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Proposal

Title: About the benefits of cooperative action in curriculum development

Abstract:
1. Problems and objectives
The development of curricula sets the foundation for the quality of study and the success of a degree programme. Challenges in curriculum development arise primarily from conflicting goals and different levels of information among the stakeholdes within the university.
2. Methodical approach
On the basis of case studies (Ruhr-University Bochum and University of Greifswald), the authors argue for an integrated approach, starting from the intended curriculum to the realized university degree programme. The focus is on the process design, the facilitated division of tasks and participation of the relevant stakeholders as well as their reflection on their role in interaction.
3. Results and findings
The quality and sustainability of the development of study programs is decisively influenced by the the facilitated division of tasks and participation the same priority given to the implementation of the well-defined process phases.

Key words: University didactics, curriculum development, quality assurance, co-creation of knowledge, study programmes, university administration

Text of paper:

1. Introduction

The Universities of Bochum and Greifswald were among the first universities in Germany to integrate reforms of establishes degree programs in an overall concept and to consider them as an institutional task within the framework of the "Modularisation" pilot programme (Bohn et al. 2002) launched by the Bund-Länder Commission for Educational Planning and Research Promotion (BLK).

Even at the above-mentioned universities, which dealt with study reform issues at an early stage and across all disciplines, knowledge of higher education didactics and of formal requirements for curricula is disparate. The systematic interaction of different stakeholders (Fung, 2017, Lippold 2005, p.9), a balanced internal division of responsibilities (Fritsch, Glawe & Kuhnhenn, 2013, Woschnack, Buff, Walter, 2016, pp. 79-84), a qualified mediator role (Niethammer, Schöb & Schrader, 2017) and the guarantee of certain processes (Brahm & Jenert, 2013; Walkenhorst 2017) are regarded as suitable way to bring together their expertise.

The term curriculum in the following refers to the teaching and learning syllabus of a degree program based on a theory of learning and teaching and is oriented towards learning outcomes and learning progress. Curriculum development is therefore the process of developing or reforming a curriculum. By course design the authors mean the framework of a curriculum, defined in the respective university context. The term program development emphasises the procedural steps. In addition to curriculum development in the narrower sense, these also include committee advice, accreditation, preparation and commencement of studies and various feedback mechanisms.

2. Diversity of information

In the development or reform of curricula, a decisive course of action is set for the quality of study, the possibility of completing the studies within the given time and thus for the success of a degree program. A variety of subject-specific, structural and legal framework conditions as well as pedagogical considerations are relevant to the process of curriculum development. These can be summarised under the headings of orientation on learning outcomes and structural prerequisites.

Orientation on learning outcomes is characterised by an orientation of the teacher to the needs and possibilities of the learners. This has its origin in higher education didactic findings and concepts. The shift from teaching to learning, deep learning, student engagement and constructive alignment are to be mentioned here above all (illustrated in an entertaining and instructive way in the teaching film "Teaching Teaching & Understanding Understanding" produced by the University of Aarhus in 2006). In the authors' opinion, the orientation towards learning outcomes as the foundation of university teaching, as it became binding with the general educational goals of university education in Europe (Dublin Descriptors 2003/2005), has decisively influenced the processes and results of curriculum development.

In Germany, there are codified requirements for study programs in the Higher Education Acts of the Länder, the "Strukturvorgaben" (structural requirements) of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder (2003, 2010) (KMK) and the guidelines of the Accreditation Council for the Accreditation of Study Programs (2013).

Fakultätentage (overall department conferences), which set subject-specific standards for qualification goals across Germany, have the specific role to give the universities and lecturers advice for the implementation of Bachelor's and Master's programs. One example is the handbook of the Conference of the Departments of Physics (2010). At the European level, the TUNING project (Tuning Educational Structures in Europe) and the follow-up projects to the European Association of Institutions in Higher Education (EURASHE) such as Measuring and Comparing Achievements of Learning Outcomes in Higher Education in Europe are to be highlighted as examples.

The authors estimate that the main conceptual contributions and hands-on reports on curriculum development issues in connection with the Bologna reform in German-speaking countries had been made by 2008 at the latest. Jenert (2014) states that the design of study programs at universities receives the necessary attention and that a large number of documents are available for the design of Bachelor's and Master's programs. Almost all higher education institutions in Germany, Austria and Switzerland have corresponding manuals for their teaching staff.

Starting from this, the question arises as to the significance of the wide range of information for the individual design of a degree programme. According to the authors, existing solutions and standards can only be used to a limited extent in the non-standardised and complex process of curriculum development. This is also due to the tendency towards diversified study programmes desired by higher

education policy. At best, good practice solutions can provide inspiration. In our opinion, this opens up new opportunities for local expertise in higher education didactics.

3. Curriculum Development and Administrative Practice

Another aspect that needs to be taken into consideration is the overall institutional responsibility for curriculum and program development. The Leuven Communiqué (2009) takes stock of the Bologna reform: "Curricular reforms are to be understood as continuous processes that produce high-quality, flexible educational pathways that are increasingly tailored to individual needs" (ibid., 2009). (ibid., p.4). The continuing importance of these aspects is underlined by recently published recommendations and manuals. According to the “Wissenschaftsrat” (Council of Science and Humanities) (2017), curriculum development should be seen and maintained as a joint and permanent scientific task. Walkenhorst (2017, p. 2) states: „An Ideen mangelt es in der Regel nicht, aber häufig an einer systematischen Vorgehensweise, um hieraus ein wettbewerbsfähiges Angebot zu entwickeln. (As a rule, there is no lack of ideas, but there is often a lack of a systematic approach to developing a competitive range of courses from them.)"

In addition, all system-accredited universities must provide quality manuals for the development and evaluation of degree programs. The involvement of stakeholders and external experts needs to be documented; decision-making processes within the framework of academic self-administration must be established and organised. The implementation of the curricula needs to be observed and there needs to be a feedback of the evaluation results.

Curriculum development takes place primarily with regard to internal habits, scientific standards and cultural practices in the department (Jenert 2014). Teachers involved in the development of the degree program often have a rather disparate knowledge of higher education didactics and higher education law requirements. The authors agree with Brahm and Jenert (2013) that the writing of learning outcomes is often a pure exercise, and usually not preceded by a discussion of the learning outcomes. Experts in higher education didactics and other stakeholders are often only involved when a draft curriculum is ready.

It is also common practice to check whether the curriculum complies with the general requirements of higher education law, capacity law and other legal frameworks after codifying in the study and examination regulations. Anyhow, study and examination regulations are crucial for structurally high-quality teaching and study program design (Classen, 2013). The higher education administrations have a veto right for the ratification. References to capacity requirements, legal compliance or examination administration provide undeniable reasons for using the veto right. In the authors’ experience, questions of constructive alignment and the coherence of the curriculum are of less importance for their decision. Thus, the university administration is regarded rather as a testing authority than as a helpful partner.

It is efficient and beneficial to involve the university administration at an early stage when the intended curriculum is transferred into the curriculum codified in the study and examination

regulations. In this way, the processes of program development can be shortened and, from the teachers' point of view, frustration and extra work following a negative review can be avoided. However, this usually means that only tried and tested forms of teaching and learning that do not pose any capacity or legal problems are used. The types of examinations are standardised as far as possible in an effort to ward off possible complaints.

The conversion of process maps can be regarded as a necessary condition for high-quality curriculum development (Walkenhorst, 2017). Pure administrative work is reduced and the quality of the curricula to be developed increased. However, it must also be stated that administrative action and the pursuit of legal compliance often dominate the curriculum development processes and that the tried and tested is inherited. The driving force is the joint attempt of faculties and university administration to obtain the necessary ministerial approval or successful accreditation.

Table 1: Dominance of administrative action in curriculum development

CONTENT DESIGN OF THE STUDY PROGRAMS BY TEACHING STAFF	VS.	ADMINISTRATION OF EXAMINATIONS AND STUDY ORGANIZATION
• Structuring of curriculum development through "perceived" accreditation requirements • Partial use of tools for writing module manuals • Restrictions on curriculum development due to a lack of information, particularly on legal issues	<	• Review of examination and study regulations with regard to structural requirements, capacity regulations and legal certainty, in particular with regard to the establishment of new study programs and in relation to accreditation processes. • University didactics hardly relevant
	>	

In addition, there seems to be structural barriers to the use of theories of higher education didactics by lecturers and in units that support the development of degree programs in higher education administration, as well as a lack of information. Conversely, this also applies to knowledge in higher education didactics on legal questions and questions of capacity law. There are promising approaches to enrich curriculum development and program development with a higher education didactic perspective. One example is the "Satelit Programm" at KIT (Klink, Schostok & Rietschel, 2016). Another approach would be the didactic qualification of relevant stakeholders in higher education administrations.

4. Designing an integrative approach

With the aim of establishing an integrative approach for the development of curricula, the authors tested this approach for the first time at the 46th Annual Conference of the German Association for Educational and Academic Staff Development at the TH Cologne in the workshop "Higher Education Didactics, Curriculum Development, Course Design" with 29 participants.

From a methodological point of view, case studies and small group work with a change of perspective were used to test the integrative, process-oriented approach.

As the survey on the previous knowledge of the participants showed, they concentrated on didactic knowledge of higher education such as the knowledge of learning taxonomies. A striking feature was the high proportion of participants who indicated only a low to medium level of knowledge of the relevant legal requirements for higher education institutions. Participation in curriculum development projects appears to be sufficient. It can be assumed that the experience background of the participants here is diametrically opposed to a thematically relevant advanced training event aimed at members of the higher education administrations.

Characteristics of the integrative approach

In the simulation, the participants in each small group were given specific roles: University/department heads, lecturers, teaching experts, quality management employees. The work assignments of the working groups were each oriented to a relevant process step in the development of the degree program: curriculum development in the department, committee advice, accreditation and preparation/commencement of studies (Table 2).

Table 2: Process steps and stages in program development

Procedural steps in the development of a degree program	Curriculum development in the department	Committee advice	Accreditation	Preparation and commencement of studies
Stage of curriculum development	Intended curriculum	Codified curriculum	Implemented curriculum	Realised curriculum

Curriculum development in the department / Intended curriculum

At this stage, the enrichment of the higher education didactic expertise at the subject level appears to be particularly relevant. The information of the program managers about requirements and good practices has to be ensured, the experts on site have to be empowered and supported.

The success of this process step depends on the participatory approach of all participants (teachers, head of department, teaching experts, quality management). The study program must be jointly developed and supported. Responsibilities have to be defined early in the process.

Committee advice

The central question for committee consultation is to what extent university didactic arguments and advice from quality management are taken into account in the development and ratification of examination regulations, or to what extent university didactic expertise and evaluation results are provided in institutional review processes for study programs e.g. the review of module manuals.

Accreditation

Accreditation processes are often the overlap of the interaction of teachers and administration: Open, transparent and equal communication is important. The balance between subject-specific content responsibility of the teachers and central procedural responsibility have to be maintained.

This process step is successful from the point of view of the participants in the simulation if the study program is successful accredited with few to no requirements. In the accreditation process, the benefit should be greater or equal to the effort. Those involved in the process should be satisfied with the result. The course of studies should be designed in a didactically clever way and teachers should have learned something in the process.

It has to be ensured that a sufficient number of feedback loops is realised. University didactic and quality management have to work together in a coordinated manner and should not act independently of each other.

Preparation and commencement of studies

This process step includes student counselling, admission, enrolment, course planning, etc. Information about a new or changed degree program has to be sent in time to the student secretariats and the student counselling services. In some casess, deadlines have to be met. The new modules have to be added in good time to the range of courses offered by the faculty and need to be integrated into the examination administration system. Here, too, deadlines may have to be observed which may delay the start.

The assumption of the authors that this so far rather neglected process step is of great importance is confirmed by the participants of the simulation. The basic prerequisite for the success of this process step is a regular exchange of university/department heads, teaching experts, lecturers responsible for a degree program and representatives of quality management, student secretariat, student advisory service and examination office.

Criteria for successful curriculum development

As a further result of the first simulation of the integrative approach, criteria for a successful study program were identified. On the basis of the distinction between intended, codified, implemented and realised curriculum, the generated criteria are systematically grouped. Overall, the result is a consistent picture that appears suitable for curriculum development (Table 3).

Table 3: Criteria for a successful study program (selection, generated by N=29 participants* in the workshop "Univesity Didactics, Curriculum Development, Course Design" at the 46th Annual Conference of the German Association for Educational and Academic Staff development at the TH Cologne)

Intended curriculum	**Codified curriculum**	**Implemented Curriculum**	**Realised Curriculum**
Objectives of the programme formulated concisely	Module structure and module objectives coordinated with study goals	Well-executed, successful implementation	Competences of the graduates
	Consistency		
Orientation on competences	Coherence of structure and organisation of the program	Possibility to complete the studies in the given time	
	Coherence of study objectives, modules and examinations	Discursive, participatory	academic success
	Accreditation possible	Internal Goods of Teaching and University Didactics (Kreber cited n. Reis 2017)	
	legally validated, but also flexible study/examination regulations		

5. Theses

From the previously described situation and the results of the simulation, the authors derive seven theses with regard to strengthening an integrative approach and the role of university didactics and quality management in curriculum development:

1. Program development has to be regarded as an interaction between teachers, faculty/university management, university didactics and quality management. For this purpose, it is important to have a regular, cross-status group exchange that takes an integrative look at all steps up to the start of a degree program. An isolated work on individual process steps is just as ineffective as the dominance of formal/legal requirements in the process.
2. Knowledge of higher education law and other curriculum requirements is still diverse, as is knowledge of learning taxonomies or the orientation on learning outcomes by teachers and

higher education administrators. Since both have effects on the development of a curriculum and the process, a procedure that is merely standardised in terms of content and form will not suffice. Therefore, the exact consideration of each individual case should not be neglected.

3. The development process itself should consider all process steps and not be restricted to single steps for reasons of time or resources. The binding clarification of responsibilities and schedules minimizes possible conflicts and ensures process progress. The expertise of experts from the fields of university didactics, quality management, university law, student counselling, examination offices, student services, etc. must be included in a timely and participatory manner. In this way, their suggestions or ideas can be taken into account right from the start in the development process and possible conflicts of interest are to avoid. Time windows for potential feedback need to be considered from the outset and a continuity of the participants should be ensured.
4. The interface function between the actors should deserve special attention, as the individual actors change according to the cycle of academic self-administration.
5. The culture of the individual university should be or should become so transparent, discourse-oriented and respectful that a curriculum development does not have to be carried out "secretly". This is the only way the expertise of teaching experts or the members of the quality management will be helpful in terms of content and methods and less as a controlling authority. This also includes giving the departments "as much freedom as possible on their way to competence orientation and supporting them in this way" (Brahm & Jenert 2013, p. 7).
6. Curriculum development must not exclude the development of appropriate formats for the examinations. The coherence of learning outcomes and the types of examinations must not stand behind the dictates of legal certainty.
7. Universities have a great deal of data (evaluation, university statistics, examination statistics) which must be regularly used in curriculum development. Striking features, such as an unusually high failure rate in a certain module or a comparatively high loss of students or inadequately defined student workload, have to be identified. The achievement of the qualification goals need to be monitored as well in order to promote a continuous curriculum development beyond the occasional curriculum reforms.

In the sense of the architectural metaphor "form follows function", institutional, technical and university didactic goals can only be the starting point for successful curriculum development; purpose and design must also form a balanced unit.

References:

Akkreditierungsrat (2010, 2013). Drs. AR 48/2013. Zur Auslegung der ländergemeinsamen Strukturvorgaben. Beschluss des Akkreditierungsrates vom 12.02.2010, zuletzt geändert am 03.06.2013, Zugriff am 30.04.2018, http://www.akkreditierungsrat.de/fileadmin/Seiteninhalte/AR/Beschluesse/AR_Auslegung_Laendergemeinsame_Strukturvorgaben_aktuell.pdf.

Biggs, J.B.; Tang, C. (2007). Teaching for quality learning at university: What the student does. 3rd ed. Maidenhead: Open University Press.

Bohn, A.; Kreykenbohm, G.; Moser, M.; Pomikalko, A. (2002). Modularisierung in Hochschulen. Handreichung zur Modularisierung und Einführung von Bachelor- und Master- Studiengängen. Erste Erfahrungen und Empfehlungen aus dem BLK-Programm "Modularisierung". (Materialien zur Bildungsplanung und zur Forschungsförderung; 101). Bonn : BLK 2002.

Brahm, T.; Jenert, T. (2013). Herausforderung der Kompetenzentwicklung in der Studienprogrammentwicklung. ZFHE Jg.8/ Nr. 1, 7-14.

Brinker, T.; Tremp, P. (2012): Einführung in die Studiengangsentwicklung. In: T. Brinker & P. Tremp (Hg.), Einführung in die Studiengangsentwicklung, Blickpunkt Hochschuldidaktik, Bielefeld: wbv-Verlag, S. 9-12.

Classen, C. D. (2013). Qualitätssicherung durch gute Studien- und Prüfungsordnungen, In: W. Benz, J. Kohler & K. Landfried (Hrsg.), Handbuch Qualität in Studium und Lehre, Raabe Verlag, Loseblattsammlung.

Cursiefen, St.; Schröder, M. (2012). Kompetenzorientierung im Studium. Vom Konzept zur Umsetzung (nexus impulse für die Praxis Nr. 1). Hochschulrektorenkonferenz: Projekt nexus, Zugriff am 30.04.2018, https://www.hrk-nexus.de/fileadmin/redaktion/hrk-nexus/07-Downloads/07-02-Publikationen/impulse_Onlineversion.pdf.

Dublin Decriptors. Zugriff am 30.04.2018, https://www.hrk.de/fileadmin/redaktion/hrk/02-Dokumente/02-03-Studium/02-03-02-Qualifikationsrahmen/dublin_descriptors-1.pdf.

Gröblinghoff, F. (2015). Lernergebnisse praktisch formulieren (nexus impulse für die Praxis Nr. 2): Hochschulrektorenkonferenz: Projekt nexus, Zugriff am 30.04.2018, https://www.hrk-nexus.de/fileadmin/redaktion/hrk-nexus/07-Downloads/07-02-Publikationen/Lernergebnisse_praktisch_formulieren_01.pdf.

Fritsch, A.; Glawe, P.; Kuhnhenn, M (2013). Hochschulinterne Rollenteilung und Gewährleistung von Studienqualität. Das Greifswalder Modell der Qualitätssicherung durch die Balance von Fördern und Bewerten. In: W. Benz, J. Kohler & K. Landfried (Hrsg.), Handbuch Qualität in Studium und Lehre. Raabe Verlag, Loseblattsammlung.

Fung, D. (2017). A Connected Curriculum for Higher Education. London College London: UCL Press.

Jenert, T. (2014). Implementing Outcome-Oriented Study Programmes at University: The Challenge of Academic Culture. ZFHE Jg.9/ Nr. 2, 1-12.

Klink, K., Schostok, P., Rietschel, U. (2016). Vom Satellit zum Fachtandem – Hochschuldidaktik in die fachspezifische Lehrkultur transportieren (Beitrag im Disqspace). 45. Jahrestagung der Deutschen Gesellschaft für Hochschuldidaktik (dghd): „Gelingende Lehre: erkennen, entwickeln, etablieren", 21.-23. September 2016, Bochum.

Konferenz der Fachbereiche Physik (2010). Zur Konzeption von Bachelor- und Master-Studiengängen in der Physik. Handreichung der Konferenz der Fachbereiche Physik (KFP) beschlossen von der Plenarversammlung der KFP am 8. November 2010 in Berlin.

Kultusministerkonferenz (2003, 2010). Ländergemeinsame Strukturvorgaben für die Akkreditierung von Bachelor- und Masterstudiengängen. (Beschluss der Kultusministerkonferenz vom 10.10.2003 i.d.F. vom 04.02.2010). Zugriff am 30.04.2018, https://www.kmk.org/fileadmin/Dateien/veroeffentlichungen_beschluesse/2003/2003_10_10-Laendergemeinsame-Strukturvorgaben.pdf.

Leuven-Kommuniqué (2009). Bologna-Prozess 2020 – der Europäische Hochschulraum im kommenden Jahrzehnt. Kommuniqué der Konferenz der für die Hochschulen zuständigen europäischen Ministerinnen und Minister, Leuven/Louvain-la-Neuve, 28. und 29. April 2009. Zugriff am 30.04.2018, https://www.hrk.de/fileadmin/redaktion/hrk/02-Dokumente/02-03-Studium/02-03-01-Studium-Studienreform/Bologna_Dokumente/Leuven_communique_2009.pdf.

Lippold, S (2005). Zusammenspiel im Veränderungsprozess. Oder: Wie verwaltet man eine Reform. In: Bologna, Berlin, Bergen. Von der Vision zur Praxisreife. Beilage DUZ vom 23.05.2005, S. 9.

European Association of Institutions in Higher Education (EURASHE). Measuring and Comparing Achievements of Learning Outcomes in Higher Education in Europe. Zugriff am 30.04.2018, https://www.eurashe.eu/projects/calohee/.

Niethammer, C.; Schöb, S.; Schrader, J. (2017). Curriculumsentwicklung im Dialog als professionelle Herausforderung. Eine nutzensinspirierte Untersuchung personaler und organisationaler Erfordernisse. In R. Kordts-Freudinger, D. Al-Kabbani & N. Schaper (Hg.) Hochschuldidaktik im Dialog (Blickpunkt Hochschuldidaktik 131), 213-232.

Reis, O. (2017): Welche Praxis brauchen Werte in der Hochschulbildung? Keynote auf der 46. Jahrestagung der Deutschen Gesellschaft für Hochschuldidaktik, TH Köln, 10.03.2017. Zugriff am 30.04.2018, https://www.youtube.com/watch?v=B_QZhk2-lUk.

Ruhruniversität Bochum (o.J.). „Lehre Laden“ Downloadcenter an der Ruhr-Universität Bochum, Loseblattsammlung. Zugriff am 15.11.2017, https://dbs-lin.ruhr-uni-bochum.de/lehreladen/planung-durchfuehrung-kompetenzorientierter-lehre/lehr-und-lernziele/.

Schaper, N. (2012). Fachgutachten zur Kompetenzorientierung in Studium und Lehre, (unter Mitwirkung von O. Reis, J. Wildt, E. Horvarth, E. Bender): Hochschulrektorenkonferenz: Projekt nexus, August 2012. Zugriff am 30.04.2018, https://www.hrk-nexus.de/fileadmin/redaktion/hrk-nexus/07-Downloads/07-02-Publikationen/fachgutachten_kompetenzorientierung.pdf.

Schröder, M. (2015). Kompetenzorientiert prüfen. Zum Lernergebnis passende Prüfungsaufgaben (nexus impulse für die Praxis Nr. 4). Hochschulrektorenkonferenz: Projekt nexus. Zugriff am 30.04.2018, https://www.hrk-nexus.de/fileadmin/redaktion/hrk-nexus/07-Downloads/07-02-Publikationen/HRK_Ausgabe_4_Internet.pdf.

Tuning Educational Structures in Europe. Zugriff am 21.11.2017, http://www.unideusto.org/tuningeu/what-is-tuning.html.

University of Aarhus (2006). Teaching Teaching & Understanding Understanding. Zugriff am 21.11.2017, https://www.youtube.com/watch?v=iMZA80XpP6Y&list=PLUvh8nBV_eO9ma_DggZiSGLnKb9hBZ5yO

Walkenhorst, U. (2017). Studiengangsentwicklung – von der Idee zum Curriculum (nexus impulse für die Praxis Nr. 13). Hochschulrektorenkonferenz: Projekt nexus.

Wissenschaftsrat (2017). Strategie für Hochschullehre, Positionspapier des Wissenschaftsrats vom 28.04.2017. Zugriff am 30.04.2018, https://www.wissenschaftsrat.de/download/archiv/6190-17.pdf.

Woschnack, U.; Buff, E.; Walter, A. (2016). Auftakt zum Prozess einer partizipativen Studiengangsentwicklung am Beispiel der AGROfutur der ETH Zürich, in HSW 3/2016, 79-84.

Zervakis, A. (2008). Zur Genese des Kompetenzzentrums. In: Hochschulrektorenkonferenz (Hrsg.): Erfahrungen aus den Hochschulen: Bologna in der Praxis, Bielefeld: Bertelsmann, 11-20.