

Sharing research across Switzerland: Higher Education and Science

REHES Workshop / Webinar
University of Lausanne, 11th September 2020

Following the first workshop « Research on Higher Education and Science in Switzerland » which took place the 2nd and 3^d of September 2019 at the University of Bern, the Observatory Science, Politics and Society (OSPS) of the University of Lausanne is hosting a 2nd workshop on the same topic.

The aim of this second workshop is twofold: to bring together researchers working on these topics in the various Swiss HEI's, scientific organizations and administrations to develop a state of the art of current research carried out in Switzerland, and to discuss further the potential institutionalization of research on HE and Science in Switzerland.

Research on Higher Education and Science has become a hot topic in Europe both politically and scientifically, with a wide range of disciplines involved (Sociology, Political Sciences, Pedagogy, Education sciences...), with topics covering the governance of universities, the academic profession, the role of science in society, etc. Nevertheless, the lack of integration of the Swiss Higher Education makes it difficult to obtain a general overview of research topics and perspectives.

Organisation

- Scientific committee: Fabienne Crettaz von Roten (UNIL), Gaële Goastellec (UNIL), Carole Probst (ZHAW), Lucas Bashung (HEG Neuchâtel), Mike Schaefer (UNIZH), Nicky Le Feuvre (UNIL), Valeria Insarauto (UNIL)
- Organisation committee: Olivia Edelmann (assistante-étudiante UNIL- OSPS), Fabienne Crettaz von Roten, Gaële Goastellec

Connexion link:

<https://unil.zoom.us/j/3277099576>

Meeting ID: 327 709 9576

Program

8h30-9h20: Welcome (Fabienne Crettaz von Roten and Gaële Goastellec) and 1st session: The academic profession (Chair: L. Baschung)

1. Lecturers at higher education Institutions in Switzerland: Conflicting demands of science and practice

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Carole Probst, ZHAW, prot@zhaw.ch, Christian Wassmer, ZHAW, wasc@zhaw.ch
Sheron Baumann, Hochschule Luzern – Wirtschaft, sheron.baumann@hslu.ch

2. Laboratory animal science and society: scientists' public outreach and engagement activities

Fabienne Crettaz von Roten, OSPS – UNIL, Fabienne.Crettazvonroten@unil.ch

3. Does research evaluation shape research? Evidence from comparing reporting and research practices at Swiss and Lithuanian Institutes

Agnė Girkontaitė, Institute of Sociology and Social Work, Vilnius University, Lithuania, & Michael Ochsner, FORS, Lausanne. michael.ochsner@fors.unil.ch

9h20-10h20: Session 2: Higher education: access, students, fields
(Chair: F. Crettaz von Roten)

1. General and Vocational Oriented Pathways to Higher Education: Does the Regional Provision of Education Moderate Social and Gender-specific Inequalities in Switzerland?

Andrea Pfeifer Brändli¹, Christian Imdorf², Regula Julia Leemann¹
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2. Baccalaureate school, specialised school and vocational education and training as pathways to universities for teacher education in Switzerland: On the relevance of the category of gender

Regula Julia Leemann¹, Andrea Pfeifer Brändli¹, Christian Imdorf², Sandra Hafner¹
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3. Engaging students- insights from distance learning during the Corona lockdown

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4. The emergence of new fields in higher education between innovation and reproduction

Philippe Saner, Department of Sociology, University of Lucerne

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5. Citizenship and access to higher education: A new field of study?

Gaële Goastellec, OSPS; UNIL. gaele.goastellec@unil.ch

10h20-10h35: coffee break

10h35-11h30: Session 3: Research evaluation and profiles of HEIS

(Chair: C. Probst)

1. Mapping of scientific excellence V2 – A bibliometric information tool for Switzerland?

Rüdiger Mutz, ETH Zurich, Professorship for Social Psychology and Research on Higher Education, mutz@gess.ethz.ch

2. Vertical cooperation in shared policy fields: do Swiss higher education institutions play the game of profile building?

Lukas Baschung, Haute école de gestion Arc//HES-SO, Lukas.Baschung@he-arc.ch

3. Under pressure: How Swiss universities improve their internal resource allocation

Kerstin Press, University of Zurich, kerstin.press@uzh.ch

4. The impact of effective and foreseen European funding access restrictions: Evidence from Swiss and UK participation in EU framework programs

Marco Cavallaro, Università della Svizzera Italiana, marco.cavallaro@usi.ch

5. National research evaluation systems: Where's the place of Switzerland in Europe?

Michael Ochsner, FORS, Lausanne, Switzerland, michael.ochsner@fors.unil.ch

11h30-12h15: Session 4: General discussion

(Chair: G. Goastellec)

Higher Education and Science in Switzerland: Research Needed and Possible Forms of Institutionalization

Christian Wassmer (ZHAW, wasc@zhaw.ch) and Luca Tratschin (UZH, luca.tratschin@chess.uzh.ch) (on behalf of the REHES working group)

Abstracts

1st session: The academic profession

1. Lecturers at higher education Institutions in Switzerland: Conflicting demands of science and practice

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The ability of lecturers at non-traditional universities / universities of applied sciences (hereafter: UAS) to both teach in a practice-relevant manner and conduct scientifically sound research and teaching is a controversial issue in the higher education policy debate in Switzerland. Therefore, the presentation examines current survey data to determine the practice-orientation and scientific qualifications of these lecturers, as well as their simultaneous activity in the fields of research and teaching. Furthermore, the comparison with data for lecturers of Swiss traditional universities (hereafter: universities) shows to what extent the two types of higher education institutions are converging with respect to their profiles. The question of the extent to which UAS meet the requirement of providing practical and professionally relevant teaching can also be answered from the perspective of graduates. Therefore, the presentation includes analyses of the graduate studies conducted by the Federal Statistical Office throughout Switzerland. Here too, the results from the UAS are compared with those from the universities. Based on the results we can show that in teaching, the educational policy requirement of equivalent but different types of higher education institutions is mostly met. As an example, we see that the majority of lecturers at UAS have extensive practical experience, which is also much more extensive than that of university lecturers. This can be seen both in the overall duration of the practical work and in the fact that lectures at UAS often work in practice in parallel. Conversely, the more frequent doctorates and habilitations of university lecturers indicate that they are in fact more research oriented than those at UAS.

The graduates of the UAS assess the studies in terms of basics for the career entry better than graduates of the universities. However, the assessment is the same in both types of higher education institutions when it comes to the basics for fulfilling current work tasks. The much greater amount of professional experience that graduates of UAS already have at this point in their career may explain these results.

2. Laboratory animal science and society: scientists' public outreach and engagement activities

Fabienne Crettaz von Roten, OSPS – UNIL, Fabienne.Crettazvonroten@unil.ch

Animal experimentation (AE) is a scientific practice generating varying degrees of confidence in society, but also in science. After several hundred years of use, it is still controversial. In Switzerland, the tools of direct democracy have led the population to vote on the subject three times (1985, 1992, and 1993) and a new one is in the horizon. Initiatives are an opportunity to inform the population and generate debate; engagement of scientists is therefore vital. Studies have analyzed scientists' public engagement and outreach (POE) activities, but not on scientists in AE.

Our aim was to document the situation in Switzerland by the mean of a mixed methodology. First, we send a questionnaire to four cohorts of scientists participating to FELASA mandatory courses, covering scientists' attitudes toward society, importance of various incentives and barriers to POE activities, level of POE activities (510 questionnaires filled, response rate of 48%). Then we undertook a media analysis of the future initiative on AE from September 2017 until December 2019 (more than hundred news have been published in the three regions).

Our results showed a constructive situation in terms of public engagement and media exposure, but with surprising differences.

3. Does research evaluation shape research? Evidence from comparing reporting and research practices at Swiss and Lithuanian Institutes

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Research evaluation has become an important instrument of governance in higher education. Evaluation procedures, however, differ widely across countries and institutions. In this presentation, we look into how such differences in evaluation can shape the way research is conducted and reported. We apply a mixed-methods approach to two institutions close to the opposite extremes of evaluation procedures: on the one hand, the Institute of Sociology and Social Work at Vilnius University, Lithuania, subject to a performance-based funding model and, on the other hand, FORS, the Centre of Expertise for the Social Sciences in Lausanne, Switzerland, evaluated periodically by peers based on self-evaluation reports. We analyse quantitatively and qualitatively the bibliometric information on the scientific production of the two institutions in the years 2012 to 2016 using three sources: the annual reports of the institutions themselves, the institutional repositories and Web of Science. Furthermore, we complement this data by qualitative semi-structured interviews with employees of the two institutes.

Our results show that both researchers and institutes themselves often choose to report only part of what they produce. Yet, what becomes visible differs between the two as reporting requirements can influence what researchers prioritise in their work. We conclude that bibliometric indicator-based research evaluation limits the understanding of the work of a researcher, ignores the variety of personalities needed within universities and disregards activities that remain invisible but are important for the functioning of research. An incomplete reporting comes with the risk of compromising SSH research's function in society and tends to separate activities that should be linked.

9h15-10h15: Session 2: Higher education: access, students, fields

1. General and Vocational Oriented Pathways to Higher Education: Does the Regional Provision of Education Moderate Social and Gender-specific Inequalities in Switzerland?

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Keywords: Higher education access, social origin, gender, regional disparities, Switzerland

In Switzerland, two vocationally oriented secondary school programs have been institutionalised in the 1990's: The Vocational Baccalaureate School which supplements basic Vocational Education and Training and the Specialised Baccalaureate Schools. They prepare pupils for Universities of Applied Science and of Teacher Education. We ask whether these two schools can bring more young people into higher education (HE; institutional permeability) and whether they are less socially selective (social permeability) compared to the classical general education pathway (General Baccalaureate School). Furthermore, we are interested in how different cantonal offers of educational pathways matter for social disparities in HE access. Theoretically, we link policy-driven educational opportunities with the concepts of institutional and social permeability and with intersectionalities of social origin and gender.

Using LABB data from the Federal Statistical Office, we analyse educational trajectories of the cohort with a first upper secondary degree in 2012 over four years. We apply multilevel binary logistic modelling to examine how educational pathways impact on HE access differently by canton. Moreover, we analyse how the cantonal educational offers structure social inequality in HE access.

Preliminary results show that institutional permeability varies at the cantonal level in consequence of regional educational policy. Regarding social permeability, young women from socially advantaged families transition to HE twice as often as young men from disadvantaged families. Remarkably, the educational pathways can almost exhaustively explain these educational inequalities. Still, Specialised and Vocational Baccalaureate Schools are important pathways to HE for young women and men respectively from socially disadvantaged backgrounds.

2. Baccalaureate school, specialised school and vocational education and training as pathways to universities for teacher education in Switzerland: On the relevance of the category of gender

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In Switzerland, teacher education has undergone major changes in recent decades. It was raised to tertiary level and is now institutionalised at Universities of Teacher Education (UTE). Young people can enter UTE via three pathways at upper secondary level – baccalaureate school (BS), specialised school (SS) and vocational education and training (VET) – the latter two require additional achievement and certificates. Furthermore, the proportion of women in the teaching professions has risen steadily.

Previous research has focused exclusively on the access to teacher education via the BS. The aim of this paper is to examine the relevance of all three pathways and the category of gender – controlling for social origin and migration background – for entry into UTE. What is the relevance of gender and of the core subject / occupational field within the respective path, what further educational qualifications do the students complete before entering UTE, and which study programs do they choose ?

Theoretically we refer to gender theories that link individual and institutional aspects for explaining gender segregated educational trajectories and choice of occupation. Descriptive and multivariate analyses are based on the LABB data from the Federal Statistical Office. We analyse educational trajectories of the cohort with a first upper secondary degree in 2012 over 54 months.

First results show that VET has the lowest transition rate, and the SS the highest. On all three pathways, women more often opt for a study at UTE than men. However, since men are

overrepresented in VET, they are quantitatively more present within this access route than in the other two. Contrary to BS, where the chosen core subject predispose entry into UTE for both genders, the occupational field in VET has no relevance. In the pedagogical field of the SS, both genders very often choose the teaching profession.

3. Engaging students- insights from distance learning during the Corona lockdown

Zellweger Franziska, Zurich University of Teacher Education

In this project, the theoretical framework builds on the concept of student engagement (e.g., Kahu & Nelson, 2018; Krause & Coates, 2008). Trowler (2010) defines it as a concept that “is concerned with the interaction between the time, effort and other relevant resources invested by both students and their institutions intend-ed to optimise the student experience and enhance the learning outcomes and development of students (...)” (p. 1). With the closure of schools and universities mid March 2020, the conditions for learning and teaching have been turned upside down for students and lecturers alike. How do the students cope with the situation and what can be learned from this experience for the further development of teacher education programmes when we return to "normality"? A questionnaire will be handed out to students of three teacher education programmes at different institution end of May as a well as interviews are conducted with 3 students at each institution at three points in time during the spring semester. At the conference, we will give insights into preliminary results regarding aspects that support student en-gagement in distance learning.

Kahu, E. R., & Nelson, K. (2018). Student engagement in the educational interface: understanding the mechanisms of student success. *Higher Education Research & Development*, 37(1), 58-71. doi:10.1080/07294360.2017.1344197

Krause, K. L., & Coates, H. (2008). Students' engagement in first-year university. *Assessment & Evaluation in Higher Education*, 33(5), 493-505. doi:10.1080/02602930701698892

Trowler, V. (2010). Student engagement literature review. *The higher education academy*, 11(1), 1-15.

4. The emergence of new fields in higher education between innovation and reproduction

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This paper investigates the emergence of data science, a new interdisciplinary field in higher education. Specifically, I examine the structural factors that shape the structure and design of study programmes within the academic field and its organisations. Universities are confronted with the question of how they can fit and implement a knowledge formation described as interdisciplinary or transversal into existing organizations that are strongly disciplinary in nature. The following questions guide the analysis: Which scientific and non-scientific factors influence the planning, design and implementation of curricula in data science? To address these questions, I examine the introduction of data science at Swiss universities as a case study, using study programme descriptions, curricula, and interviews with data science educators to serve as empirical material. Based on correspondence analyses of curricula and qualitative content analyses of the interviews, the article elaborates how higher education

policy, economic motives and organisational aspects frame the introduction of the new study programmes. The analysis points to different understandings of data science, which manifest themselves in divergent research and teaching practices on the one hand and symbolic demarcations with other field actors on the other. The epistemic and disciplinary distinctions intertwine with structural categories in the organizational field of universities. This reciprocity shapes an academic field that is characterized by the synchronicity of cooperation and competition.

5. Citizenship and access to higher education: A new field of study?

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Since the creation of the first European universities in the Middle Ages, the instrumentation of access to Higher Education has been associated with civil, political and social citizenship differentiation. Still, research on Higher Education has largely let aside this dimension to mainly investigate the effect of cultural, social and economic resources. This presentation aims at engaging the debate about the reciprocal relation between access to Higher Education and citizenship, its empirical and theoretical added value as it allows to connect different scales of analysis and offers insights on the role of Higher Education in the world historical development.

Session 3: Research evaluation and profiles of HEIS

1. Mapping of scientific excellence V2 – A bibliometric information tool for Switzerland?

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In view of the problems of peer review for evaluating research (e.g., biases), the question of correctives and additions to peer review is of particular importance. Since the turn of the millennium, the importance of bibliometrics defined as the quantitative analysis of documents as they are listed in bibliographic databases has increased significantly. The Excellence Mapping project developed by Bornmann, Clemente, de Moya-Anegón, Haunschild, Mutz and Stefaner aims to process bibliometric data to enable a comparative interpretation of the performance of universities and research institutions worldwide by visualizing bibliometric indicators on a map. In contrast to the Leiden ranking, a statistical model is used that includes additional factors as covariates that might distort institutional comparisons. The tool is among others able to answer questions of how institutions would perform, if all countries were equally economically productive. The new version, which will be released later this year, not only has a completely new user interface, but also adds altmetrics to the classical bibliometric data. In addition to the scientific impact, the societal impact of an institution can now be graphically represented. The aim of the paper is to present the new tool and to discuss it critically with regard to its applicability to the Swiss university landscape. One limitation, for example, is that due to certain selection criteria not all universities can be presented.

2. Vertical cooperation in shared policy fields: do Swiss higher education institutions play the game of profile building?

Lukas Baschung, Haute école de gestion Arc//HES-SO, Lukas.Baschung@he-arc.ch

Since the creation of a federal law on higher education in the late 1960s (Perellon 2001) and even after the profound reform of Swiss federalism (Ladner and Desfontaine Mathys 2019),

higher education and research is still a common task of the Confederation and the cantons. As in other shared policy fields, this situation necessitates coordination in order to elaborate and implement policies in an effective and efficient way. The fact that Swiss higher education institutions (HEIs) benefit of a high level of autonomy adds complexity to vertical coordination. One of the central objectives of the Federal act on funding and coordination of the Swiss higher education sector (Swiss Confederation 2011) consists in producing coordination among those three actors, i.e. the Confederation, the cantons and HEIs, among others regarding their profile building and “distribution of tasks”. This means a clear distinction in terms of activities between the three types of HEIs (traditional, applied and teacher universities) and also a certain distinction between the HEIs of a same type. Griessen and Braun (2010) consider that institutional tools have been created in order to permit the achieving of better coordination. However, given the large autonomy of HEIs, the question has to be asked to what extent HEIs respect the idea of coordination regarding profile building. The present proposal examines this question by analysing the development of new educational programmes within a number of Swiss HEIs since the coming into force of the new federal law in 2015.

3. Under pressure: How Swiss universities improve their internal resource allocation

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With looming reductions in public funding, universities are pressured to find ways to keep evolving. While the most immediate consideration has been the diversification of income sources (e.g. more third party funding), many income streams cited from UK or US examples are institutionally closed to local universities (e.g. endowment and investment income). Another option are strategies to improve the allocation of existing budgets. Drawing on qualitative interviews with experts from 5 Swiss Higher Education Institutions, the paper looks at approaches to improve internal resource allocation. Examples covered include changes in the planning of professorships, cost and activity accounting as well as integrated planning procedures.

4. The impact of effective and foreseen European funding access restrictions: Evidence from Swiss and UK participation in EU framework programs

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Following the Brexit vote, access by UK organizations to the next EU Framework Program for R&D (EU FP) may be restricted. As of now, the effect of a country’s status change on EU FP participation has not been addressed by scholars. This paper aims to correct this lack, by examining how institutional barriers resulting from policy decisions influence the level of participations in R&D collaborations. We consider Switzerland’s 2014 downgrade to third country status in Horizon 2020. The true effect of the status change is considered in parallel to organizational and reputational factors, which have been previously analyzed in the literature on EU FP participation. The analysis shows that the effect of the status downgrade has been partially alleviated by the universities’ experience in EU FP funding, their reputation and their size. This implies that non-EU HEIs’ existing collaboration networks can mitigate the effect of non-eligibility for EU funding, at least in the short term. The extent to which universities will be affected by institutional barriers will thus depend on how well these are integrated into the European R&D landscape. A preliminary analysis of the effect of Brexit on UK university participations demonstrates however a strong negative impact on the number of projects coordinated and on the number of grants acquired in the MSCAs, the H2020 research mobility grants. The uncertainty related to the access of UK to EU FPs, possible immigration restrictions

and foreseen consequences on the economy may have lessened the attractiveness of UK universities as research destinations.

5. National research evaluation systems: Where's the place of Switzerland in Europe?

Michael Ochsner, FORS, Lausanne, Switzerland, michael.ochsner@fors.unil.ch

The emergence of the knowledge society and the introduction of so-called New Public Management led to the implementation of systematic research evaluation procedures all over Europe and beyond. However, these evaluation procedures differ widely across countries. In this presentation, I report from a large comparative project on national research evaluation systems undertaken by the COST-Action “European Network for Research Evaluation in the Social Sciences and Humanities (ENRESSH)”. I will address three questions: What is a national research evaluation system and how do they differ between countries? How do evaluation procedures relate to conceptions of research quality? And: Where is the place of Switzerland on the map of European national research evaluation systems? Our research shows that evaluation procedures are very diverse across European countries. While different procedures have advantages and disadvantages, the characteristics of a national research evaluation system follow tradition rather than research policy needs. Often, evaluation methods do not reflect research practices, especially regarding the social sciences and humanities, which comes with the risk of reducing the interaction with society. A link to conceptions of research quality can help design evaluation systems that better adapt to the current situation in a country and to policy needs. I suggest a shift of perspective in the design of evaluation procedures from an administrative point of view to an analysis of what happens at the shop floor: Switzerland can serve as a good example.

Session 4: Presentation and General discussion

Higher Education and Science in Switzerland: Research Needed and Possible Forms of Institutionalization

Christian Wassmer (ZHAW, wasc@zhaw.ch) and Luca Tratschin (UZH, luca.tratschin@chess.uzh.ch) (on behalf of REHES working group)

The REHES working group emerged from the CHES project “Research on Higher Education and Science in Switzerland” and the first REHES meeting of the same name in September 2019 at the University of Bern. Its aim is to develop proposals for research topics and for the institutionalization of higher education and science studies in Switzerland. At the first REHES meeting in September 2019, representatives from various universities and disciplines gathered and discussed ideas and conceptions for topics and institutional forms of research on higher education and science. On this foundation, members of the REHES working group developed a policy paper. At the workshop “Research on Universities and Science in Switzerland” on 10 and 11 September 2020 in Lausanne, we, as members of this group, would like to present the ideas to a wider academic audience in order to discuss and develop them further.

Based on the situation and changes in the higher education and science system, the position paper presents opportunities for research on higher education and science in Switzerland. On this basis, we propose possible forms of institutionalisation and thematic orientations. The policy paper assumes that both the production of reflective as well as operational knowledge require a form of institutionalization that is, on the one hand, constituted by the scientific community itself and, on the other hand, disposes of an organizational interface with

the actors who need the evidence-based knowledge produced and who include it in their decision-making processes. The task of an interface would be to bundle interests and ideas on the part of both the scientific community and the stakeholders and to organize communication in both directions.