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# University-wide, top-down curriculum reform at a Finnish university: perceptions of the academic staff

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## ABSTRACT

This study examines academic staff's perceptions of a university-wide, top-down curriculum reform in terms of the management of the reform, the support provided by the university's administration, and the utilisation of the university's guidelines. Differences between faculties are also scrutinised. The study was conducted at a multidisciplinary public research university in Finland using the survey method. The data ( $n = 394$ ) consisted of academic staff's responses to multiple-choice and open-ended questions. Correlation coefficients, exploratory factor analyses, and one-way analysis of variance (ANOVA) were utilised to analyse the quantitative data. Responses to the open-ended questions were analysed using thematic analysis. The academic staff expressed discontent with the management and support provided by the university even though they had proceeded according to the university's guidelines. Significant differences concerning the perceived management and support and reported utilisation of the university's guidelines were found between the personnel of different faculties. The results indicate that a top-down curriculum reform creates conflict between the academics' own ideas regarding curriculum planning and those of the senior management and university administration.

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Curriculum planning; curriculum reform; higher education; academic staff; top-down management

## Introduction

Curriculum plays a central role in effective teaching and educational change in higher education (HE) (Barnett and Coate 2005; Khan and Law 2015). Curricula have also been strongly linked with learning outcomes in recent discussions among different interest groups, such as national governments and HE policy forums (see Ahola and Hoffman 2012; Davies 2017; Jones and Killick 2013). Several global drivers have been acknowledged to influence curriculum reformation: massification of HE; pressure from industries for employees to have advanced skills; competition between HE institutions; internationalisation; digitalisation; increasing quality in teaching; and a continuous need for

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improvement, growth, and innovation (Henderikx and Jansen 2018; Patria 2012; Shay 2016). All of these drivers include opportunities for development but also a risk of inertia and defensiveness among the academics, who are key persons in curriculum work in practice (Rebora and Turri 2010). The literature also refers to academics' minimal consideration of the external drivers affecting their curriculum work (e.g. social trends, government programmes, industry factors, and institutional leadership, Khan and Law 2015).

The development of curriculum is an ongoing process of planning, implementing, and assessing, which involves both the academics and management of educational institutions in different ways due to their positions and responsibilities (Shams 2019). For academics, this process can be realised at a minimum as single course developments with minor changes, or it can involve them broadly in large-scale reforms linked to the mission, vision, and strategy of an entire institution (Khan and Law 2015). In the latter case especially, the success of the curriculum development depends not only on a single academic's work but also on conducive, dynamic, and supportive management, which is perceived as essential in grass-roots level work in departments (Annala and Mäkinen 2013). In this regard, different approaches to educational change management – top-down (management-led) and bottom-up (generated by the staff's initiatives) (Brown 2013) – have been discussed from the perspectives of academics. The literature suggests that tensions between academics and management typically ignite from the pressure faced by HE institutions when considerable changes in education have to be made simultaneously with an increase in the role of the university's administration in steering the developmental work (Kivistö 2018). Even in these situations, however, the negotiations of the details concerning the change and decisions about its implementation take place among the grass-roots actors in the faculties, departments, and units. To better understand curriculum development from the perspective of the academics and to develop management practices, the academics' views of the process should be heard.

Thus, in the present study, we examine the perceptions of the academic staff of a university-wide curriculum revision process that was, for the first time, initiated and directed by the university's administration. Although differences in learning and teaching cultures and their approaches have been reported between different fields (e.g. Lindblom-Ylänne et al. 2006; Parpala et al. 2010; Ylijoki 2000), teachers' perceptions of curriculum development and the management thereof have been less examined across disciplines. Therefore, the present study investigates and compares academics' perceptions of curriculum reform in different faculties.

## **Approaches to educational change management at university**

HE institutions differ from other institutions in terms of institutional governance, management, and leadership (Patria 2012). Traditionally, universities have been characterised as loosely coupled organisations where connections between different professional groups are loose and the academic staff are autonomous (Eteläpelto et al. 2014; Patria 2012). However, the organisational decision-making processes of universities have recently become more top-down globally (Leisyte 2016). Universities have become like corporate organisations, with accountability demands, and are more tightly coupled than before (Eteläpelto et al. 2014).

Brown (2013) presents two typical types of approaches to educational change management: top-down (management-led) and bottom-up. These approaches differ in terms of leadership, championing, planning, purpose, institutional culture, and support offered to staff during changes (Cummings et al. 2005). In a top-down approach, the leaders of change are the administrative management, who use their managerial positions to drive the changes, typically with a strong change agenda. In a bottom-up approach, leadership comes from academic staff who are personally inspired and inspire others to make changes. Planned change is characteristic of the top-down approach. It is directed by management through university-wide strategic and operational plans. In contrast, in a bottom-up approach, change is often emergent and organic. The purpose for change can also be seen differently by those involved. Cummings et al. (2005) observed that administrative managers are more influenced by broad university drivers, such as the university's financial situation or a need for structural changes. In a bottom-up approach, academic staff is thought to be driven by more specific factors, such as personal interests or student feedback. Moreover, the institutional culture of the top-down approach is more bureaucratic, centralised, and directed than in a bottom-up approach, which, in turn, is more decentralised and collegial in nature. In the former, support for change is provided through centrally allocated funding, whereas in the latter, the support is provided through voluntary resources (Cummings et al. 2005).

Several researchers (e.g. Annala and Mäkinen 2013; Kohtamäki 2019; Lachiver and Tardif 2002; Skordoulis 2012) underline successful curriculum change as a process that may require both top-down and bottom-up strategies, in which strong leadership accepted by the faculty and dialogue among the leaders and academics are needed. In large-scale curriculum renewal, Lachiver and Tardif (2002) perceive as important the kind of management that has the ability to engage teachers in pursuing objectives defined by an educational vision and guiding principles; however, they add that this engagement arises from a collective acceptance of the need for change.

### **Curriculum reform from the perspective of academics' work**

Curriculum reform is a typical embodiment of an educational change, which in general is implemented at the whole university level. In this context, many academics perceive that the educational changes are imposed on them with inadequate consideration of their beliefs, and the values that have traditionally guided academic work (Locke, Cummings, and Fisher 2011). For example, there are tensions between teaching and research with regard to institutional rewards and values creating conflict concerning academics' time and priorities in the research-focused work (Scott and Scott 2016).

Despite the arrival of the managerial culture to HE institutions, it seems that traditional professional values have survived among academics (Shams 2019). Since university curricula reflect the culture of each discipline (Annala 2017), changing curricula can be a sensitive topic that provokes political, philosophical, and educational considerations (Pegg 2013). The success of curriculum reform has been described as a balanced relationship between the agencies of academic people and structures (Annala 2017; see also Jääskelä, Häkkinen, and Rasku-Puttonen 2017). Related to engineering curriculum work, Lachiver and Tardif (2002) report a shift in academics' work from having a high degree of individual autonomy and academic freedom to a situation with a very high level of interdependence. It appeared that all educational activities had to fit into a

continuum of activities, and each faculty member had to explicitly take into account what was upstream and downstream of his/her own interventions.

From the perspective of academics, the top-down and bottom-up approaches in curriculum reform have different impacts on their work. Historically, universities have held an autonomous position in organising their teaching (Barnett 2000), and disciplines have functioned as long-standing organising structures not only in knowledge production but also in its transmission (Millar 2016). According to Skordoulis (2012), in a top-down approach, many staff feel overworked and under-appreciated due to processes they see as overly bureaucratic and irrelevant. However, in organisational change processes in general, the *transition state* can include a disturbance of the equilibrium, low stability, emotional stress, and undirected, high levels of energy (Fremerey 2006). This state can create insecurity and lead to resistance that is not necessarily well acknowledged (Lachiver and Tardif 2002).

The curriculum in HE can be seen as a communal process where different mindsets are reconciled, and shared interpretations of teaching, learning, and the nature of knowledge are searched (Lindén, Annala, and Mäkinen 2016). According to Annala and Mäkinen (2013), academic communities should aspire to creative, research-based approaches to curriculum development, just as they do with their disciplinary work. Embracing curriculum development as a shared responsibility among faculty and administration can lead to widespread collaboration that can promote organisational change (Oliver and Hyun 2011).

Successful curriculum change is perceived as challenging (Lachiver and Tardif 2002). Much discontent exists in academia concerning the ways in which HE institutions are governed (Locke, Cummings, and Fisher 2011). When the leaders of a change are administrative managers, their positions enable them to drive the changes with a planned agenda, common goals, guidelines, and recourses (Cummings et al. 2005). Fremerey (2006) has, however, noted that academic staff does not always fully identify with the university as their home organisation and that their resistance to change may result from the thought that an organisational change does not concern them or can be perceived as a threat to their autonomy. To succeed, a top-down managed change may require the integration of staff's personal goals with the changes by creating opportunities for shared ownership in the process (Patria 2012).

In an HE institution, as a loosely coupled organisation, smaller operational units, such as faculties, have stated that they have better abilities to recognise a need for change in their environments than the institution does (Patria 2012). Because of universities becoming more tightly coupled, academic work and identities are undergoing transformation (Eteläpelto et al. 2014; Leisyte 2016). Traditionally, academic communities have had ownership of developing teaching, and setting the goals and ways of acting in curriculum work, which naturally offer teacher-researchers a sense of being influential and allow them to organise changes in a less bureaucratic way.

### **Educational strategies and research-based developmental themes framing curriculum reform**

As a communal process, the curriculum in HE can also be seen as an intersection of educational policy, societal target setting, and the educational practices adhering to them

(Lindén, Annala, and Mäkinen 2016). Along with global, international, and national drivers, research on teaching and learning provides material and raises demands on curriculum development in HE. For example, the massification of HE means increasing numbers of students from diverse backgrounds with different abilities and needs. At the same time, trade and industry expect universities to produce multi-skilled graduates for workforce competitiveness. In many countries, graduate employment has become a criterion for public funding (Tynjälä et al. 2021). As a result, HE institutions compete for the best students, staff, and innovations. For these reasons, increasing attention has been paid to the quality of teaching and the development of pedagogy and student wellbeing (Gunn and Fisk 2013; Hérard and Roseveare 2012). For example, the need to develop activating and interactive pedagogy, diverse assessment and feedback practices, and versatile forms of teaching and learning that serve the nurturing of generic skills (Virtanen and Tynjälä 2019) have been widely recognised. A global trend has been to create fewer, broader Bachelor's degrees and interdisciplinary and competency-based degree programmes. Universities are also promoting internationalisation, digitalisation, and higher-quality research (Annala et al. 2020; Henderikx and Jansen 2018; Patria 2012; Shay 2016).

Some issues related to the global trends affecting universities' strategies have stimulated debate among academics. For example, with regard to interdisciplinary programmes, it has been questioned whether interdisciplinary knowledge is more inadequately classified and framed than disciplinary knowledge (Millar 2016). Similarly, the view of employability as a purpose of HE seems to differ with disciplines' degrees of alignment with specific labour market segments. For example, Sin, Tavares, and Amaral (2019) report that the Management and Computer Engineering academics, from areas with relatively clear correspondence with labour market professions, accepted learning for employability, but the Arts academics, from areas with blurred labour market destinations, favoured academic learning as a purpose of HE. Furthermore, implementing technologically supported pedagogical solutions and learning environments is seen as both sustaining and disrupting HE (Marshall 2010).

## Context of the study

The present study was conducted at a Finnish public research university (7 faculties, 15,000 students; 1660 academics). Like all Finnish HE institutions, the university is autonomously responsible for the content and development of the education it offers. However, it is steered and financed by the Finnish Ministry of Education and Culture and the strategic objectives set by the Finnish government. In its strategy, the university declares its mission as: 'Enabling excellence for the future'. The education objectives in the strategy include the following statements: 'The university is a nationally and internationally attractive place of study; its competitiveness is based on the recruitment of top students, the synergy of research and teaching, the pedagogical competence of its academic staff, and the high-quality degrees that enhance students' employability; the university's Student Life concept supports students' progress in their studies as well as their wellbeing.'

The university-wide curriculum reform started as an initiative of the university's administration and proceeded as a two-year renewal process until the new curricula



were ready for implementation. For the first time, the curriculum renewal process was directed by a top-down approach and launched simultaneously across all faculties. According to the university's strategy, the degree programmes are expected to respond to the challenges of society and the competences that will be needed in the future. By revising the curricula, the university aimed to guarantee the best possible competencies for their graduates to be active agents in society.

To ensure that all the new curricula would be in line with the university's strategic aims, guidelines were published by the central administration. Following the global trends and research-based development themes described in the previous section, the guidelines outlined five main themes: (1) a reduced number of programmes for comprehensive Bachelor's degrees; (2) a multidisciplinary approach (referring to cooperation between faculties and departments) and an unrestricted right to study minor subjects; (3) attention to students' workloads, their study progress, and course offerings; (4) students' wellbeing; and (5) the quality of the learning environments. All of these themes included detailed suggestions for revision, and the last one also included six sub-sections: (a) novel pedagogical solutions; (b) university/industry collaboration, employability, and entrepreneurial approaches; (c) internationality and multicultural competence; (d) interaction and feedback; (e) technologically supported pedagogical solutions and learning environments; and (f) explicit competence goals and versatile evaluation practices.

An additional goal of the reform was to create uniformity throughout the curricula of the various faculties by introducing a common Annual Planning System of Education and Teaching (APSET) for documenting the requirements of the degree programmes. The APSET was meant to enhance the transparency between units, prevent the overlap of study paths, and facilitate cooperation and communication. Seminars on curriculum topics were organised to support the academic staff, and the staff members of the administration who guided the developmental process offered their support in face-to-face faculty meetings.

## **Purpose of the study and research questions**

In the previous sections, we examined different approaches to university management in the context of curriculum development and discussed the tensions that top-down, bottom-up, and mixed approaches raise in academics' work. We also pointed out the increasingly important role of educational strategies and research-based developmental themes as drivers of curriculum reform. In the empirical part of the study, we investigated the top-down curriculum process from the academic staff's point of view. The special focus was on support provided by the management (Annala and Mäkinen 2013; Cummings et al. 2005) and the strong change agenda (Cummings et al. 2005), which are typical features of the top-down approach. In this study, the change agenda of the university was implemented by publishing university-wide guidelines for the curriculum process. The study aims to increase understanding of how academic staff from different faculties perceive top-down directives and guidelines in curriculum planning. In more detail, the following questions guided the research:

- (1) How did the academic staff perceive the university's top-down management and support in the curriculum planning process?



- (2) How did the academic staff utilise the guidelines set by the university administration in the curriculum planning of their study programmes?
- (3) Were there any differences in perceptions concerning the management and support from the university between the academic staff of the different faculties?
- (4) Were there any differences in perceptions regarding the utilisation of the university's guidelines between the academic staff of the different faculties?

## Method

Perceptions of the university staff were examined using a survey method. The data were collected using a web-based questionnaire (Appendix 1, see supplementary material) after the new curricula had been introduced. The respondents were asked to respond to statements about the university-level management and support and utilisation of the university guidelines using a 6-point Likert scale (1 = *disagree completely* – 5 = *agree completely*; 6 = *cannot say*). Some background questions were also asked.

The data related to the academics' perceptions of university-level management and support, and respectively their utilisation of the university guidelines were analysed separately. The connections between variables were examined by Pearson and Spearman correlation coefficients. Exploratory factor analyses (EFA) were used to discover the common features of the variables; these were conducted using maximum likelihood with Kaiser normalisation as the rotation method in the SPSS-24 context. By taking into account the results concerning the goodness-of-fit tests ( $p < 0.05$ ) and communalities (0.3 or higher) and the factor loadings for each variable (over 0.40), the latent variables were constructed as aggregated variables. The reliability for each aggregated variable was estimated using Cronbach's alpha coefficient. All loadings varied between 0.46 and 0.98 (Appendixes 2–3, see supplementary material). Cronbach's alphas varied from 0.67 to 0.84 for each aggregated variable, indicating acceptable internal consistency regarding the latent factors. One-way analysis of variance (ANOVA) was used in the comparisons of the means between the faculties.

While the respondents were expected to give voice to their perceptions through reactions to the statements of the questionnaire, they were also offered the opportunity to express their opinions to three open-ended questions (see Munhall 2012). In the first question, the respondents were asked to elaborate on their multiple-choice answers concerning university management and support. The second question asked them to evaluate the success of the curriculum planning process, and the third one how the new curriculum differed from the previous one.

Answers to these open-ended questions were analysed separately by questions according to the principles of thematic analysis (Braun and Clarke 2006). The analyses started with careful readings of the answers. The next stage was classifying the data into preliminary thematic categories. In terms of the first and second questions, it was, however, clearly notable that answers included different stances on the topics. Thus, before the more detailed thematic analyses, answers to the first question were classified to positive and critical comments on the topics; among the answers to the second question, it was possible to find three types of stances: the comments that expressed successful and unsuccessful curriculum work and one including ideas of development. The next reading

round resulted in content-based upper-level categories (such as themes focusing on either management or support in the first question) and sub-themes (e.g. more detailed classification of the critical comments). Answers to the third question opening the core changes in renewed curricula were, from the beginning, classified based on the themes of changes mentioned. Finally, in all three questions, the amount of comments were also quantified by themes in order to get a general picture of the extent of each type of comment. These operations were conducted by the first author. The preliminary categories and sub-themes were discussed and elaborated among the whole research group, and the final names of the themes were established.

## Results

A total of 394 academics completed the questionnaire. They reported to have participated in the planning of the curricula as follows: attending the teaching development group of their unit ( $n = 219$ , 55.6%); taking part in the curriculum work of their subject team ( $n = 285$ , 72.3%); participating in curriculum events of their faculty/unit ( $n = 220$ , 55.8%); attending university seminars ( $n = 159$ , 40.4%); or as a commentator of the curriculum work ( $n = 102$ , 25.6%). Most of the respondents ( $n = 258$ , 65.5%) had over 10 years of teaching experience; a quarter ( $n = 101$ , 25.6%) had one to nine years, and 30 (7%) had no teaching experience (missing data for five persons). The respondents represented all seven faculties at the university (missing data for seven persons): Humanities ( $n = 73$ , 18.5%), Information Technology ( $n = 30$ , 7.6%), Business School ( $n = 31$ , 7.9%), Education ( $n = 63$ , 16.0%), Sport and Health Sciences ( $n = 42$ , 10.7%), Mathematics and Science ( $n = 82$ , 20.8%), and Social Sciences ( $n = 33$ , 8.4%). A small number of respondents ( $n = 33$ ; 8.4%) represented units (e.g. Open University) that did not have an independent position in the curriculum work but collaborated with the academic staff of various faculties.

### ***Academics' perceptions of the management and support provided by the university***

Two aggregated variables for the university-level management and support were computed and named: *University-level management and guidance* (seven items) and *University-level technical support* (two items). The Cronbach's alphas and the EFA factor loadings for the aggregated variables of these items are presented in Appendixes 1 and 2 (see supplementary material).

At the total sample level, the academic staff perceived the management and guidance from the university as moderate ( $M = 3.17$ ), whereas they viewed the technical support as rather poor ( $M = 2.31$ ; Table 1).

The ANOVA tests showed differences between the faculty groups regarding the perceived university-level management and guidance ( $F[6, 147] = 5.39$ ,  $p < 0.001$ ) and for the perceived university-level technical support ( $F[6, 199] = 3.18$ ,  $p < 0.01$ ). The univariate follow-up comparisons (using Bonferroni tests) indicated that the members of the Faculty of Education ( $M = 3.61$ ;  $SD = 0.64$ ) rated the university management and guidance higher as compared to those representing the Faculties of Sport and Health Sciences ( $M = 2.93$ ;  $SD = 0.74$ ) and Social Sciences ( $M = 2.92$ ;  $SD = 0.73$ ) (see Appendix

**Table 1.** Management and support provided by the university.

Aggregated variable	<i>n</i>	Missing data	<i>M</i> ( <i>sd</i> )
University-level management and guidance	172	222	3.17 (0.77)
University-level technical support	233	161	2.31 (1.00)

Note: Likert scale 1–5: 1 = Fully disagree; 5 = Fully agree.

4, Table C, see supplementary material). The academic staff of the Faculty of Information Technology ( $M = 2.48$ ;  $SD = 0.88$ ) gave the lowest ratings and differed from their counterparts in the Faculties of Humanities ( $M = 3.24$ ;  $SD = 0.55$ ), Education ( $M = 3.61$ ;  $SD = 0.64$ ), and the Business School ( $M = 3.52$ ;  $SD = 0.59$ ).

With regard to technical support, the Faculty of Information Technology ( $M = 1.61$ ;  $SD = 0.85$ ) gave lower ratings than the Faculties of Education ( $M = 2.76$ ;  $SD = 0.87$ ) and the Business School ( $M = 2.48$ ;  $SD = 0.85$ ) (Appendix 4, Table D, see supplementary material).

Answers to an open-ended question about the perceived management and support were in line with the aforementioned quantitative results and opened details of stances on the topic. Table 2 shows the distribution of different categories of answers with 109 respondents (159 opinions in total). The most notable feature of the findings was the amount of critical comments. Only a few expressed appreciation for the support of the university or how the reform was introduced. For example:

It was great that the curriculum work was now visible at the whole university level. There were curriculum seminars for everyone with interesting themes. (Education, 87)

The majority of the critical comments comprised managerial issues such as problems in the juxtaposition of management at different levels, scheduling, and issues regarding the technical system. As the examples show, the tone of the opinions is critical and emotional in nature.

Scheduling failed in several phases. It took too much time away from the work itself. (Humanities, 17)

The curriculum seminars were of almost no use to the unit. The definitions of the concepts created a kind of Newspeak that hampered verbalising things and took tools away from the

**Table 2.** Categories and sub-themes of answers to the first open-ended question.

Themes	Positive comments <i>n</i>	Critical comments <i>n</i>
<b>Management:</b>		
1. Juxtaposition of the university-level and unit-level management	3	32
2. Scheduling and time management	–	29
3. University guidance/instructions	12	18
4. Simultaneous reforms	–	11
<b>Support:</b>		
1. Technical system	4	28
2. Definitions of the concepts	1	12
3. Curriculum seminars	5	4
The amount of positive and critical comments	25	134
<b>Total</b>	<b>159</b>	

faculty's internal structuring. The university guidelines covered a wide variety of things that were experienced to have only meagre relevance to the fundamental challenges of the unit's teaching. (Information Technology, 57)

The curriculum work needs only the TRUST of the university administration for the departments' know-how. The top-down 'so-called' management of the curriculum development process simply cannot reform curricula effectively because the real expertise lies in the departments. The most important thing is to allow open space and sufficient time to discuss future expertise and to plan profound pedagogical processes. (Education, 98)

Furthermore, 202 respondents wrote their opinions of how the curriculum planning process progressed (the second open-ended question, Table 3). Most of the 378 comments were again critical in nature.

Critical comments were targeted at problems concerning the leadership, briefing, and scheduling at the university, faculty, and unit levels. In addition, some programme changes were considered unsatisfactory. Resistance to change, other simultaneous reforms, and a lack of interaction were viewed as obstacles to the planning. Better management with proper scheduling and instructions and more appreciation for the academic staff, including better listening to their suggestions, were among the proposals for the future:

The curricula are, broadly speaking, going in the right direction, but the process has been very chaotic and the guidance was often unclear. (Humanities, 133)

In our own unit, the curriculum work was undertaken vigorously and the work was taken seriously. Too broad and vague bachelor's degrees turned out to be flops and decreased the amount of applicants. The whole massive amount of curriculum work was partially for nothing. (Humanities, 25)

The good thing was that the study programme was reformed. However, in the planning of the programme, the administration should have, first of all, listened to the teachers and

**Table 3.** Categories and sub-themes of answers to the second open-ended question.

<b>Successful aspects of the curriculum work</b>	
1. Cooperation, collective consideration and involvement	42
2. The final outcome of the work	39
3. Improvements to the content	29
4. The process of the work	13
Sub-total	123
<b>Unsuccessful aspects of the curriculum work</b>	
1. Problems in the process at the level of the university, faculty, or unit	84
2. Negative consequences of the curriculum planning work	42
3. Obstacles in the work	34
4. Inoperative support from the university	26
5. Questioning or criticising the basic goals of the reform	24
Sub-total	210
<b>What should have been done differently?</b>	
1. Leadership (e.g. sufficient time, more appreciation, more guidance, better leadership)	20
2. Starting point of the planning, among other aspects; listening to the teaching staff and experts	8
3. Increasing participation and listening to the students	7
4. More cooperation	4
5. More flexibility in the curricula	3
6. More adequate support	3
Sub-total	45
<b>Total</b>	<b>378</b>

employers of the field concerning how the teaching should be reformed or what should not be thrown away during the reform. Neither the employers nor I were asked anything, even though the students I have trained have been employed well and, specifically, in jobs within their field. (Mathematics and Science, 200)

The respondents perceived, however, the collective work with different partners as successful in the curriculum planning (Table 3). In addition, content improvement was appreciated.

We could involve teachers, students, study guides, representatives of workplaces, alumni, and professors both from our own faculty and other universities in the work. (Information Technology, 1)

### Utilising the university guidelines

Five aggregated variables for the curriculum work under the guidelines of the university were computed (Appendixes 2 and 3, see supplementary material): *Utilising feedback and cooperation* (five items); *Increasing interactive and versatile pedagogy* (4 items); *Developing diverse ways of studying* (two items); *Nurturing future skills* (2 items); and *Developing the internationality of studies* (three items).

At the total sample level, there were rather high mean scores for *Increasing interactive and versatile pedagogy* ( $M = 3.86$ ), *Developing diverse ways of studying* ( $M = 3.72$ ), and *Nurturing future skills* ( $M = 3.82$ ) (Table 4). The mean score for *Developing the internationality of studies*, however, was below 3.0 ( $M = 2.81$ ).

Statistically significant differences between the faculty groups were found for *Utilising feedback and cooperation* ( $F[6, 179] = 3.98, p < 0.01$ ), *Increasing interactivity and versatile pedagogy* ( $F[6, 258] = 3.00, p < 0.001$ ), *Developing diverse ways of studying* ( $F[6, 269] = 5.82, p < 0.001$ ), and *Nurturing future skills* ( $F[6, 280] = 2.14, p < 0.05$ ). There were no differences between faculties regarding *Developing the internationality of studies* in their curriculum planning (Appendix 5, see supplementary material); this variable was the only one where the means were below 3.0, varying from 2.47 to 2.99.

The comparisons between the faculties indicated that the members of the Faculty of Humanities ( $M = 3.72$ ;  $SD = 0.64$ ) rated *Utilising feedback and cooperation* higher than the academic staff in the Faculties of Education ( $M = 2.97$ ;  $SD = 0.67$ ), Sport and Health Sciences ( $M = 3.03$ ;  $SD = 1.01$ ), and Mathematics and Science ( $M = 3.10$ ;  $SD = 0.83$ ). Furthermore, academic staff of the Faculty of Information Technology ( $M = 3.15$ ;  $SD = 1.05$ ) rated the *Increasing interactivity and versatile pedagogy* lower than their counterparts in the Faculties of Humanities ( $M = 3.98$ ;  $SD = 0.72$ ), Education ( $M = 4.15$ ;  $SD = 0.61$ ), and Mathematics and Science ( $M = 3.93$ ;  $SD = 0.78$ ). Several

**Table 4.** Utilising the university guidelines.

Aggregated variable	<i>n</i>	Missing data	<i>M</i> (sd)
Utilising feedback and cooperation	204	190	3.23 (0.82)
Increasing interactivity and versatile pedagogy	295	99	3.86 (0.80)
Developing diverse ways of studying	310	84	3.72 (0.96)
Nurturing future skills	319	75	3.83 (0.95)
Developing the internationality of studies	210	184	2.81 (1.03)

Note. Likert scale 1–5: 1 = Fully disagree; 5 = Fully agree.

**Table 5.** Themes of answers to the third open-ended question.

Themes	<i>n</i>
1. Curriculum structure	225
2. Pedagogy	88
3. Content of the courses	49
4. Teacher collaboration	16
5. Strengthening internationality	10
Only minor changes, if any	26
<b>Total</b>	<b>414</b>

statistically significant differences between the faculties were also found for *Developing diverse ways of studying*. Members of the Faculty of Humanities ( $M = 4.20$ ;  $SD = 0.82$ ) rated this aspect higher than the faculties of Information Technology ( $M = 3.36$ ;  $SD = 1.12$ ), Education ( $M = 3.63$ ;  $SD = 0.95$ ), Sport and Health Sciences ( $M = 3.06$ ;  $SD = 1.14$ ), and Mathematics and Science ( $M = 3.64$ ;  $SD = 0.84$ ). Academic staff of the Faculty of Social Sciences ( $M = 3.85$ ;  $SD = 0.64$ ) also differed from their counterparts in the Faculties of Sport and Health Sciences ( $M = 3.06$ ;  $SD = 1.14$ ) and Mathematics and Science ( $M = 3.64$ ;  $SD = 0.84$ ) regarding *Developing diverse ways of studying*. Finally, the mean scores were generally high for *Nurturing future skills* with respect to all faculty groups. However, the Business School academics ( $M = 4.19$ ;  $SD = 0.67$ ) rated this item higher than the members of the Faculty of Social Sciences ( $M = 3.40$ ;  $SD = 1.11$ ).

As regards to open-ended questions related to changes made to the new curriculum, the respondents ( $n = 189$ ) most often referred to curriculum structure (225 comments, i.e. 54% of all comments) and renewal of pedagogy (88 comments, 21%, Table 5). These answers align with the guidelines of the university in that they emphasised larger and more uniform curriculum structures with joint studies at the faculty level, more options, fewer mandatory studies, and overall broader study modules with fewer main subjects. Furthermore, the distribution of the answers shows that the respondents paid more attention to pedagogical issues than the course contents.

## Discussion

The purpose of the present study was to examine academic staff's perceptions of the process of a university-wide curriculum reform that was initiated and led by the university's administration for the first time. This kind of top-down reform reflects the increased autonomy of universities and its effect on development work (see Kivistö 2018). At the centre of these changes, academics, who are traditionally the main creators of curriculum in their respective fields, are in a challenging position.

This study shows that the university management and the support they provided were perceived as inadequate by the academics. These findings are in line with previous research showing how the contemporary ways of managing HE institutions are arousing discontent in the academy (Locke, Cummings, and Fisher 2011). In the implementation of such a broad revision that required a lot of collaboration and coordination, better leadership was expected – revealed both by the answers to the multiple-choice and the open-ended questions – not only at the university level but also at the faculty and department levels (see Kohtamäki 2019). The perceived problems of the management may have

caused frustration and the feeling of being disregarded in the top-down reform process among the most very experienced university teachers (see Patria 2012).

The administration's ideas for leading the curriculum reform included many well-meaning features, such as seminars, faculty visits, and a lexicon of common concepts that were meant to communicate the common goals, create space for negotiating, and facilitate shared-ownership of the reform, as Patria (2012) suggests. They also provided the means for the university's management to assess academic staff's commitment to the process (see Eteläpelto et al. 2014). Concerning, for example, the supportive seminars, the findings were twofold: Some academics regarded the seminars as useful, while others felt they were useless. In addition, the definitions of the concepts did not receive any favourable response. It seems that the senior management's university-wide agenda for curriculum reform and the following guidance did not reach all the layers of the staff as a shared endeavour. A similar kind of discrepancy has been found also in studies by Annala and Mäkinen (2013), Lachiver and Tardif (2002) and Oliver and Hyun (2011).

The purpose of the APSET was to facilitate the academic staff's work; however, both the statistical and qualitative analyses showed this effort as unsuccessful. Instead, it may have increased arguments against the university's management by inflicting emotional stress, which is a typical feature related to the resistance of change in HE (Fremerey 2006). The APSET was even perceived to hinder academic staff's pedagogical goals and was experienced as a controlling device. This might have increased the feeling of the distance between university management and grass roots level staff (Leisyte 2016). In addition, the findings of this study showed alignment with Fremerey's (2006) notion that it may be problematic to implement an educational reform together with other changes or new systems.

There were differences between the faculties concerning perceptions of the management and guidance of the university. The academic staff of the Faculties of Education and the Business School appreciated it the most, whereas the Faculty of Information Technology did not appreciate it at all. However, these faculties criticised the university's technical support equally. These differences might be explained by different kinds of expertise of teachers in these faculties. As the development of education, including curriculum work, is a central area of expertise in the field of Education, the members of the Faculty of Education might value the efforts of the university management in these matters. Similarly, leadership as an essential part of the Business School substance binds its staff to have high regard for leading processes by university management. As the experts in the field, the Faculty of Information Technology evaluated the technical system most critically.

Even though the academics criticised the top-down management they had proceeded along the guidelines set by the university. The findings of the study suggest that the academics embraced the global drivers of the changes and other pressures in HE. The guidelines concerning the pedagogy and learning environments seemed to be appreciated among all of the academics. The academics reported on utilisation of feedback from different parties and work in cooperation with their colleagues in other subject fields, faculties, and units, which reflects the implementation of the ideals of providing multi-disciplinary and interdisciplinary education for future professionals (see Henderikx and Jansen 2018). Also, they reported on paying attention to interactivity in teaching and learning, and utilisation of varied teaching and assessment methods. Similarly,



they acknowledged versatile and flexible study modes and attended to students' future expertise. The internationalisation of the studies, however, was less favoured.

Perceptions among different faculties concerning the university's guidelines illuminate the differences between the characteristics of the faculties. For example, with regard to the guideline of *Nurturing future skills*, the academic staff from the Business School felt the strongest that they had aimed to prepare their students for the future; the lowest rating was from the Faculty of Social Sciences, though this was still relatively high. It seems that Social Sciences are more oriented to traditional academic goals, whereas, the Business School sector pursued fulfilling the needs of economic and business life. The cultures of these two disciplines are based on different virtues; accordingly, it is to be expected that they have different emphases in education (see Ylijoki 2000). Similarly, Sin, Tavares, and Amaral (2019) have reported on different discipline-specific views of the academics about the employability as a purpose of HE. The Faculty of Education scored the highest with regard to *Increasing interactive and versatile pedagogy*, which is their own field of expertise.

It was the first time that curriculum reform was implemented in all of this university's faculties, and the reform was made at the same time and pace. The respondents answered the survey according to the situation and history of their own faculty. Therefore, if the faculty had undergone profound changes in curriculum recently – as did the Faculty of Education when shifting to phenomenon-based teaching and learning – it is possible that the *present state*, that is, returning to one's comfort zone in organisational change process, is predominant among the staff instead of the *transition state* regardless of the present curriculum activities (see Fremerey 2006). This may relate to the compliant attitude to university management. In addition, if a lot had already been done, for example, to diversify teaching methods, then academic staff's answers in the survey would not necessarily show any increase regarding this point despite the valuation of the matter in question. Similarly, respondents from all faculties gave a low rating to the internationalisation of their studies, which raises the question of whether this aspect was already developed sufficiently or simply did not arouse the academics' interest.

The findings indicate that the respondents experienced a conflict of interest with both the management and technical support of university concerning the curriculum development. From the academics' perspectives, the senior management of the university framed the reform in quite a one-sided way by scheduling the curriculum renewing process and giving instructions and guidelines, while the management of the APSET system framed the curriculum process according to the system's technical nature. However, perceptions of the academic staff seemed to advocate a jointly deliberated planning and implementation of curriculum reform in cooperation with the senior management with regard to common aims (cf., Cummings et al. 2005). In addition, they wished to include the various faculties with their diverse expertise and cultures in the development.

### **Implications for practice**

This study shows that a university top-down managed curriculum reform does not necessarily produce the best possible result from the perspective of academics. The problem lies in the managerial practices, guidance of the process, and shortcomings in the involvement of grass roots staff. Improvement would be to actively engage academic

staff in the change process rather than ordering the change to be implemented, which could cause the feeling that the university is intruding on employees' professionalism and academic freedom.

This study also shows that academic staff is receptive to the global and national trends pressing the university and the needs for development regarding teaching, learning and the educational environments. However, a successful curriculum reform process requires trust among the stakeholders. From the viewpoint of academics, trust is built on showing appreciation for academics' expertise, their views on future prospects, and feedback from students.

As compared to earlier curriculum research in HE, the specific added value of this study lies in the investigation of the differences between the faculties in the academics' perceptions of the university's management, support and guidelines. The differences found in our study, refer to challenges confronted when the curriculum work is top-down managed in the whole university. When there are many faculties with their own approaches and needs, managing the renewal should be carefully planned with involving representatives of the executive staff of different faculties in the planning process. In terms of top-down and bottom-up management, our suggestion is that in curriculum work a hybrid model could work the best. This means that general principles and guidelines of the curriculum work would be negotiated between the university's central management, faculties' management and grass-root level teachers, while context-specific needs and characteristics of each field of study would be handled in teaching units in collaboration with teachers and their leaders. At its best, a well-managed curriculum reform can offer a desired, fruitful debate throughout the university.

### ***Limitations and suggestions for future research***

The present study utilised a survey method to examine academics' perceptions. This method offers a limited power to reveal deeper explanations for findings. Therefore, to gain an understanding of contextual interpretations related to curriculum planning, the research will continue with the analysis of the focus group interviews with the academics. Furthermore, the present study focused on the planning stage of the curriculum work; it does not provide knowledge of actualisation of curricula in teaching and learning or success of the curricula in terms of the goals set. Thus, future study steps would be to examine the implementations of the new curricula and the relation of the goals set in the renewed curricula to the learning outcomes of students. Moreover, as stated by the previous literature (e.g. Scott and Scott 2016), the educational development, in which curricula renewal plays a central role, includes tensions and expectations from various stakeholders in higher education. Thus, it would be important to examine the curriculum reform also from the perspectives of university management and administration, and compare perceptions of the various stakeholders. In addition, our findings raise the need for further examination for a deeper understanding of the reasons behind the cultural differences between the disciplines in the curriculum context.

### **Disclosure statement**

No potential conflict of interest was reported by the authors.

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## References

- Ahola, Sakari, and David Hoffman. 2012. "Higher Education Research from a Finnish Perspective: An Introduction." In *Higher Education Research in Finland: Emerging Structures and Contemporary Issues*, edited by Sakari Ahola, and David Hoffman, 11–25. Jyväskylä: Jyväskylä University Press.
- Annala, Johanna. 2017. "Yliopiston opettajien toimijuus opetussuunnitelmatyön muuttuvilla kentillä." [Agency of University Teachers in the Changing Contexts of Curriculum Work.] In *Kehittämisen palat, yhteisöjen salat: Näkökulmia koulutukseen ja kasvatukseen* [The Snippets of Development, the Secrets of Communities: Views on Education and Training], edited by Vesa Korhonen, Johanna Annala, and Pirjo Kulju, 17–33. Tampere: Faculty of Education, Tampere University Press.
- Annala, Johanna, and Marita Mäkinen. 2013. "Curriculum as Intentional and Dynamic Process in Higher Education." Paper presented at the European Conference on Curriculum Studies. Future Direction: Uncertainty and Possibility, Braga, Portugal, October. [https://www.researchgate.net/publication/274337069\\_Curriculum\\_as\\_intentional\\_and\\_dynamic\\_process\\_in\\_higher\\_education](https://www.researchgate.net/publication/274337069_Curriculum_as_intentional_and_dynamic_process_in_higher_education).
- Annala, Johanna, Marita Mäkinen, Jyri Lindén, and Jonna Henriksson. 2020. "Change and Stability in Academic Agency in Higher Education Curriculum Reform." *Journal of Curriculum Studies*, 1–16. doi:10.1080/00220272.2020.1836261
- Barnett, Ronald. 2000. "Supercomplexity and the Curriculum." *Studies in Higher Education* 25 (3): 255–265. doi:10.1080/713696156.
- Barnett, Ronald, and Kelly Coate. 2005. *Engaging the Curriculum in Higher Education*. Berkshire, GBR: McGraw-Hill Education.
- Braun, Virginia, and Victoria Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3 (2): 77–101. doi:10.1191/1478088706qp0630a.

- Brown, Stephen. 2013. "Change Management in Higher Education: An Empirical Approach." In *Proceedings of the International Conference on Information Communication Technologies in Education*, edited by Linda Morris and Costas Tsolakidis, 89–98. Crete, Greece: Southampton SOLENT University and JIBC.
- Cummings, Rick, Rob Phillips, Rhondda Tilbrook, and Kate Lowe. 2005. "Middle-Out Approaches to Reform of University Teaching and Learning: Champions Striding between the Top-Down and Bottom-Up Approaches." *The International Review of Research in Open and Distributed Learning* 6 (1): 1–18. doi:10.19173/irrodl.v6i1.224.
- Davies, Howard. 2017. "Competence-Based Curricula in the Context of Bologna and EU Higher Education Policy." *Pharmacy* 5 (2): 1–12. doi:10.3390/pharmacy5020017.
- Eteläpelto, Anneli, Päivi Hökkä, Susanna Paloniemi, and Katja Vähäsantanen. 2014. "Ammatillisen toimijuuden ja työssä oppimisen vahvistaminen: Hankkeen taustaa ja lähtökohtia." [Occupational Agency and Strengthening of Work-Based Learning: Background and Starting Points of the Project.] In *Ammatillisen toimijuuden ja työssä oppimisen vahvistaminen: Luovia voimavaroja työhön! [Occupational Agency and Strengthening of Work-Based Learning: Creative Resources for Work!]*, Final report of the Finnish Work Environment Fund, edited by Päivi Hökkä, Susanna Paloniemi, Katja Vähäsantanen, Sanna Herranen, Mari Manninen, and Anneli Eteläpelto, 17–31. Jyväskylä: University of Jyväskylä.
- Fremerey, Michael. 2006. "Resistance to Change in Higher Education: Threat or Opportunity?" In *Prospects of Change in Higher Education: Towards New Qualities & Relevance*, edited by Michael Fremerey, and Martina Pletsch-Betancourt, 217–230. Frankfurt: IKO-Vlg fur Interkult, GW/Transaction Pubs.
- Gunn, Vicky, and Anna Fisk. 2013. "Considering Teaching Excellence in Higher Education: 2007-2013: A Literature Review Since the CHERI Report 2007." Project Report. Higher Education Academy, York, UK.
- Henderikx, Piet, and Darco Jansen. 2018. *The Changing Pedagogical Landscape: In Search of Patterns in Policies and Practices of New Modes of Teaching and Learning*. <https://tinyurl.com/CPLreport2018>.
- Hérard, Fabrice, and Deborah Roseveare. 2012. *Fostering Quality Teaching in Higher Education: Policies and Practices*. OECD IMHE. <http://www.oecd.org/edu/imhe/QT%20policies%20and%20practices.pdf>.
- Jääskelä, Päivikki, Päivi Häkkinen, and Helena Rasku-Puttonen. 2017. "Supporting and constraining factors in the development of university teaching experienced by teachers." *Teaching in Higher Education* 22 (6): 655–671. doi:10.1080/13562517.2016.1273206.
- Jones, Elspeth, and David Killick. 2013. "Graduate Attributes and the Internationalized Curriculum: Embedding a Global Outlook in Disciplinary Learning Outcomes." *Journal of Studies in International Education* 17 (2): 165–182. doi:10.1177/1028315312473655.
- Khan, Mohammad Ayub, and Laurie Smith Law. 2015. "An Integrative Approach to Curriculum Development in Higher Education in the USA: A Theoretical Framework." *International Education Studies* 8 (3): 66–76. doi:10.5539/ies.v8n3p66.
- Kivistö, Jussi. 2018. "Yliopistot: Instituutioita vai instrumentteja?" [Universities: Institutions or Instruments?]. *Vaikuttaja* [The Influencer] (blog), October 16. <https://vaikuttaja.uta.fi/yliopistot-instituutioita-vai-instrumentteja/>.
- Kohtamäki, Vuokko. 2019. "Academic Leadership and University Reform-Guided Management Changes in Finland." *Journal of Higher Education Policy and Management* 41 (1): 70–85. doi:10.1080/1360080X.2018.1553499.
- Lachiver, Gérard, and Jacques Tardif. 2002. "Fostering and Managing Curriculum Change and Innovation." Paper presented at the 32nd ASEE/IEEE Frontiers in Education Conference, Boston, MA, November 6–9. <http://archive.fie-conference.org/fie2002/papers/1266.pdf>.
- Leisyte, Liudvika. 2016. "Top Down or Bottom Up?" *The World View* (blog), May 9. <https://www.insidehighered.com/blogs/world-view/top-down-or-bottom>.
- Lindblom-Ylänne, Sari, Keith Trigwell, Anne Nevgi, and Paul Ashwin. 2006. "How Approaches to Teaching are Affected by Discipline and Teaching Context." *Studies in Higher Education* 31 (3): 285–298. doi:10.1080/03075070600680539.

- Lindén, Jari, Johanna Annala, and Marita Mäkinen. 2016. "Tienteenalakohtainen tieto ja opetus-suunnitelman kriisi korkeakoulutuksessa." [Disciplinary knowledge and the crisis of curriculum in higher education.] *Tiedepolitiikka* [Science Policy] 1: 19–28.
- Locke, William, William Cummings, and Donald Fisher, eds. 2011. *Changing Governance and Management in Higher Education: The Perspectives of the Academy*. Netherlands: Springer.
- Marshall, Stephen. 2010. "Change, Technology and Higher Education: Are Universities Capable of Organizational Change?" *ALT-J, Research in Learning Technology* 18 (3): 179–192. doi:10.1080/09687769.2010.529107.
- Millar, Victoria. 2016. "Interdisciplinary Curriculum Reform in the Changing University." *Teaching in Higher Education* 21 (4): 471–483. doi:10.1080/13562517.2016.1155549.
- Munhall, Patricia L. 2012. "Perception." In *The SAGE Encyclopedia of Qualitative Research Methods*, edited by Lisa M. Given, 606–607. Thousand Oaks, CA: SAGE.
- Oliver, Shawan L., and Eunsook Hyun. 2011. "Comprehensive Curriculum Reform in Higher Education: Collaborative Engagement of Faculty and Administrators." *Journal of Case Studies in Education* 2: 1–20. <http://www.aabri.com/manuscripts/10649.pdf>.
- Parpala, Anna, Sari Lindblom-Ylänne, Erkki Komulainen, Topi Litmanen, and Laura Hirsto. 2010. "Students' Approaches to Learning and their Experiences of the Teaching–Learning Environment in Different Disciplines." *British Journal of Educational Psychology* 80 (2): 269–282. doi:10.1348/000709909X476946.
- Patria, Bhina. 2012. "Change Management in the Higher Education Context: A Case of Student-Centred Learning Implementation." *International Journal of Education* 4 (4): 176–191. doi:10.5296/ije.v4i4.2515.
- Pegg, Ann. 2013. "We Think that's the Future": *Curriculum Reform Initiatives in Higher Education*. Higher Education Academy. Centre for Inclusion and Collaborative Partnerships, Open University. [https://www.heacademy.ac.uk/system/files/curriculum\\_reform\\_final\\_19th\\_dec\\_1.pdf](https://www.heacademy.ac.uk/system/files/curriculum_reform_final_19th_dec_1.pdf).
- Rebora, Gianfranco, and Matteo Turri. 2010. "Change Management in Universities: More a Question of Balance than a Pathway." *Tertiary Education and Management* 16 (4): 285–302. doi:10.1080/13583883.2010.529162.
- Scott, Donald E., and Shelleyann Scott. 2016. "Leadership for Quality University Teaching: How Bottom-Up Academic Insights Can Inform Top-Down Leadership." *Educational Management Administration & Leadership* 44 (3): 511–531. doi:10.1177/1741143214549970.
- Shams, Farshid. 2019. "Managing Academic Identity Tensions in a Canadian Public University: The Role of Identity Work in Coping with Managerialism." *Journal of Higher Education Policy and Management* 41 (6): 619–632. doi:10.1080/1360080X.2019.1643960.
- Shay, Suellen. 2016. "Curricula at the Boundaries." *Higher Education* 71 (6): 767–779. doi:10.1007/s10734-015-9917-3.
- Sin, Cristina, Orlanda Tavares, and Alberto Amaral. 2019. "Accepting Employability as a Purpose of Higher Education? Academics' Perceptions and Practices." *Studies in Higher Education* 44 (6): 920–931. doi:10.1080/03075079.2017.1402174.
- Skordoulis, Rosemary Thomas. 2012. "Change Management in Higher Education: Top-Down or Bottom-Up?" *International Journal of Applied Management Education and Development* 1 (3): 1–19. <http://managementjournals.com/journals/education/vol1/5-1-3-1.pdf>.
- Tynjälä, Päivi, Anne Virtanen, Maarit Virolainen, and Hannu L. T. Heikkinen. (2021). "Learning at the Interface of Higher Education and Work: Experiences of Students, Teachers and Workplace partners." In *Developing connectivity between education and work: Principles and practices*, edited by Eva Kyndt, Simon Beauseart, and Ilya Zitter.
- Virtanen, Anne, and Päivi Tynjälä. 2019. "Factors explaining the learning of generic skills: a study of university students' experiences." *Teaching in Higher Education* 24 (7): 880–894. doi:10.1080/13562517.2018.1515195.
- Ylijoki, Oili-Helena. 2000. "Disciplinary Cultures and the Moral Order of Studying: A Case-Study of Four Finnish University Departments." *Higher Education* 39 (3): 339–362. doi:10.1023/A:1003920230873.