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A future-ready model for cooperation in curriculum development

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Abstract

In the last few years new fields of activity have emerged around the interface of science and administration at universities. These activities require new forms of cooperation. At the Swiss Federal Institute of Technology (ETH) Zurich, a new collaborative process has been developed over the last eight years to react efficiently and sustainably to new demands on degree programme curricula. This contribution describes the structures, processes and cultures of this curriculum development endeavour, and its future potential.

1 Introduction

The last two decades have seen fundamental changes in the interplay of research, teaching and administration at universities (Nickel & Ziegele, 2010; Schneijderberg & Merkator, 2013). These changes are a reaction to new demands on universities such as increased accountability in the areas of quality, performance and cost. They have engendered new functional areas situated at the interface of established university science and administration. Whitchurch (2008) calls the specialists who operate there “third space professionals”. New forms of cooperation associated with this change have expressed themselves in new structures, processes and cultures via which universities hope to achieve both externally imposed and internal goals (Wildt & Wildt, 2015). This paper describes how ETH Zurich faculty, study programme administration staff and curriculum development specialists have cooperated in new ways to address curriculum development challenges in this context, and presents perspectives on the way forward.

2 Established curriculum development structures, processes and cultures

In the structural sense, collaboration on curriculum development began in 2012 with the naming of a Vice Rector for Curriculum Development and the launch of regular “curriculum development” meetings where curriculum development projects are evaluated, support measures are established and curriculum development issues are discussed. These meetings

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are attended by the Vice Rector, representatives of the Curriculum & Faculty Development group⁵, advisors on legal matters related to teaching, and degree programme representatives.

A timetable and processes governing curriculum development projects were set out in a Rector's directive⁶. To render cooperation more binding, curriculum development policies⁷ were formulated. These drew on ETH teaching policy⁸ and the quality criteria for teaching at ETH Zurich⁹. Funding was also made available. This enabled departments to apply for financial support for complex curriculum development projects (Innovedum Fund¹⁰).

Standard curriculum development processes involve various project types, sequences of steps and responsibilities (see Figure 1). The variants in Figure 1 differ in their levels of complexity and the extent to which programme regulations have to be revised.

The lead in curriculum development projects always lies with the respective department. Collaboration in this context features a culture of dialogue among participating partners. If the plan is to revise a degree programme or develop a new one, the objectives and content of the project are discussed, critical points are identified (e.g. degree programme coherence or student workload), a timeline is set, and forms of cooperation and support are considered.

The Curriculum & Faculty Development group offers help with project planning and organisation, the planning and conducting of workshops, qualification profiles, and alignment issues; it also provides documentation of good practice and guidance on didactic questions.

ETH's curriculum development standards were determined using a participative approach involving workshops and consultation with those involved in teaching.

3 Stimuli for enhanced cooperation

The following issues have intensified the need for cooperation on curriculum development over the last few years.

3.1 Support of curriculum development projects

While departments who wish to revise a degree programme or develop a new one must follow mandatory steps (see Figure 1), they have much autonomy in how they shape the associated project. A dialogue at the curriculum development meetings (see Section 2) determines how much support the process requires; this can vary widely and involve anything from sporadic project management advice to intensive process supervision.

However, any guidance must stay up-to-date, and the curriculum development team is therefore dependent on continued cooperative relationships with project participants. Here the question arises as to how cooperation might be intensified. This is the more crucial because binding decisions regarding certain aspects of the process have to be made at meetings with the Vice Rector.

⁵ One of four groups in ETH Zurich's Educational Development & Technology (LET) unit (www.let.ethz.ch)

⁶ <https://ethz.ch/content/dam/ethz/common/docs/weisungssammlung/files-de/curriculumsentwicklung-rechtsetzung-lehre.pdf> (retrieved 1 July 2020)

⁷ <https://ethz.ch/content/dam/ethz/main/eth-zurich/education/policy/policies-curriculum-development-and-curricula-of-degree-programmes.pdf> (retrieved 1 July 2020)

⁸ <https://ethz.ch/content/dam/ethz/main/eth-zurich/education/policy/lehrpolicy-quality-EN/lehrpolicy-en.pdf> (retrieved 1 July 2020)

⁹ <https://ethz.ch/content/dam/ethz/main/eth-zurich/education/policy/lehrpolicy-quality%20EN/qualit%C3%A4t-lehre-en.pdf> (retrieved 1 July 2020)

¹⁰ <https://ethz.ch/de/die-eth-zuerich/lehre/innovedum/innovedum-fund.html> (retrieved 1 July 2020)

Curriculum development: Revision of a degree programme or development of a new degree programme

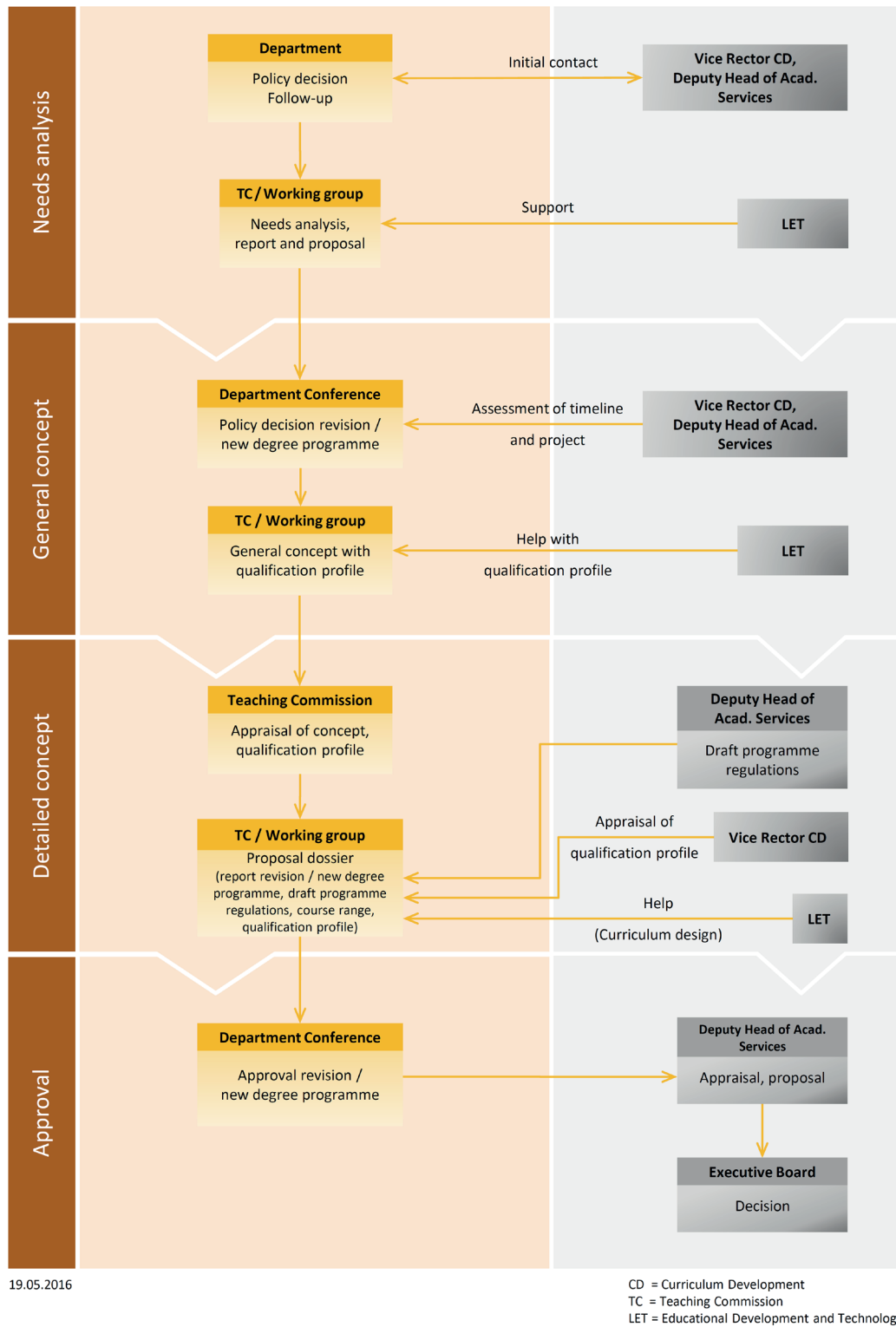


Figure 1.1: Two types of curriculum development process.¹¹
 Revision of a degree programme or development of a new degree programme

¹¹ <https://ethz.ch/en/the-eth-zurich/education/educational-development/curriculum-development/procedure-concepts.html> (retrieved 1 July 2020)

Curriculum development with minor changes to programme regulations

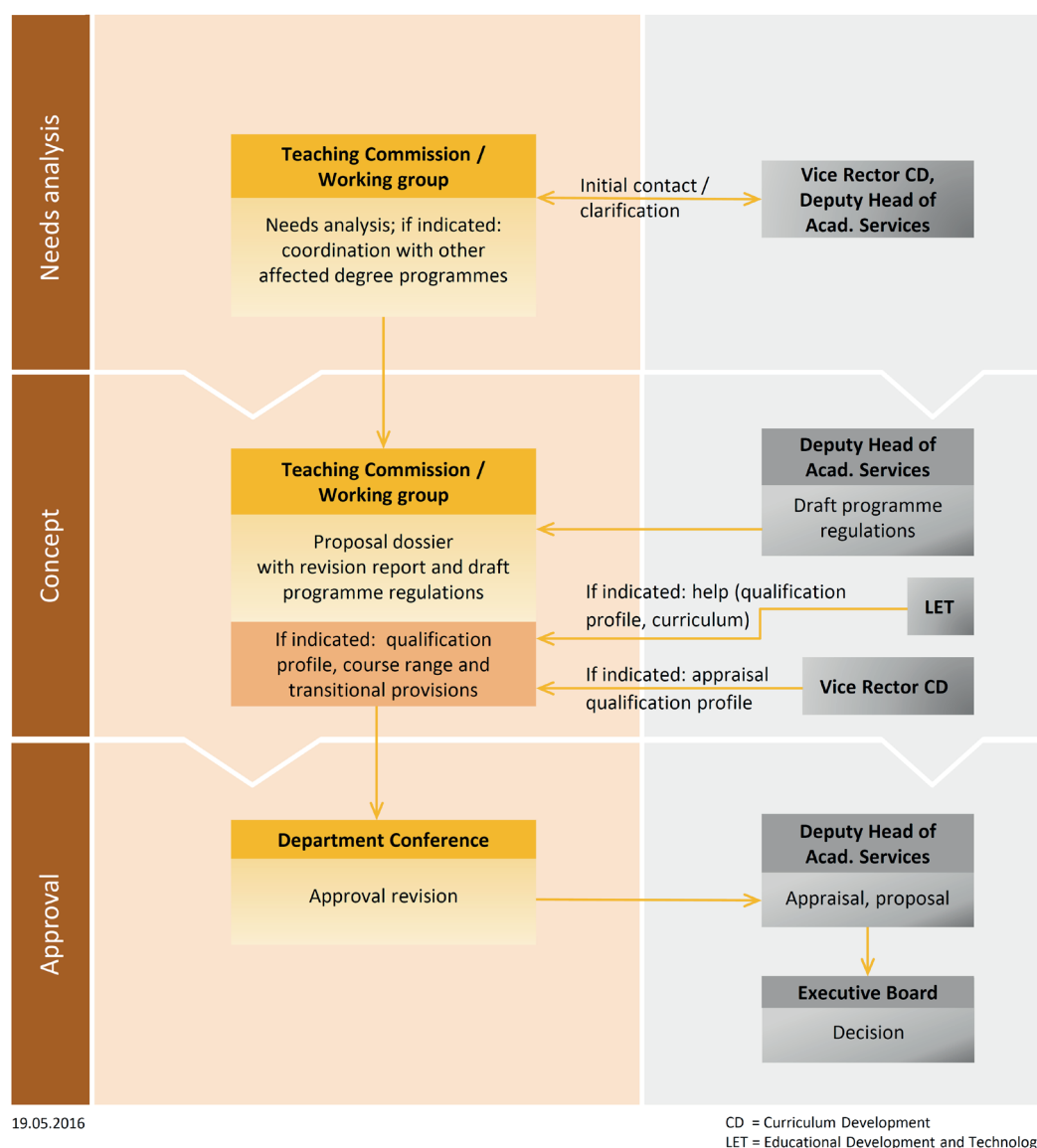


Figure 1.2: Two types of curriculum development process
Curriculum development with minor changes to programme regulations

3.2 Evaluation of curricula

Currently, evaluation of curricula draws primarily on departmental peer evaluation, assessment of individual courses, graduate surveys and data from controlling. However, such evaluations emphasise procedures implemented and academic results rather than the features of a curriculum as a whole. There is no defined process for evaluating revised and new curricula, and no obligation to conduct evaluation. However, some projects have been evaluated using specific methods such as the “rating conference”¹².

¹² <https://ethz.ch/de/die-eth-zuerich/lehre/lehrentwicklung/curriculumsentwicklung/evaluation-von-curricula.html> (retrieved 1 July 2020)

If curriculum development is to be evidence-based, systematic data collection regarding the progression and effects of projects is urgently required. Here topics of discussion would be which indicators to scrutinise in the context of evidence-based curriculum development (Knight, 2001), and how to foster more commitment in evaluating curriculum development processes.

3.3 Compliance with curriculum development policy

The above-mentioned policies regarding curriculum development⁷ are considered binding in meetings with the Vice Rector. In cases where central points have not been adhered to, however, it can be difficult to enforce compliance. Project requirements can be formulated if projects receive funding (through the Innovedum Fund¹⁰), but otherwise not.

The challenge is how to go about gaining broad support for mandatory curriculum development processes according to established policies regarding curriculum development⁷.

4 Potential scope

The issues referred to in Section 3 cannot be overcome via point-by-point intervention, but must consider the interplay of curriculum development structures, processes and cultures. Specifically, structures which support curriculum development processes could be extended and made more attractive by

- making the standards imposed upon funded curriculum development projects¹⁰ contractual and taking them into account in monitoring and the final report;
- addressing strategically important themes such as diversity, digitisation and cross-disciplinary competences;
- offering customised didactic support for faculty of new or revised degree programmes, e.g. in the form of lunchtime events, guidance sessions etc.

Processes can be improved by

- systematically documenting and regularly evaluating project experiences on a digital platform and making this information accessible;
- defining evaluation of curricula as a quality management process, such that it can become a standard which is accepted university-wide;
- amalgamating the evaluation experiences in the degree programmes with those of the central units;
- making a spectrum of evaluation methods available;
- having ETH curriculum development activities evaluated outside ETH.

To develop a culture of cooperation it is essential to include all actors in the above discussion, so that changes may be owned by all. This includes discussion of the curriculum development policies⁷ themselves where the inclusion of all stakeholders facilitates wider commitment.

Cooperation will also be deeper if support options and curriculum development findings are highly visible. This can be achieved by

- internal marketing of options, e.g. via a video on the website or articles in university publications with examples of curriculum development projects;
- publication of findings in the form of specialist articles, reports, blogs, conference presentations etc.

5 Conclusions

This article reflects on the curriculum development structures, processes and cultures at ETH Zurich, in the context of the fundamental changes affecting research, teaching and administration at universities today. The ETH Zurich curriculum development team believes its experiences to be relevant not only to curriculum development, but also to other areas of university-wide cooperation. Its main conclusions are:

- Cooperation at the university level is a complex field which cannot be sustainably modified via point-by-point interventions based upon monocausal ideas.
- To institute change processes at universities, especially those which involve teaching, the respective actors must be won over because universities are not constructively steered by hierarchies of command.
- In line with a participative approach, expertise within the university organisation must be aggregated and made useful to all.

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References

- Knight, Peter T. (2001). Complexity and Curriculum: A process approach to curriculum-making. *Teaching in Higher Education*, 6(3), 369-381.
- Nickel, S., & Ziegele, F. (2010). Karriereförderung im Wissenschaftsmanagement – nationale und internationale Modelle. Eine empirische Vergleichsstudie im Auftrag des BMBF, Band 1, Gütersloh: Centrum für Hochschulentwicklung.
- Schneijderberg, C., & Merkator, N. (2013). The New Higher Education Professionals. In B. Kehm & U. Teichler (Eds.). *The Academic Profession in Europe: New Tasks and New Challenges*, 53-92, Dordrecht: Springer.
- Whitchurch, C. (2008). Shifting identities and blurring boundaries: The emergence of third space professionals in UK higher education. *Higher Education Quarterly*, 62(4), 377-396.
- Wildt, J., & Wildt, B. (2015). Organisationsberatung intern – zur partizipatorischen curricularen Entwicklung von Studiengängen an deutschen Hochschulen. *Gruppendynamik und Organisationsberatung*, 46(1), 77-91.