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The empirical state of academization in Swiss higher education: the case of universities of applied sciences and arts and universities of teacher education.

Sheron Baumann¹, Melanie Elderton²

¹*University of Applied Sciences and Arts Lucerne, Lucerne, Switzerland* ²*University of Teacher Education Lucerne PHLu, Lucerne, Switzerland*

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Abstract: Relatively recent reforms of the Swiss higher education system have elevated former institutions of vocational training and education to the tertiary level and tasked them with the same public remit more traditional universities have to fulfill. The integration of research by the new universities of applied sciences and arts (UASes) and universities of teacher education (UTES) necessitates staff with different competencies favoring academics. This prompted concerns that processes of academization could lead to a gap between the demand of society and industry for highly educated practitioners and the education provided by the new institutions.

In order to create an empirical insight into the basis of these concerns, we calculated and compared degrees of academization in 'hard' and 'soft' disciplines that constitute Swiss non-traditional universities. The results lead to the conclusion that there is evidence supporting the mentioned concerns. However, more research is needed to understand why academization occurs, why its pattern varies in different disciplines and what it means for the education of practitioners.

Paper: [Introduction and Context]

The Swiss higher education system experienced profound reforms in the last quarter of a century. One of the outcomes was the formation of seven public universities of applied sciences and arts (UASes) as well as 16 universities of teacher education (UTES) from pre-existing non-tertiary institutions. These new types of universities share a legal basis and their public remit with traditional universities. Even though UASes and UTES are called 'universities' in English, they are not regarded as such in Switzerland, where they are known as *Fachhochschulen* and *Pädagogische Hochschulen* in German and in French as *hautes écoles spécialisées* and *hautes écoles pédagogiques*. As former vocational institutions, UTES and UASes emphasize the applied aspects of science relevant to practitioners rather than fundamental ones, which remain the domain of the traditional universities.

While the predecessors of UASes and UTEs were exclusively tasked with teaching, the reforms added research to their mission. The relationship between the two areas has been described as the most basic issue in modern higher education (Clark, 1997, p. 241) and their integration along Humboldtian lines presents the newcomers to tertiary education with a problem regarding their lecturers, who are responsible for teaching and research activities in Swiss higher education institutions. Namely, teaching applied sciences requires lecturers with a certain amount of practical experience in the vocational fields relevant to their students. It is typically found in professionals who do not necessarily have an academic education. However, the requirement to be able to conduct research favors staff with an academic background. UASes and UTEs therefore have to ensure that both scientific and practical competencies are present in their lecturers, i.e. that they have mixed profiles. The latter are a prerequisite for a successful Humboldtian model as described by Schimank and Winnes (2000) which has its equivalent in the 'strong integrationist view' i.e. a strong connection of teaching and research at the individual level (Ramsden & Moses, 1992, p. 275).

[Concerns regarding academization]

Due to the rather surprising lack of empirical data on lecturer profiles and with a view to the new remit, concerns have been expressed in Swiss higher education circles that UASes and UTEs are in the process of an academic drift, endangering their economically and socially important role of providing practically or vocationally oriented higher education (e.g. in Bollier, 2004; Hoffmann-Ocon, 2012; SSTC, 2013 and Graf, 2018). The press has picked up on these and has addressed the alleged growing distance between the higher education relevant to practitioners and the one currently provided by UASes and UTEs.

The evidence from other countries regarding the academization of similar higher education institutions does support the mentioned concerns. Neave (1996) describes a tendency of making vocational education more academic in Europe and more recently, Harwood (2010) compiles numerous studies from various countries and disciplines attesting to the phenomena. Studies from Germany (e.g. Hachmeister, Duong & Roessler, 2015; Ziegele, Roessler & Mordhorst, 2017; Hermes & Wagner, 2010), which are especially relevant to the Swiss perspective due to similarities of the two countries' higher education systems, even show that an academic drift is specifically observable in teaching staff of UASes and UTEs. The altered requirement for a greater affinity toward research and scientific qualifications is responsible for this change (Hachmeister, Duong & Roessler, 2015, p. 20). This evidence gives rise to the question, if an academic drift is also observable in Switzerland. If it is indeed the case, we hypothesize that the longer disciplines have been reformed and the 'harder' they are, the stronger they have been academized.

[Methodology]

The absence of empirical knowledge on permanently employed lecturers at UASes and UTEs (swissuniversities, 2017) was the catalyst for a nation-wide survey of this group of professionals in autumn of 2018. The data contains information on their prior employment as assistants, doctoral students and professors by traditional universities (N = 2428) and provides us with a definition for the

academization of staff members at Swiss UASes and UTEs.

We assigned each department to one of the two poles, i.e. hard-applied and soft-applied, of the typology developed by Biglan (1973) and calculated the shares of former personnel from traditional universities (i. e. not from UASes and UTEs) in the body of lecturers for each of the two groups. The typology, which was recently complemented by Simpson (2017), provides two benefits to our analysis. Firstly, it reduces the complexity of the disciplinary patterns delivered by Swiss non-university higher education for the purpose of this short research paper. Secondly, the hard-soft dimension largely corresponds with the duration that disciplines or rather the corresponding departments have been reformed and therefore exposed to academization, i. e. the hard disciplines have all been reformed before the soft disciplines with the exception of applied linguistics. We categorized 'Agriculture/Forestry', 'Applied Linguistics', 'Architecture/Planning', 'Chemistry/Life Sciences', as well as 'Information Technology/Engineering' as hard disciplines, while 'Applied Psychology', 'Art/Design', 'Social Work', 'Business', 'Music/Theater/Film', 'Health Professions' and 'Teacher Education' were assigned the soft label.

[Results]

Overall, academics according to our definition work frequently at UASes and UTEs and constitute 39.3 percent of the body of lecturers. The difference between soft- and hard-applied disciplines is shown in figure 1. It amounts to 25 percentage points and can be largely attributed to the much higher frequency of former doctoral students in hard disciplines. The association between the number of academics and the categorization into soft and hard is statistically significant ($\chi^2(3) = 150.916$, $p = .000$). However, it is not very strong, as the values for Cramér's V (.249, $p = .000$) and the contingency coefficient (.242, $p = .000$) indicate.

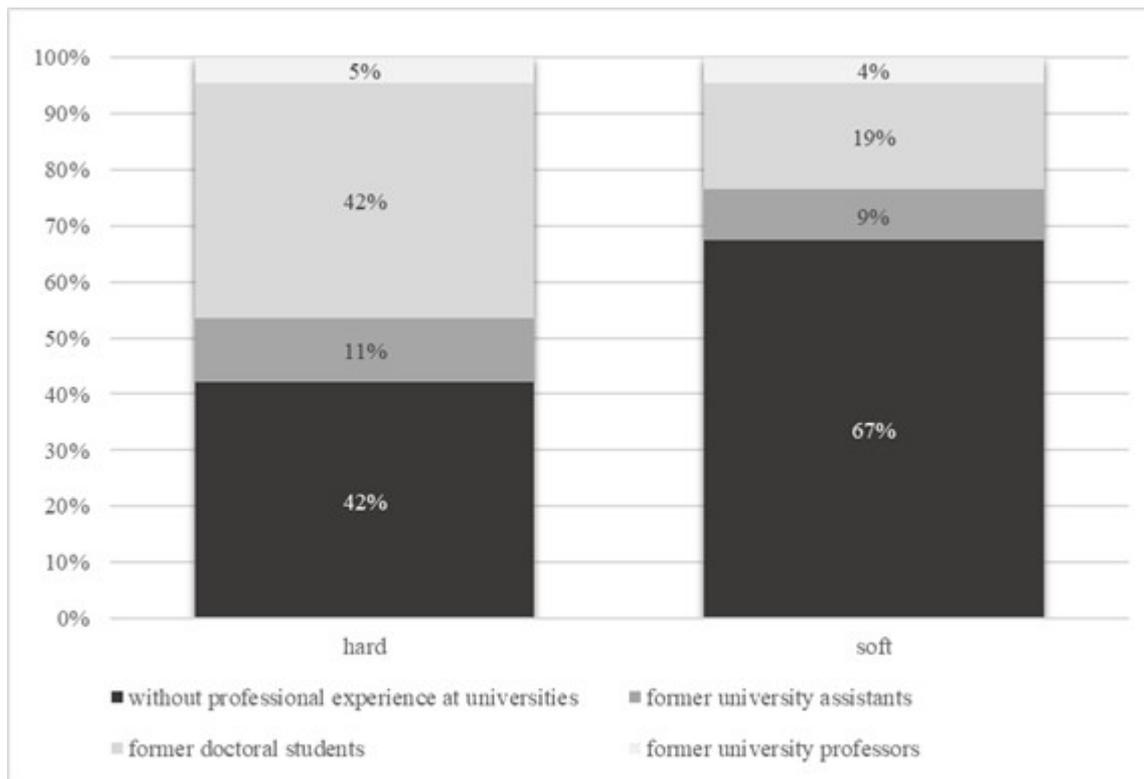


Figure 1 Comparison between soft and hard non-university disciplines regarding the employment of former university personnel

[Conclusion and Discussion]

The calculated degrees of academization may neither be direct evidence for a general academic drift in Swiss UASes and UTEs nor for a growing distance between the teaching staff and student needs of these institutions. Rather, they could just represent the potential for the latter because the background and professional experience of former university staff influence teaching and research in non-university higher education. As the values for Cramér's V and contingency coefficient suggest, there are definitely other variables at play in explaining the degree of academization. Nevertheless, the categorization into hard and soft explains a good portion of the variation between disciplines and the hypothesis cannot be rejected.

Furthermore, the result does not invalidate concerns of a growing distance between non-university higher education and practitioner needs. It also raises the question, whether a high degree of academization is just a question of time, rather than a disciplinary one and encourages further research into the link between the duration of disciplines under the reformed regime and the degree of academization.

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