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**Author(s):**

Schiltz, Guillaume; Volk, Benno

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# Coupling local and central support structures: a model to ensure teaching support and quality assurance in research universities

Guillaume Schiltz & Benno Volk (ETH Zurich, Swiss Federal Institute of Technology)

**Abstract:** ETH Zurich supports faculty development by implementing a dual model which consists of a central support unit and a network of local educational developers at the department level. This organisational support structure adopts the study administration structure and thus is consistent with both the structural integrity of ETH and the institution's policy of departmental autonomy. In this paper we illustrate the outcomes of this strategy in our faculty development programmes, and use that example to make recommendations on how to enhance faculty development effectiveness in highly heterogeneous educational settings.

## The dual support model of ETH Zurich

One of the major problems in implementing teaching support and quality assurance as a strategic measure is that universities are complex organizations. Even though they are often compared with other educational institutions such as schools or colleges their organizational structure is quite different. In fact, universities are defined as "loosely coupled systems" (Orton & Weick 1990) with faculties and departments having a certain degree of autonomy and maintaining specific academic cultures, mind-sets and traditions. In such settings adaptations to organisational development processes often have to contend with acceptance issues. Well-defined top-down and corresponding bottom-up processes, on the other hand, have better chances of success. Measures for teaching support and quality assurance turn out to become a challenging and complex issue, especially when faced to highly heterogeneous departments that are usually populating the major research universities (Gillespie 2010).

To efficiently address the specific requirements, needs and cultures of each of its departments, ETH Zurich mirrors the organisational structure of the university in its teaching support and quality assurance services (Fig. 1). A central unit "Educational Development and Technology" (LET)<sup>1</sup> consisting of experts in the related fields (educational technology, innovation management, assessment and evaluation, faculty and curriculum development) is complemented by a network of locally based educational developers (EDs)<sup>2</sup>. With this approach a dual-mode model of organizational development is introduced. The central unit (LET), affiliated with the ETH Executive Board, provides a broad range of services based on demand, works out top-down activities and helps to implement these measures extensively. The local EDs, who are full members of the respective departments and partly financed by the Vice President of Education, operate as change agents by promoting bottom-up activities and by aligning department-specific measures with the strategic aims of the university.

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<sup>1</sup> Central unit (LET): [http://www.let.ethz.ch/index\\_EN](http://www.let.ethz.ch/index_EN)

<sup>2</sup> Network of local EDs: [http://www.let.ethz.ch/lehrspezialisten/index\\_EN](http://www.let.ethz.ch/lehrspezialisten/index_EN)

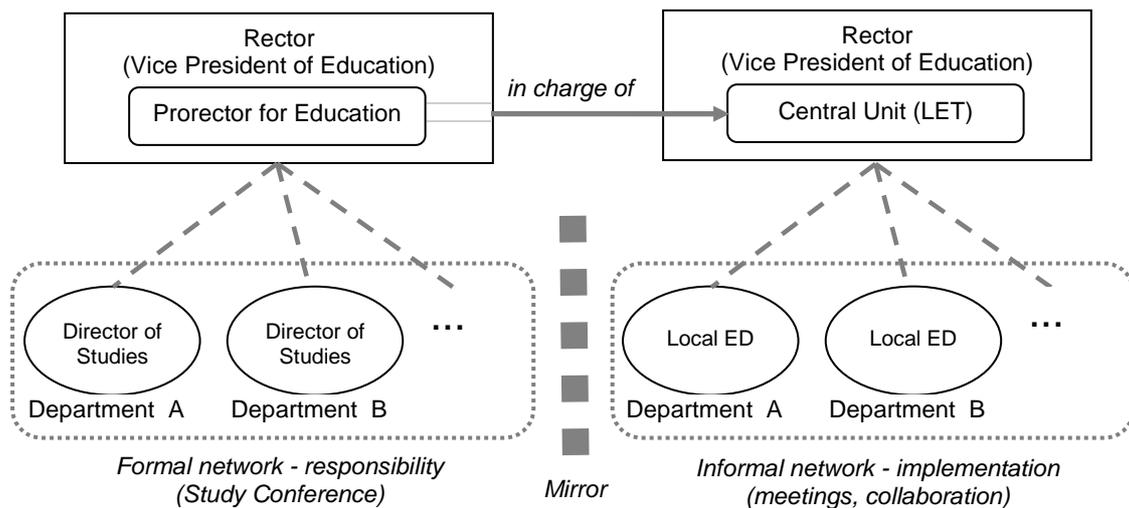


Fig 1: Mirrored organisational structure

In implementing this dual-mode model, several essential problematic fields have to be taken into consideration:

- To avoid redundancy or competition, it is necessary to clearly define and delineate the fields of action of the local EDs and the central unit (LET).
- Interfacing between local EDs and the central unit (LET) is crucial to collaborative planning and continuous exchange of information.
- The local EDs act as a two-way information and communication gateway between their respective departments and the central unit (LET).
- Characterized as "third space professionals" (Whitchurch 2008) local EDs have to a great extent to develop and define their own fields of activities. For this reason, functional areas largely vary amongst local EDs with individual emphasis on faculty, instructional or organisational development.

In the following we pinpoint these problems in detail by focusing on faculty development in the Department of Physics, which has given the area much attention over the past few years. The local considerations mentioned below apply only to this department.

## Faculty Development

At ETH Zurich we define faculty development as activities that include staff's teaching development as well as quality assurance in teaching. The central unit (LET) runs university-wide teaching development programmes for different target groups (see Table 1). The two course programs in Table 1 are generic, non discipline-specific courses that mainly address teaching staff in transition phase, i.e. teaching assistants with upcoming teaching responsibilities or assistant professors who are newly appointed at ETH.

<b>Teaching courses run by the central unit (LET)</b>		
target groups:	Graduate Teaching Assistants	Assistant Professors
attendance:	optional (recommended)	optional (recommended)
goals:	<ul style="list-style-type: none"> <li>• gain confidence and awareness</li> <li>• prepare and structure teaching units</li> <li>• presentation and rhetorical skills</li> <li>• use basic pedagogic methods</li> <li>• experience basic feedback and tutoring approaches</li> </ul>	<ul style="list-style-type: none"> <li>• become familiar to university teaching</li> <li>• design lecture courses and assessments</li> <li>• apply practical teaching tools</li> <li>• actively engage students</li> <li>• research-oriented teaching in small groups</li> </ul>
extend:	3 days	6 days plus transfer sessions (in-class observation, written report)
attestation:	certificate	certificate
participants:	max. 80 / year	max. 20 / year

Table 1: Generic teaching course programs

In addition, the local ED offers several courses for graduate teaching assistants at the department level. These courses focus on discipline-specific issues and offer ready-to-use tools for the participants (see Table 2). Most participants already have teaching experience and want to refine their skills.

<b>Teaching courses run by the local EDs</b>		
target groups:	Graduate Teaching Assistants: exercise classes	Graduate Teaching Assistants: laboratory classes
attendance:	optional	optional (recommended)
goals:	<ul style="list-style-type: none"> <li>• gain confidence and awareness</li> <li>• prepare and structure exercise classes</li> <li>• design assessments and grade assignments</li> <li>• use discipline specific pedagogic methods</li> <li>• experience basic feedback and tutoring approaches</li> </ul>	<ul style="list-style-type: none"> <li>• plan and organize small group teaching</li> <li>• experience feedback and tutoring techniques</li> <li>• teach scientific writing activities</li> <li>• grade lab reports</li> </ul>
extend:	2 days plus transfer sessions (incl. peer-visit, report presentation)	1 day
attestation:	1 credit point	certificate
participants:	max. 10 / year	max. 10 / year

Table 2: Discipline specific teaching courses

At the moment discipline specific courses are offered only for graduate teaching assistants at the Department of Physics. These courses are a cooperative venture of the local ED, members from the physics teacher training and experts from the central unit (LET). Running central and local courses in parallel offers opportunities for the exchange of experiences and outcomes among the course leaders involved, and thus great potential for mutual improvement.

At the lecturer level (professors), local EDs rely on personal coaching instead of formal courses. The local ED, as a member of the department administration and as it is mostly the case also as a member of the department faculty, maintains collegial relationships with the lecturers which – based on mutual confidence and acceptance – enable him/her to offer support at a very specific level. Discussions on teaching practice and peer observations allow the local ED to initiate customized teaching improvements. In addition, personal coaching is not limited to a certain course period but often results in a long-term process. Comparable support strategies can clearly not be implemented by a central unit because of its intrinsically interdisciplinary approach and lack of resources. Local and central approaches complement each other here, however, as general processes and aims are easily realised at the level of the individual teacher.

### Quality assurance

Teaching courses and personal coaching, both offered on a voluntary basis, mainly address engaged teachers, which then leads to the well-known 'Matthew effect' (accumulated advantage). Instruments of quality assurance, such as SET (student evaluation of teaching), however, address the whole faculty and identify a range of teaching performance levels. For educational developers coping with low performance is always linked to potential conflicts. In this case educational developers might be assigned roles such as “teaching police”, “teaching doctor” or even worse, which prevents them from efficiently supporting teaching improvement.

At ETH Zurich the central unit (LET) has worked out a summative SET which is regularly conducted in all courses (see Table 3). The results are then transmitted via the ETH Executive Board to the departments and it is up to the departments to adopt improvement measures.

<b>SET (student evaluation of teaching)</b>		
purpose:	summative evaluation	formative evaluation
completion:	compulsory, at least every 2 years	optional (recommended)
executed by:	central unit (LET)	students/local ED/lecturer
method:	anonymous questionnaire	anonymous questionnaire
feedback to:	department	lecturer/students
implications:	<ul style="list-style-type: none"> <li>• counselling by LET</li> <li>• counselling by local ED</li> </ul>	<ul style="list-style-type: none"> <li>• in-class discussion</li> <li>• counselling by local ED</li> </ul>

Table 3: Instruments of quality assurance

As a member of the department the local ED can counsel low performing teachers and mediate between them and the department board. In all recent cases this procedure has shown itself to be perfectly applicable and highly efficient.

In addition to the summative evaluation, student representatives are invited to carry out a mid-semester formative evaluation. Here the local ED and the lecturer can provide operative help with the questionnaire. The results are discussed in class and the lecturer may seek further support from the local ED.

In terms of quality assurance, the dual support model turns out to be highly efficient. In teaching development, the same: engaged lecturers can both acquire basic skills in generic courses, and refine them at a discipline-specific level via courses and personal coaching. Teaching problems can also be analysed and dealt with through personal and collegial counselling. The approach thus enables us to address lecturers from both ends of the performance spectrum and we hope to encourage average teachers to reflect on their teaching practice.

### **Operative Network of central unit and local EDs**

The complementary nature of teaching development courses and evaluation processes depends upon efficient co-operation between the central unit (LET) and the local EDs. To promote this, a network has been established which conducts regular coordination meetings. Once a month a team from the central unit (LET) reports to the local EDs on on-going projects and further development plans. The local EDs are also invited to take part in some central unit team meetings. These measures help to build interpersonal communication.

We have also established so-called “Teaching and Learning Intelligence” meetings, which are held four times a year and are attended by the Prorector for Education, the management of the central unit (LET) and the local EDs. In these meetings participants discuss new developments and exchange experiences regarding current issues in higher education at ETH Zurich.

In sum, the network requires both formal meetings and informal communication between the central and local support units in order to uphold interpersonal exchange and build an operable network.

### **Lessons learned**

The dual-mode model can only work if a sufficient number of departments have local EDs. At the moment 5 out of 16 ETH departments have them and we plan to double this number in the coming years. In the meantime, the central unit (LET) remains the central contact point for all departments without local EDs. This has produced a situation which is not very conducive to a complete shift to the dual model.

ETH's dual-mode model, since its implementation in 2008, has produced noticeable results in the area of faculty development. Many newly appointed professors receive initial training in the generic teaching courses and later receive long-term coaching from local EDs. Diagnostic SET questionnaires drawn up by the central unit (LET) and corrective action taken by local EDs together ensure the maintenance of high teaching quality standards. Meshing underlying top-down (central) and bottom-up (local) measures, however, often causes argument. The local EDs and the central unit (LET) must negotiate jointly between the ETH Executive Board and department heads, and make compromises where necessary. Experience has shown both that compromise is not always easy, and that the major problem lies with information exchange. One reason for this situation is the potential tension between the Executive Board and the departments as a result of the organizational structure of a university. Systemic organisational theories (Reed 2006) indicate that structural characteristics are passed from system to subsystem: because ETH's organisational circumstances are not easy to change, this should be kept in mind in the networking between the central unit (LET) and local EDs.

In conclusion, the dual-mode model combines discipline-specific and generic faculty development approaches with perfect efficiency. The major challenge the model now faces is to design further parallel teaching and quality assurance elements, which are as compatible as those that we have described here.

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