enough credit hours.

School management prefers a situation having a restricted number of department members available, above the participation of many staff members for only a small part of credit hours. Continuity and educational quality is best served by a small amount of staff members performing a relatively large amount of teaching roles.

Professionalism

A School doesn't need its own teaching-staff, except for highly specialized tasks. The School of FPAS for instance, employs specialists in gender studies, philosophy of policy and administrative sciences and in communication skills. Student administration, informational and other student services, as well curriculum and organizational expertise, and teacher training facilities are necessary within the School.

Quality management

A School has to implement a quality management system: all courses and the curriculum as such should be evaluated periodically. A discussion of evaluation outcomes should be standard routine within the board. Evaluation results are useful to improve educational quality, or provide teachers with opportunities to improve their teaching skills. Teachers who persist in not being successful in performing certain teaching activities may be replaced, or get other teaching roles. A such quality management is needed to assure educational quality and to obtain information for accountability purposes.

Conclusion

It is often thought that only new schools can implement PBL because of the radical changes needed in the organizational structure (Bouhuijs, 1990). The case described in this article proves that under certain conditions PBL can also be introduced in established faculties. In this particular case the explicit attention for management issues (for example, introduction of the school concept and culture management) facilitated the introduction of PBL.

Two other conditions appeared also to be of importance: The first condition is that external pressures are strong enough, in combination with changed management procedures, to provide adequate resistance to internal forces wanting no change. The second condition is that attention was paid to faculty approval and organizational culture. Management tried to change the organizational culture by explicitly focusing attention to compliance with the programme. For example, staff members were schooled in the principles of PBL at the University of Limburg. However, as such the management of FPAS has the feeling that when looking back into the past period even more attention should have been paid to cultural changes. More seminars, courses, workshop, internal magazines, festivities, financial stimuli to reward wanted organizational behavior, should have been organized. Last but not least, student involvement and participation in the management of the programme is needed to support the process of change.

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