Enhancing Flexibility: Ten years of experience with new academic structures in Swiss universities

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Abstract. The 1999 European Bologna Declaration aims to create a European Higher Education Area (EHEA). Structural elements of the study programs as well as content-related guidelines are defined. The Bologna Process has frequently been criticized for over-standardizing comparable structures, standards, and processes, and thus for not sufficiently taking into account the specific circumstances of countries, educational systems, and disciplines.

This article begins with the assumption that the structural elements of the Bologna Process also open up new possibilities. In particular, it explores to what extent and for whom the Bologna Process may be associated with flexibilization.[1] It refers to the Swiss higher education system, with a focus on the development at universities and only limited attention to universities of applied sciences and of teacher education.

Keywords: Bologna Declaration, ECTS, European Higher Education Area, Higher Education, internationalization, modularization, student mobility, Switzerland

Flexibility as a requirement

Study programs' requirements and expectations can originate from very different standpoints and priorities. What proves to be successful from one perspective is perhaps less suitable in another respect. This article focuses on the term – "flexibilization" – that is not explicitly among Bologna's goals, yet is a central expectation of various actors. According its hypothesis, the transition from the

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academic structures of the late 20th century to the Bologna model's two-tiered, module-based study programs has in many ways actually created potential for flexible use.

Academic structures can be viewed from the perspective of five stakeholder groups, although these are by no means homogeneous or even unanimous.

a) The *students* assess the value of academic structures primarily with regard to the feasibility of study courses; their individual study preferences; and their own personal qualification profile. Increasingly, they expect to be able to combine a study program with professional, private, and social activities, depending on their personal situation.
b) For the *scientific community* the assessment of flexibilization primarily concerns with to what extent it takes into account specialization trends in scientific disciplines. Also important is the possibility of participation, or conversely the danger of being disadvantaged due to structural constraints. Further, relevant to this group is the allocation of resources (time, personnel).
c) For its part, the *university* as an institution is confronted with questions regarding the study programs' organizational and financial viability. Here, the study options; the transferability of credits to different programs; and – in conjunction with this – the size of study groups play an important role.
d) From the perspective of *academic occupational fields*, flexibilization has the additional benefit of enabling quicker reactions to meet new demands in science-based professions with less effort and while maintaining the same quality of education.
e) Finally, *educational politics* expects universities to make their unique contribution to the development of society, the economy, culture, and politics and thereby uphold the government-defined general regulations and development perspectives.

This article describes the introduction of the academic structures in accordance with the Bologna model in Swiss universities from 2000 to 2013. Conclusions and assessments will be made based on this experience. First, in chapter 2 some aspects of the Bologna reform in Switzerland will be explained and select experiences reported. In chapter 3 the flexibilization issue will be discussed from the perspective of students and universities.

Aspects of the Bologna reform in Switzerland

The implementation of the Bologna reform in Switzerland combines different elements which can only partially be derived from the actual declaration. These aspects which enter the reform and go beyond the declaration can be understood as an expression of a changed conception of university courses as was typical of the late 20th century.

The tertiary level of education in Switzerland is characterized as follows: About 34% of each age group obtains one of the following university admission qualifications: 20% acquire entrance qualification to universities, universities for technology and the natural sciences (ETH), and universities of teacher education, and 14% earn a vocational diploma which qualifies them for universities of applied sciences (BFS, 2014c). With the exception of medicine, all university disciplines can be studied without additional entrance exams; at universities of applied sciences placement is determined based on further entrance requirements. Tuition at public universities, which offer the most available places by far, is relatively low at 500-2,000 CHF per semester[2]. With an unemployment rate of less than 5%, the vast majority of university graduates find employment that matches their qualification (BFS, 2013, p.4).

Orientation toward learning and competences

The Bologna model's learning theory foundation refers to fundamentals based on insights from higher education didactics as well as experiences from mobility promotion. The scholars' perspective is key, *i.e.* those taking courses (students) and the perspective of academics who have obtained qualifications *via* the study program (graduates). Indeed, these perspectives present other and in some cases new demands both for the definition and goals of the curriculum as well as for the documentation of the educational process and its outcome; naturally, the instructors must also develop a new self-conception of themselves and their tasks.

This model assumes that an educational process will in all likelihood be successful when students' participation and autonomy are facilitated. Students can and should be in control of their educational process themselves now and then. This was boldly and successfully labeled and propagated as a "Shift from Teaching to Learning." Teaching has been interpreted primarily as a way to ensure optimal support of the learning process. The role of lecturer transformed from that of a teacher who dictates content and tests knowledge acquisition to that of subject expert and learning aide who presents contents and approaches to knowledge; suggests learning pathways; and provides feedback on the learning process and level of competence along with the evaluation of learning results.

The orientation to goal competences is a central idea that is also reflected in changed course planning. The starting point is mainly what students should know and be able to do – be competent in – at the end of their studies or after each step of the program. The individual course offerings – classes, assignments, *etc*. – must show how they contribute to the attainment of these competences.

This (formal) competence orientation is simultaneously linked to the content requirement that a study program should be relevant to the labor market, and that this should be made explicit. Thus, the study programs are confronted, for example, with the question of which professional options they open

[2] www.berufsberatung.ch/dyn/2674.aspx; retrieved October 27, 2014

up; which generic yet professionally relevant competences are fostered during the course of study; and generally: what is the significance of a scientific discipline? what is the significance of a professional perspective?

In this way, a learning model combines with specific considerations regarding the function of universities. The coupling of universities and the working world still remains loose, and different universities and study programs respond to it differently; nevertheless, this coupling is becoming a central discussion regarding the introduction of the Bologna reform. Especially criticized is the study programs' allegedly too-strong focus on the market's needs and thereby a departure from general education in favor of economic functionalization.

The competence-oriented conception and description of study programs is still in its infancy. Since 2009, the necessary foundation has existed in the form of a national qualifications framework (CRUS, 2009), on the basis of which universities are now continuing to adapt the individual study programs. Whether and to what extent this step will also be used to provide further flexibilization potential cannot yet be assessed.

Gradation, profiling, and mobility

The university study programs exhibited different forms of gradation before the Bologna reform. Some study programs contained a pre-diploma stage of one to two years that was completed with an intermediate exam. In other programs, only a few courses were defined as introductory courses in the first study phase. This was followed by the main study period, lasting two, two and a half, or three years, depending on the discipline. The program was completed with a larger thesis (licentiate or diploma thesis) for which there was no standard temporal specification, but in most cases was supposed to take between four months and one year. The program culminated in five to ten examinations covering content learned over the entire course of study.

In none of the study programs was the first phase conceived of as a degree in its own right or its completion as an opportunity to change programs. Rather, all programs were designed to be completed after four and a half or five years. However, in some fields of study one could choose a focus after completing basic courses.

At universities of applied sciences and universities of teacher education, which were not founded in Switzerland until the mid-1990s and the early 21st century, respectively, the entire program took three or four years. This diploma program was subdivided according to subject into different phases analogous to those of universities.

With the Bologna model, a formal subdivision is created for tertiary education in Switzerland too, which will be "transdisciplinary" and apply to all types of institutions: A first degree is intended to be

completed after three years or a total of 180 European Credit Transfer System (ECTS)[3] credits (Bachelor), a second degree after a further 1.5 to 2 years or 90 or 120 ECTS credits (Master's; only exception: medicine).

Between 2000 and 2007, all Swiss university degrees were reformed according to this model. At universities the Master's degree is considered the standard qualification. Universities base the design of their curricula on this degree as, generally, do the accepting institutions regarding their requirements for Master's graduates. Nevertheless, it is possible to graduate from university with a Bachelor's degree.

Gradation emphasizes vertical differences, *i.e.* differences in the levels of qualification that must also be defined in terms of content. In the "Bologna discussion," these differences are systematically illustrated by means of descriptors. In the scheme of so-called "Dublin descriptors," competence categories are defined which can be assigned to academic levels or degrees according to qualification standards. The individual countries shall develop the descriptors according to their educational system.

The systematic structuring and description of study programs with reference to competence models make clear study programs' positions and requirements. This transparency should increase the comparability of study programs. The requirements become more discernible, which will make it easier for students to change disciplines and the place of study.

At the same time, the study programs are asked to clarify the content-related – and therefore qualitative – differences between the academic levels. In particular, they must demonstrate that the Master's level is not merely a temporal extension of the Bachelor's level and thus the study program, but rather leads clearly to a higher or more distinguished qualification.

The study programs at Swiss universities have hardly changed in their content orientation as a result of the Bologna reform. For example, the traditional subject "History" is still being offered as a course of study at different universities. Nevertheless, the choices have increased, with the subject of History being studied at different levels and thus with expanded supplementary options. All in all, this has made the course offerings more diverse and complex.

Work-oriented study programs hardly offer any such options. Here, the programs are still oriented to specific learning outcomes; students' freedom is very limited. Moreover, the subdivision of a Bachelor and Master level is seldom associated with options for changing the course of study.

Some universities are beginning to offer expanded study options at the Master's level by using the program's gradation to provide new course offerings by way of new discipline combinations. The University of Basel, for example, offers a few cross-departmental Master's programs which integrate

[3] "ECTS is the credit system for higher education used in the European Higher Education Area. […] ECTS is a learner-centred system for credit accumulation and transfer based on the transparency of learning outcomes and learning processes. […] ECTS credits are based on the workload students need in order to achieve expected learning outcomes. […] 60 ECTS credits are attached to the workload of a fulltime year of formal learning (academic year) […]." (European Commission, 2009, p.9 and 11)

several disciplinary perspectives. The admission requirement for such Master's programs is a Bachelor degree in one of these disciplines.

An information platform of the Rectors' Conference of the Swiss Universities (CRUS) shows the respective options for students with a particular Bachelor's degree. At the same time, it clarifies the various procedures of the universities and individual faculties. While, for example, students with a Bachelor's degree in History can join ten Master's programs at the University of Zurich without additional requirements and conditions, their counterparts in Bern can choose from twenty-seven options. For the subject Biology (Bachelor's degree), there are sixteen options in Zurich and five in Bern.

The structuring of the program into two academic levels creates different options for students with a Bachelor's degree. Today it is possible for Bachelor graduates to take up an occupation or continue their studies at the Master's level either in the same or—usually subject to certain conditions—another related field. If they choose the professional path, they still have the option of starting a Master's program at a later time.

What are Switzerland's experiences at the interface between Bachelor and Master? Which paths do the students take after getting their Bachelor's degree? And to what extent do they use the opportunities to take other paths instead of continuing their studies in the same field as their Bachelor's program?

Swiss Federal Statistical Office data from 2012 (BFS, 2014a, pp.4-5) paint the following picture, which is confirmed by the less detailed 2013 Bologna-Barometer (BFS, 2012, 2014a). University Bachelor's degrees have a graduation rate of 79%: *i.e.* four out of five students who began studying in 2003 at a university obtained at least a first degree after eight years at the latest. Of these Bachelor graduates, about 10% changed their subject over the course of their studies and about 5% continued studying at a university of applied sciences or teacher education.

The transfer rate, *i.e.* the percentage of Bachelor graduates who take up a Master's program immediately or with an interruption of no more than two years, is largely dependent on the field of study. In addition, the ratios differ between universities and the other two types of institutions, as the Master's degree is considered the standard university qualification.

The following is observed for universities: in Medicine, the Technical Sciences, and Law, nearly all Bachelor graduates go on to study a Master's program (97-99%). The quotas of the Exact Sciences and Natural Sciences are somewhat lower at 92%, and those of the Humanities (75%) and Social Sciences and Economics (78%) considerably lower (BFS, 2012, p.12).

Entering the Master's level is an opportunity to continue one's studies at a different institution. Of all the Master's students at Swiss universities in 2012, 34% had obtained their Bachelor's degree at a different institution. Almost two-thirds (19%) of these mobile students had completed their Bachelor abroad, and one third (11%) had obtained theirs at another Swiss university (CRUS, 2014, p.17).

In the transition from the Bachelor to the Master level one can observe a vertical mobility that is rather weakly linked to a change of institution type. While less than 1% of all university Bachelor graduates continue with a Master's program at a university of applied sciences or teacher education, 4% of university of applied sciences Bachelor graduates and 2% of university of teacher education Bachelor graduates switch to a university Master's program (BFS, 2012, p.5).

On the other hand, subject-related vertical mobility, *i.e.* when the Master's program is in a different subject than that of the Bachelor's program, is somewhat more common. 5% of Master's students obtained their Bachelor's degree in a different discipline. It is also interesting that the switch from the Humanities and Social Sciences to Economics is especially high and that this change happens more frequently when some time elapses between the Bachelor and Master program. Moreover, one can assume that changes of subject within the disciplines are even more frequent (BFS, 2012, p.19). These observations can only be compared with caution to the circumstances preceding the Bologna reform. However, they reveal that students indeed make decisions at the Bachelor/Master interface regarding their educational trajectory or whether to then enter a profession. Such decisions were surely taken before the Bologna reform as well, but the students did have less information.

Modularization

Although the Bologna Process and modularization are often mentioned in the same breath, modularization is referenced in neither the Bologna Declaration (1999) nor the communiqués of subsequent conferences; in any case, the modularization of higher education is not required explicitly. Accordingly, there is no corresponding European reference document. The fact that the modularization concept was still largely implemented in connection with the Bologna reform, albeit interpreted differently by various countries (Keller, 2006), is likely related to Bologna's demand for the use of a credit point system.

In the present context, modularization is relevant as an element that can have a structuring effect. Modularization helps us answer a traditional issue of curriculum design: how can learning content and objectives be portioned into units that are manageable for students and put in a temporal sequence? This problem is twofold: for one thing, it is an education-theoretical problem of selection because more knowledge is available than can be taught and learned in educational institutions. For another thing, it is a learning psychology issue: when is the best time to learn what, what conditions must be met, what comes next, and what comes first?

The modularization of study programs is mainly a principle of structuring and sequencing the offered courses. Modules are learning units that do not necessarily need to be coordinated sequentially. Competence-oriented learning units have their own content-based importance, but they always have a functional purpose for a greater whole as well. Basically, modules as learning units, as part of several

higher-level units, can meet various classification criteria simultaneously and be combined with each other (Frommberger, 2005).

Modularized study programs thus provide opportunities for flexibilization. These comprise several aspects:

- more elective options, as modules can be chosen both for a specific study program as well as by individual students;
- more admission, transfer, and termination possibilities for a single study program, thanks to the portability of modules; and
- the integration of credits earned elsewhere, thanks to transferability.

All in all, modularized study programs can be structured with more transparency and flexibility. This creates more freedom for the various stakeholder groups. Essentially two types of models can be distinguished, namely supply-oriented and demand-oriented forms of modularization (Gonon, 2005). While the first type still leaves the formative power largely to the educational institutions regarding the sequence and structure of the modules and thus follows past tradition, the demand-oriented model leaves such decisions largely to the users. This is an advantage for education providers and institutions: all told, modularization enables a quicker adaptation to new requirements. Single modules can be substituted or counted as credit toward different study goals. And in cooperation with other universities, single modules can be offered jointly or in alternation, which increases efficiency and lowers costs.

The freedom of students can be pre-structured to varying degrees in modularized study programs. If there are adequate electives and less strictly defined required courses, the students receive a significant amount of personal responsibility for achieving qualifications that are tailored to their expectations. Freedoms can be found within modules as well. By consisting of several elements (different classes or assignments), elective options can also be created within modules – for both the university and the student. The important feature of modules is their competence orientation: by successfully completing a module, the acquisition of describable and verifiable skills is documented. Only after an evaluation of these competences is made are credit points awarded; these do not, however, reveal anything about the quality of academic achievement, but are rather a measure of the student's workload in this module.

Proofs of achievement always show individual study quality and are graded accordingly. They are thus important feedback for students regarding their learning process and possible improvements as well as the search for the right study order and planning individual studies. Modularization as a structuring principle is used in all university study programs. However, the module conceptions are by no means homogeneous and in some cases reveal contradictory interpretations. There are also large differences regarding module size:

Guidelines regarding module size do not exist in Switzerland, but experts generally recommend between three and nine ECTS credits per module, and 30 ECTS credits for a written Master's thesis. Some institutions have university-wide recommendations or guidelines, usually with the aim of facilitating the use of modules, also across disciplines. Too-small modules increase the fragmentation of the study program and complicate the big picture. Altogether—according to one point of criticism—modularization has supposedly led to breathless hecticness. The focus is no longer on delving into the subject matter, but rather on test scores and collecting credits. Proof of achievement is integrated into modules, whereby this takes on various forms. These proofs of achievement can be staggered and completed at the same time as the module. Interestingly, the program's flexibility and individualization as intended by modularization are hardly taken into account in the particular case of proofs of achievement (Hildbrand & Tremp, 2008); instead, tests are "applied."

In some study programs modularization is adapted to a training course model. In a training course model, the sequence of all or nearly all the learning units are prescribed systematically and according to academic regulations. The training course principle is based on a learning concept as a mostly compulsory sequence of units of knowledge and skills acquisition. The order of learning units is prescribed by the educational institution and is only (and also formally) finished upon completion of the degree. While in work-oriented programs the course content focuses to a large extent on successfully entering the respective profession and offers relatively few elective options, Humanities programs are often devised as a combination of various disciplines. In this case, major and minor subjects are studied. Thus, fields of study are created that can effectively be referred to as "macro modules." "Macro modules" can also be observed in terms of time. For this reason, different study programs have defined actual introductory phases that summarize different modules and in some cases are even completed with an examination.

Supporting instruments

To support establishment of the European Higher Education Area some instruments were created that support "harmonization via a common range of topics." Such instruments include:

- introduction of the "student workload" aspect;
- introduction of ECTS, also as an accumulative credit system;
- definition of academic levels based on ECTS credit points;
- documentation of academic performance in the Transcript of Records;
- documentation of the educational system in the Diploma Supplement;
- clarification of academic levels based on the European and related National Qualifications Frameworks; and
- introduction of the Learning Agreement to accompany studies abroad. 0

The aspect of study courses' feasibility demands a real assessment of student effort to achieve a specific learning outcome. This "student workload" principle helps students to plan their studies more efficiently. It is supposed to ensure that a study program can be successfully completed within a limited amount of time that is generally accepted as being expedient. A comprehensive change in perspective is connected with the principle of taking the student workload into account while designing study units. The previous model was characterized predominantly by two elements: number of hours per week and total duration of the program. The student workload emphasizes the shift from teaching to learning and establishes the time for study activities as a relevant measurement. Student workload is thus a departure from the traditional orientation to the instructors' teaching time and defining the effort required for competence acquisition based solely on student attendance hours. Focusing on the study program and all of its activities also raises awareness of self-learning.

Even before the signing of the Bologna Declaration there was a credit point system in place that took into account student workload, especially in connection with student mobility—the European Credit Transfer System (ECTS). This system is being developed from a transfer- to an accumulative system in the Bologna Process and plays a central role in the assessment of academic achievement at the home university as well. ECTS credit points are establishing themselves as a "new artificial currency" (Kühl, 2012). Because the awarding of ECTS credits is tied to reviewed, satisfactory achievement, the testing system is also changing. The large intermediate and final exams are being replaced by numerous smaller performance assessments that are done concomitantly with the study program.

The introduction of credit points as part of an accumulation model is connected with a number of questions that accompanied its implementation especially during the first years. Can learning processes be standardized in terms of time? Can teaching/learning units be planned so precisely? How great are the individual differences between the students concerning learning time and effort? These questions point to the necessity of an understanding between instructors and students regarding practical application so that this timescale can be established as a useful orientation for instructors and students alike. Credit points are also comprehensively becoming the central unit of measure for the academic levels. Thus, the Bachelor level in Switzerland uniformly comprises 180 ECTS credits, while the Master's level is classified as 90 or 120 ECTS credits and the exceptional case of medicine 180 credits. Here, an ECTS credit is equivalent to 30 student working hours and a semester equivalent to 30 ECTS credits, *i.e.* approximately 900 student working hours.

The achieved program result is finally certified in line with the goals of the Bologna model with a diploma with evaluative grades. This is complemented by the Diploma Supplement, which contains information on the individual elements of the completed study program (Transcript of Records) and places the program in the context of the national education system. Both instruments enable better comparability between study programs and educational qualifications. They indicate the subject

matter and study modules completed by the individual students. Depending on a curriculum's elective options, students can tailor these to create an individual qualification profile.

The Learning Agreement is promoted in order to directly support student mobility. In this medium, which was already used in mobility programs before the Bologna Declaration, credits taken as part of an exchange at a different university can be planned, visited, and successfully completed. Central here is the agreement between the university and the student regarding the recognition of these credits toward the degree at the home university.

New roles and tasks

The implementation of the Bologna model is also connected with organizational changes (CRUS, 2007b, pp.94-96; Winter, 2009, pp.71-75). Both the structuring of a two-tiered system and modularization call for an intensive exchange of information between the involved persons and continual observation of the interaction between the various elements. Therefore, two functional roles in particular have clearly become more important in recent years: program directors and student advisors. After all, demands on management have also increased. Altogether, one can see that "teaching and learning" as a university performance area has gained significance which is also reflected in the workloads of professors and their staff (Schomburg *et al*., 2012).

The increased orientation to the students, their learning processes, and the targeted learning outcomes is changing awareness. Even planning a new study program raises new questions and poses new demands, which is also apparent in the tasks and responsibilities regarding curriculum design. By now, most study programs recognize the function of a program director who keeps an eye on the composition of offered courses and occasionally makes optimizations. To this end, this person coordinates the modules, their objectives and subject matter, and performance assessments between the individual professors with the curriculum as a whole in mind. "Academic freedom" is thus increasingly regarded as the freedom of a university to design its own programs. The teachings of individual instructors, however, must coordinate with the respective course offerings of their colleagues.

Compared to the study programs before the Bologna Process, this may also be connected to a change in the relationship between research and teaching: recently, course contents are now derived primarily from the students' qualification objectives; instructors' research topics influence their teaching but only secondarily and as derived from the study programs' qualification objectives. For this reason, the research of individual instructors is no longer relevant to the curriculum per se; rather, the research orientation of university programs must be redefined (Tremp & Hildbrand, 2012).

The orientation to the students' learning processes together with increased options for students is also seen especially in the growing importance of student advisory services. This was also recognized by CRUS early on in the process (CRUS, 2007b, p.96). Many study programs have intensified their

advisory services and differentiated them internally. These advisory services include already improved information aimed at prospective students regarding the study programs, individual classes, course work, *etc.* As ever, there are still numerous advisory services provided for students in the first semesters and for mobile students. In addition, there are a growing number of advisory services for specific issues such as combining studies and employment, studies and family, or studying with a disability.

The function of an expert student advisor has been enhanced in recent years. One of the advisory services' most important questions is how students find the path through their studies that best suits their personal interests and optimally takes into account their (possible) career ideas. The student advisory services' function will become even more important in the future as study programs increasingly take advantage of a modularized structure and allow more "combination offerings." Advising students will also increasingly become the task of individual instructors. The mandatory proofs of achievement that take place over the course of studies in particular serve as an opportunity to talk with students and to discuss strengths and weaknesses as well as possible alternative courses of study. In programs with large numbers of students, this will only be possible to a limited degree, however. Therefore, it is necessary to empower students in their learning and studying competences so that they can design and take responsibility for their studies themselves.

Across the entire university organization, new collective control systems are also being established. These committees, commissions, and conferences are usually composed of all the professors in a program, representatives of other groups involved in teaching, as well as student representatives. The tasks of these committees usually include designing curricula content, determining academic qualifications for program admission, and quality assurance activities. They do not deal with individual cases but instead develop medium-term development plans and provide general rules for the study program as well as for teaching.

Implementation

The Bologna reform was the central topic of higher education development in recent years. Some goals have not yet been met. Nevertheless, structures and concepts have changed considerably within just a few years. The rapid and largely successful implementation of the Bologna reform in Switzerland was framed by binding guidelines that the Swiss University Conference (CUS) adopted for all universities at the request of CRUS. These guidelines were also coordinated with the committees responsible for the universities of applied sciences and teacher education sectors, so that the same basic structures and structural elements apply for the entire Swiss higher education system. Some further important aspects should also be mentioned briefly:

Speed: The transition occurred quickly and, at least in Switzerland, comprehensively. From the signing of the Bologna Declaration to the adoption of basic rules applicable at all universities by the

Swiss committees, around 4 years passed. This is remarkable, considering the numerous approval processes involved. Moreover, many universities began the necessary planning and implementation work before the final adoption of the guidelines, so that after only five to seven years all new programs offered were in accordance with the new model.

Time for optimization: Such a comprehensive redesigning of learning and teaching with all its organizational repercussions cannot be successfully implemented all at once. Therefore, it was expected from the beginning that individual elements must be analyzed and optimized after a trial period (CRUS, 2014, pp.15-16). However, this demanded considerable perseverance from the involved parties at times, as changes which require adjustments in regulations sometimes have very long lead times. This resulted in longer debates, especially in cases of controversial aspects such as the frequency of examinations or the elimination of comprehensive final examinations, although the need for action was well recognized.

Monitoring and supplementary studies: As a supplement and in order to recognize areas of improvement, monitoring studies were carried out. Most universities also performed their own analyses, for example on the examinations and module concepts, or the students' workload. CRUS has documented the overarching aspects throughout Switzerland every two years in a monitoring report, discussed these internally, and submitted them to the supervisory committees. Based on the findings, the regulations were adapted and further recommendations were issued to the universities. A review of the universities of applied sciences was created in 2010 and put to the responsible committees with the next developments in mind (von Matt, 2010).

Getting students involved: Students were involved more or less intensively with all of these endeavors. They contributed via representatives in the overarching management committees, and they were also heard in the individual universities and individual fields. In some cases, however, this involvement was delayed and took place only after student protests. This occasionally meant that controversial aspects had to be reassessed at a later date and in some cases redesigned.

Discussion: Recognizing and utilizing flexibilization potential

The European Higher Education Area is constituted by some structural elements whose concrete forms are not yet definitively established. For the Bologna Process, a series of lines of action were defined which are to be processed in the national higher education systems and by the individual institutions. Thus, harmonization is primarily carried out in topical areas in which open-outcome questions are being asked; the answers and concrete forms of implementation in the various institutions and study programs may differ significantly, however. Indeed, the harmonization of questions also sharpens the outlook on different forms of implementation and draws attention to the freedom as well as the responsibility of individual institutions.

The various actor groups assess these developments from different perspectives and with different expectations. In this section, the question of academic structures' flexibility will be discussed from the students' and the university's perspective. Starting from the assumption that the structurings connected with the Bologna reform above all reveal the potential for multi-perspective, flexible use. So how and where do the Bologna modifications open up further potentials for students and universities?

Individual design options for students

First, for students such potentials are in profiling a degree by tailoring content. Students can give their degree a unique character. Depending on the curriculum, modules can be freely selected to varying degrees. Because these are presented in the Diploma Supplement, such individual interests are easily shown. To what extent this is already being perceived by employers is yet unknown, however. These potentials for students are also dependent on the university's programs and regulations.

Further potentials lie in the course-related performance assessments that are connected to modularization. The students receive regular feedback on their academic achievement and progress within the program. This feedback reveals where the individual strengths and weaknesses lie and can be combined with a student advisory consultation. This guidance, but also the feedback in itself, offers students the opportunity to set a new specialized focus, to switch to a new subject, or to completely reorient themselves, even outside the university sector. The newly introduced Bachelor-Master gradation further intensifies the issue of how to best continue one's studies. First experiences show that numerous students redefine their educational and/or professional paths at this point.

By incorporating student workload and gradation, the study phases become more transparent with regard to both time and effort and overall duration. Together with modularization, which, depending on the regulations, also allows part-time studies, study programs generally become easier to plan. This makes it possible for persons of different circumstances to undertake a degree program, as they can define the path through their studies that is best suited to them. These possibilities are additionally supplemented by e-learning, which supports studies that are less constrained by time and locality.

In the case of mobility, too, additional potential for flexible use for the students has been created by the structures. The program contents are comparably described and formally structured at the home and guest universities. This supports the planning of a mobility stay and the creation of a learning agreement. This ensures students more security with regard to credit recognition. With these possibilities, students can also use mobility as a profile-building complement to their study qualifications which is then presented in the Diploma Supplement.

In sum, it can be stated that structuring shows the students in several ways which potentials exist for a flexible use of the offered courses at a specific university and in a specific degree program. This increases the individual elective and design options for students. To what extent these potentials exist

crucially depends on the regulations determined by the universities. However, again and again limitations can be identified that hamper the flexible use of the new structures. Compulsory attendance, proofs of achievement, or exams can be prescribed in a way that leaves students little freedom, from both a formal perspective and in terms of time. The recognition of credits earned outside of universities is not always guaranteed either, although supporting lifelong learning in particular requires accommodation. Finally, the combination and elective options may be limited so that students cannot create a profile that adequately suits their needs.

Profiling possibilities for universities

Universities traditionally see their profiling opportunities in their research profile—and to a lesser extent in their offered programs. With the Bologna reform there are now an increasing number of university positioning strategies in the German-speaking countries that refer to teaching and learning. These emphasize either a more content-based profiling or a special consideration of student concerns. Content-based profiling is especially reflected in offered courses with a specific focus. Such focuses emphasize their cross-disciplinary character, for example, or highlight special issues of the labor market. This shows what potential is inherent in flexibly organizable programs: Courses of study become feasible that are geared toward new central questions or specific challenges of certain occupational fields. Such new study programs can be created, for example, from a combination of modules from different disciplines. Furthermore, they can also use gradation purposefully, for instance by building on a variety of Bachelor's degrees and providing a profiled Master's program.

For Switzerland, however, the individual universities have been rather conservative when it comes to utilizing such opportunities. The traditional division of the study programs along disciplines (or profession-oriented lines) and their borders have remained largely intact. The previous study programs have indeed been tiered, but they continue to be similarly profiled in terms of content and with the same formal structures. This may also be related to the fact that the close connection between research- or discipline-oriented organizational structures and academic structures can only be overcome by conscious strategic objectives: study programs are located in institutes that are defined by their disciplines. However, modularization and the gradation of study programs would offer opportunities to create new combinations, and thus generally further loosen the ties of a study program to a single institution.

Yet this leads to the question of whether or not this would ignore or sacrifice a traditional guiding principle of the university, namely that the disciplines also correspond to a distinct field of research. This is because interdisciplinary programs would reach their limit where interdisciplinarity cannot achieve a certain autonomy in research. For another thing, the study programs and the university as a whole can focus especially on specific concerns of the students. Thus, it is conceivable that new

structural elements would improve the possibilities of a part-time study program, which could be systematically implemented by a university as a strategic position.

Here, too, Swiss universities have been cautious thus far. Instead, the "competition for the best students" is emphasized, whereby "best" is used in a largely non-specific sense. The distinguishing of a university's profile through the use of flexible structures would enable and require a more precise definition of what is meant by "best" students: namely those that best fit the university's profile in terms of content. "Best" would thus receive a substantive definition and flexibilization and profiling would come together.

Numerous universities define their profiles with increased internationality in mind, also in teaching and learning. This profile-building has both content- and addressee-related aspects: for example, study programs are increasingly being offered that explicitly emphasize the international dimension. "Bologna" also offers improved possibilities for international cooperation between the study programs. On a more practical level, however, is the question of the language of instruction: in order to attract students from beyond the national language area, numerous lectures and increasingly even entire programs are being offered in English. In this sense, it can be stated that in the authors' view Swiss universities are not yet harnessing the potential of the new structures and structural elements to develop study programs aimed at specific issues or target groups. There is still some hidden potential that surely will and must be used increasingly in the coming years.

Necessary further developments

Flexibilization is not an explicit objective of the Bologna reform. Nevertheless, flexibility has become a central demand of various actor groups. Flexibilization, as understood here, aims to create more possibilities for various stakeholder groups. However, flexibilization is not a value in itself, but is rather motivated in terms of content. This motivation can be understood as the result of changed circumstances and thus a change in the relevance of a study program. For example, the diverse lives of students require diverse design options for their courses of study. In addition, the future requirements of academically educated people are unclear and therefore demand greater flexibility when it comes to building a qualification profile. Hence, it makes sense to use flexibility potential to meet these multidimensional requirements.

However, it is also clear that maximal flexibility cannot be the goal—neither for a university nor the students. This is neither feasible for the institution, nor sensible for the individual course of education. It is therefore recommended to strive for an optimal balance between the institution's responsibility for the study programs and the students' responsibility for their studies. This means, for example, that a study program should allow enough time and space to delve into the subject matter so that a deeper understanding and an academic education can actually be achieved.

The Bologna Process but also many other developments in society, business, culture, and politics have caused considerable changes in the universities. The structuring and common instruments which the European Higher Education Area has had at its disposal for some years still hold much untapped potential which is only just beginning to be noticed. This is also the case regarding the use of flexibilization potential in teaching and learning. Therefore, for further development it is necessary to understand that flexibility also always has an overarching dimension. Although ultimately individuals or individual institutions benefit from flexibility, flexibility potential is ultimately created only in an overarching perspective. Individual characteristics become feasible and visible thanks to the fact that we have common structures, open system boundaries, and ultimately a common understanding of the system at our disposal. The Bologna Process has done its part to achieve this. Now flexibilization potential must be used innovatively and purposefully by the universities and their actors.

References

Bundesamt für Statistik (BFS). (2011). *Mobilität der Studierenden. Absichten, Erfahrungen und Hindernisse*. hg. v. Bundesamt für Statistik, Bern.

BFS. (2012). *Bologna-Barometer 2011*. hg. v. Bundesamt für Statistik BFS, Bern.

BFS. (2013). *Hochschulabsolventinnen und Hochschulabsolventen auf dem Arbeitsmarkt. erste Ergebnisse der Längsschnittbefragung 2011*. hg. v. Bundesamt für Statistik BFS, Bern.

BFS. (2014a). *Bologna-Barometer 2013*. hg. v. Bundesamt für Statistik BFS, Bern. Retrieved September 29, 2014, from http://www.bfs.admin.ch/bfs/portal/de/index/themen/15/06/dos/blank/03/02.print.html

BFS. (2014b). *Soziale und wirtschaftliche Lage der Studierenden 2013*. hg. v. Bundesamt für Statistik BFS, Bern.

BFS. (2014c). *Maturitätsquoten 2013*, (Path: Statistischer Atlas der Schweiz - 15-Bildung, Wissenschaft - Abschlussquoten - Maturitätsquoten – 2013). Retrieved October 27, 2014, from http://www.atlas.bfs.admin.ch

Rectors' Conference of the Swiss Universities (CRUS). (2002). *Zentrale Dokumente zum Bologna-Prozess in der Schweiz*. hg. v. der Projektleitung Bologna-Koordination der CRUS, Bern.

CRUS. (2003). *Empfehlungen der CRUS für die Anwendung von ECTS an den universitären Hochschulen der Schweiz*. hg. v. der Projektleitung Bologna-Koordination der CRUS, Bern.

CRUS. (2004). Empfehlungen der CRUS für die koordinierte Erneuerung der Lehre an den universitären Hochschulen der Schweiz im Rahmen des Bologna-Prozesses. *Fassung vom 16*. hg. v. der Projektleitung Bologna-Koordination der CRUS, Bern.

CRUS. (2007a). Empfehlungen der CRUS für die koordinierte Erneuerung der Lehre an den universitären Hochschulen der Schweiz im Rahmen des Bologna-Prozesses. 2. *grundlegend überarbeitete Fassung vom 3*. hg. v. der Projektleitung Bologna-Koordination der CRUS, Bern.

CRUS. (2007b). *Zwischenbericht der CRUS zum Stand der Erneuerung der Lehre an den universitären Hochschulen im Rahmen des Bologna-Prozesses einschliesslich des Reporting 2006 zu den Kooperationsprojekten «Bologna-Initialkosten» und «Bologna-Initialkosten in der Medizin»*. hg. v. der Projektleitung Bologna-Koordination der CRUS, Bern.

CRUS. (2009). Qualifikationsrahmen für den schweizerischen Hochschulbereich nqf.ch-HS, mit Zustimmung aller drei Hochschulrektorenkonferenzen vom gemeinsamen Lenkungsausschuss (la-hrk.ch) verabschiedet am 23. November 2009 (aktualisierte Version vom 20. September 2011) von der Schweizerischen Universitätskonferenz (SUK) am 30. Juni 2011 genehmigt soweit er die Universitäten betrifft, Bern

CRUS. (2011). *Modularisierung als Instrument – Checklist für die Gestaltung und Implementierung von Modulen*. hg. v. der Bologna Koordination der Rektorenkonferenz der Schweizer Universitäten, Bern.

CRUS. (2013a). *Zulassungspraxis beim Übergang Bachelor-Master in der entsprechenden Studienrichtung*. hg. v. der Koordination Lehre der Rektorenkonferenz der Schweizer Universitäten, Bern.

CRUS. (2013b). Flexibilisierung – Grundsätze zum Teilzeitstudium, *verabschiedet am 5*. hg. v. Koordination Lehre der Rektorenkonferenz der Schweizer Universitäten, Bern.

CRUS. (2014). *Bologna-Monitoring 2012/2014. Schlussbericht*. hg. v. der Rektorenkonferenz der Schweizer Universitäten, Bern.

European Commission. (2009). *ECTS Users' Guide. hg.v.* European Commission, Brussels.

Frommberger, D. (2005). Modularisierung als Standardisierungsprinzip: Eine Analyse zum «Mainstream» der administrativen Steuerung von Lernprozessesn und Lernergebnissen in Bildungs- und Berufsbildungssystemen. *Schweizerische Zeitschrift für Bildungswissenschaften, 27* (2), 193-206.

Gonon, Ph. (2005). Modularisierung im Zeitgeist – Zeitgeistmodule: Ursprung. *Kontext und Konsequenz. Forschung und Lehre, 12* (2), 66–67.

Hildbrand, T., & Tremp, P. (2008). *Die Curricula-Reform an Schweizer Hochschulen. Stand und Perspektiven der Umsetzung der Bologna-Reform anhand ausgewählter Aspekte.* (= Berichte zur Umsetzung der Bologna-Deklaration in der Schweiz, 13/2008). CRUS, Universität Zürich.

Keller, H.-J. (2006). Die Modularisierung und der Bologna-Prozess. *Beiträge zur Lehrerbildung 24* (3), 303-314.

Kühl, S. (2012). Zur Einführung einer neuen ‚Kunstwährung' an den Hochschulen – Die Vergleichs- und Tauschfunktion von ECTS-Punkten. In U. Wilkesmann, C. Schmid (Eds.), *Hochschule als Organisation* (pp.325-344). Wiesbaden: Springer VS 2012.

Müller, B. (2012). *Die Anfänge der Bologna-Reform in der Schweiz*, Bern.

Ryter, E. (2014). *Das Diploma Supplement. Zum Informationsgehalt der Diploma Supplements an schweizerischen Fachhochschulen – ein Bericht im Auftrag des Staatssekretariats für Bildung, Forschung und Innovation SBFI*, Bern

Schomburg, H., Flöther, C., & Wolf, V. (2012). *Wandel von Lehre und Studium an deutschen Hochschulen–Erfahrungen und Sichtweisen der Lehrenden*. Projektbericht, Kassel: Internationales Zentrum für Hochschulforschung (INCHER-Kassel), Universität Kassel

SUK. (2003). *Bologna-Richtlinien und Kommentar, 4*. Dezember 2004, hg. v. der Schweizerischen Universitätskonferenz, Bern

Tremp, P., & Hildbrand, T. (2012). Forschungsorientiertes Studium–universitäre Lehre: Das «Zürcher Framework» zur Verknüpfung von Lehre und Forschung. In T. Brinker, & P. Tremp (Eds.), *Einführung in die Studiengangentwicklung* (pp.101-116). Bielefeld: Bertelsmann. (Japanese version: (2014). 研究指向の勉学—大学での教育: 教育と研究の結び付けのためのチューリヒ式フレームワーク)

von Matt, H.-K. (2010). *Bologna-Report Fachhochschulen 2010. Stand der Umsetzung der Bologna-Reform an den Fachhochschulen*. hvm-consulting gmbh, Luzern.

Winter, M. (2009). *Das neue Studieren. Chancen, Risiken, Nebenwirkungen der Studienstrukturreform: Zwischenbilanz zum Bologna-Prozess in Deutschland*. HoF-Arbeitsberichte, Wittenberg.