

KEYNOTE: 20 YEARS BOLOGNA – AND STILL MORE TO GO?

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PRE-PRINT

from the Proceedings of the SILVA Network Annual Conference
Twenty years after the Bologna Declaration -
challenges for higher forestry education
held at the Forestry Faculty, Technische Universität Dresden

June 19th – 21th, 2019

This publication has been peer-reviewed.

Please cite as: Lewark, S. 2021: Keynote: 20 years Bologna – and still more to go?

In: Schmidt, P., Lewark, S. and Weber, N., (Eds.): Twenty years after the Bologna declaration – Challenges for higher forestry education. SILVA Publications 17, Dresden.

Pre-publication published online at <https://ica-silva.eu/>



SILVA Publications 17, 2021
Editors: P. Schmidt, S. Lewark, N. Weber

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Abstract

In June 2019 the twentieth birthday of the Bologna Declaration was celebrated at the University of Bologna. In this keynote goals, implementation, impacts and perception have been reviewed from the perspective of a professor who has been involved in curriculum development and teaching in higher forestry education at the University of Freiburg, Germany, and in accreditation commissions. One general observation is that in the general public the Bologna Process is not an issue anymore. It was not an issue in SILVA Network either at the time of the anniversary or in the years before, after heated discussions ten years ago.

The implementation of the three cycle study programme structure has meanwhile been completed to a large extent, the new study programmes have been accredited. The traditional mobility of students of higher forestry education had initially suffered, but most obstacles have been overcome with sophisticated amendments. However, the many goals of the Bologna Process do not seem to be of high relevance in higher forestry education, nor in other disciplines.

Learning and teaching is considered one of the core tasks of universities. However, innovative learning and teaching approaches like student-centered methods have been included in the goals of the Bologna Process only recently. Some fundamental, expertise based publications for this topic are found, but a major impact on the ground is not to be expected very soon.

E-learning techniques and tools have been used in higher forestry education for many years for on-campus applications, but not much for distance learning. The new relevance as a consequence of the Corona pandemic is obvious and will be evaluated in the up-coming (2021) annual conference of SILVA Network.

Consideration of equity of gender and diversity also became a goal some years after the Bologna Declaration. The included related teaching continues to have a meagre existence, in spite of the programmatic political priority on EU level.

Generally, one can conclude that the Bologna Process mostly was not welcomed in higher forestry education, but implemented anyway. The faculties of forestry have arranged themselves with the regulations and structures. There is no new discussion of reform vision in sight, although substantial, observable changes of learning and teaching have not yet been induced by the Bologna Process.

Happy birthday, Bologna!

Twenty years of the Bologna Process may deserve an appropriate birthday party. At the same time this is a good reason for the stakeholders to look back and to evaluate the achievements.

There was a grand celebration indeed, few days after the SILVA Network annual conference in June of 2019, with an academic procession of Ministers and Rectors, the latter in their academic gowns, at the dignified University of Bologna. Fitting speeches were held.

As the Bologna Process was an ambitious undertaking and indeed fundamentally changed higher education all over Europe, this anniversary is also reason for reflecting on the goals of the process and the reality of learning and teaching in the universities in 2020, as the learning results are what it is all about.

That is to say universities are the places of learning and teaching, not the ministerial arenas on national and international level. Therefore, stakeholders in processes of study reforms are in the first place the learners and teachers, the students and professors. Next are the faculties that decide about the curricula. And only then come the administrations on university, national and international level that should do what they possibly can do to facilitate learning and teaching on the level where it happens.

These convictions are the fundamentals for the following observations.

The perspective

My perspective is that of a university teacher in the first place, enriched by experience in curriculum commissions and accreditation bodies, and in academic networks on international level, mostly in IUFRO and, of course, in SILVA Network. In different functions, not to forget memories from own student times, I lived to see learning and teaching processes and study reforms, most of them long before the Bologna Declaration, then the implementation of the Bologna transformed study programmes and their early years.

The Bologna Process met quite different situations at the European faculties of forestry. At Freiburg university, there had been an intensively discussed, radical revision of the forest sciences programme in 1995. That had resulted in a startling, theory-based, innovative study programme, described several times, including in SILVA Network publications (e.g. Lewark, 1998, 2002a, 2002b, Weber and Lewark 2004). A credit point system had been developed and been in use, one of the very few in Germany. Over its ten years of existence the programme had received internal and external evaluations and got a teaching reward of the State of Baden-Württemberg. There were favourable comments, and some proposed adjustments made. There was

thus no reason for a new radical change when the Bologna ideas came to university level some years after the Bologna Declaration. On the contrary. As the following years showed, most didactic and structural innovations of 1995 were abandoned when the new regulations were implemented. This was mostly because they were considered not fitting into the new structures required very strictly by the university.

The observations presented here are certainly subjective and only a limited selection of relevant issues, given the major changes in the learning and teaching situation over the last years. Some will relate to the process of implementation of the Bologna Process and early experiences, being more general, others more specific to the forest sciences curricula. In addition, I was asked to include two specific topics, because of own early teaching experiences, the subject of gender and diversity in the study programmes, and e-learning.

The Bologna Process, its structures and players

The celebration

The perception of the Bologna Process by the cooperating European governments after 20 years may be found condensed in the programme of the birthday celebration. Who held the speeches, who participated and listened, who was invited? There were many ministers, rectors and directors, but no university teacher dealing with learning and teaching is listed. This sheds some light on the focus of the celebration and thereby of the Bologna Process. The official programme includes the topic of learning just once, and three student speakers and two student facilitators of round tables, on the second day. An academic conference followed the celebration, its proceedings were presented at the Ministerial Conference of 2020¹.

The players

The Bologna Process is a voluntary process based on the Bologna Declaration of 1999 that defines the European Higher Education Area (EHEA), with 48 signatory states in 2020. Every two or three years a Ministerial Conference is held. The executive structure supporting the process between the conferences is the Bologna Follow-Up Group, with its BFUG Secretariat at the location of the upcoming conference. Then there are the Bologna Implementation Coordination Group (BICG) and workings groups like the Working Group on Policy Development for New EHEA Goals 2015-2018. The BICG under BFUG in October 2018 released a Work Plan 2018-2020, with, amongst others, three Thematic Peer Groups and its Advisory Groups on Social dimension and on Learning and Teaching. The European Association for Quality Assurance (ENQA) is responsible for setting accreditation standards.

¹ The proceedings of the conference attached to the Bologna celebration are titled: Bologna Process beyond 2020 (Noorda *et al.*, 2020). This makes the Bologna Process look like a permanent process, after the first time frame for implementation to 2010, another one to 2020 and now to 2030. This text has been written before the Bologna follow-up conference in Rome in November of 2020.

In addition to the structures belonging directly to the Bologna Process, the main support and stakeholder agencies for facilitation and accompanying the process are the European Students Union (ESU)², the European University Association (EUA) as coalition of the universities, and the European Association of Institutes in Higher Education (EURASHE) as coalition of the universities of applied sciences³. Some are attached as official partner organizations, others are just part of the process' follow-up like the European Council of Doctoral Candidates and Junior Researchers (EURODOC), the Council of Europe and UNESCO.

All agencies and organizations have created bodies of administration and staff and produced their respective statements and documents. In addition, there are the governmental institutions on national level of all 48 signatory states. Is it surprising, that this is sometimes called an over-bureaucratized monster, as put by one of the German state ministers of education in an interview (Deutschlandfunk, 2014)? It seems quite difficult to gain and keep an overview about the actions and documents of the Bologna Process, about goals and priorities over time. How was this administrative structure perceived on university level, by teachers and learners, in SILVA Network? What have all these documents and activities to do with the reality in forest sciences study programmes?

Achievements of the Bologna Process

The perception of the Bologna Process

The Bologna Process resulted in great commotion in the universities, when it was perceived there, only some years after it had been initiated, even though with the Bologna Declaration of June 1999 the governments and ministers had committed to fundamental changes on university level.

Very much has been written about the intentions and fields of action, especially between 2005 and 2010, when the implementation was supposed to be concluded. But today, twenty years after the declaration, Bologna is no longer an issue in the media. The fundamental structural changes and related issues seem to be forgotten by the teachers – while the actual students know little about the structures before Bologna.

Perception inside the SILVA Network

The shifting focus of attention is also found in the discussions within SILVA Network. Bologna has been an issue or even an explicit topic of SILVA Network annual conferences for some time, especially in Wageningen 2005, Valencia 2006, Thessaloniki 2009, Zagreb 2010, St. Petersburg 2011⁴ – then no more until 2019 in

² ESU has published several editions of detailed analyses, called "Bologna with Student Eyes", that are based on reports of national student organizations, the latest one in 2018 (ESU, 2018)

³ The respective internet pages are not listed as all organizations are easily found in the internet.

⁴ The proceedings of these conferences are found at www.silva-network.eu. See also the last pages of this volume.

Tharandt, on the occasion of the anniversary of the Bologna Declaration, where this keynote was presented. The discussions during the first years of implementation often were heated. They were reaching from descriptions of the single steps and elements of implementation and realized new study programmes at different universities to aggressive refusal, as also took place in other disciplines in times before and during implementation. Higher forestry education under the envisaged structures was often claimed impossible, it would suffer to a state beyond recognition. The traditional solid competences of a forest graduate, needed in working life, would be impossible to deliver. Later also more matter-of-fact presentations of new study programmes were given.

What information to look for – where to find it?

What has been achieved must be the overarching question at the time of the 20th anniversary of the Bologna Declaration. There were numerous reports, reviews and evaluations along the way and at the time of the anniversary, by the actors of the process, at different levels including the university level, on international and national level, by different stakeholders. There were apparently few related to higher forestry education – and not so many publications in general media.

Basically the impact of the changes triggered by the Bologna Process may be searched in particular in the documents published around the Bologna follow-up conferences, many of them written by the named agencies. Naturally, the anniversary documents include a good deal of self-praise.

The following observations do not cover all dimensions of the Bologna Process, e.g. within the three cycle structure not the third one (PhD programmes), which would certainly also deserve attention.

The goals

Success should be measured against goals and objectives, sometimes called principles, of the Bologna Process. In the general perception, also in SILVA Network, structures of the BSc programmes, mobility and employability were seen in the foreground (Lewark *et al.*, 2014). But from the beginning there were more goals and dimensions of the Bologna Process, some later added in the communiqués⁵ of the first Ministerial Meetings. An overview is given in Figure 1.

In 2015 in the Yerevan Communiqué⁶ four goals had been named as equally important:

- **"Enhancing the quality and relevance of learning and teaching is the main mission of the EHEA."**

⁵ All communiqués of the Bologna Process are accessible via www.ehea.info.

⁶ All communiqués are accessible via www.ehea.info.

- **"Fostering the employability of graduates throughout their working lives** in rapidly changing labour markets – characterized by technological developments, the emergence of new job profiles, and increasing opportunities for employment and self-employment – is a major goal of the EHEA. We need to ensure that, at the end of each study cycle, graduates possess competences suitable for entry into the labour market which also enable them to develop the new competences they may need for their employability later ..."
- **"Making our systems more inclusive** is an essential aim for the EHEA as our populations become more and more diversified, also due to immigration and demographic changes."
- **"Implementing agreed structural reforms** is a prerequisite for the consolidation of the EHEA and, in the long run, for its success. A common degree structure and credit system, common quality assurance standards and guidelines, cooperation for mobility and joint programmes and degrees are the foundations of the EHEA."

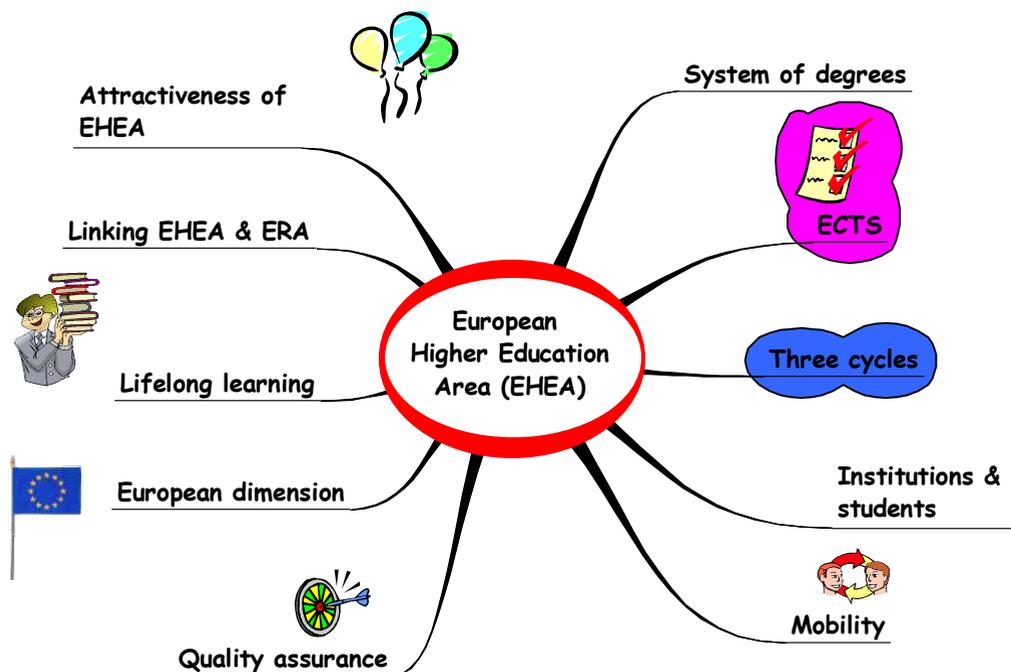


Figure 1: The dimensions of the Bologna Process (Lewark, 2008) (ERA: The European Research Area, ECTS: European Credit Transfer System).

Obviously these goals have not fully been achieved in 2015 – e.g. the three cycle structure that was planned for 2010 was not implemented at that time. This is true for

the original signatory states, and even more for the later ones. Differences between disciplines are observed. Sometimes the priorities of the goals have been described differently. Recently highest priorities were mobility of staff and students and facilitation of employability (Box 1).

Box 1: Presentation of EHEA and Bologna Process in the introductory text on the occasion of the EHEA Rome 2020 Ministerial Conference on 19 November 2020 (EHEA, 2020).

"European Higher Education Area and Bologna Process

The European Higher Education Area (EHEA) is a unique international collaboration on higher education and the result of the political will of 48 countries with different political, cultural and academic traditions, which, step by step during the last twenty years, built an area implementing a common set of commitments: structural reforms and shared tools. These 48 countries agree to and adopt reforms on higher education on the basis of common key values – such as freedom of expression, autonomy for institutions, independent student unions, academic freedom, free movement of students and staff. Through this process, countries, institutions and stakeholders of the European area continuously adapt their higher education systems making them more compatible and strengthening their quality assurance mechanisms. For all these countries, the main goal is to increase staff and students' mobility and to facilitate employability. This official website of EHEA provides both general information on this process and detailed information for experts."

It is noteworthy that the process of learning and teaching and its quality and development in the first years is only included indirectly, at best. Other goals added later were lifelong learning (Prague Communiqué of 2001) and gender equity (Berlin Communiqué of 2003).

Stocktaking and Implementation Reports

The evaluations carried out within the Bologna Process resulted first in Stocktaking Reports and later in Implementation Reports of some hundred pages, the last ones from 2018 and 2020 (European Commission, 2018; 2020). They were commissioned by the BFUG and guided by the formulated or updated goals and priorities of the times of commission.

The data collection has been described in the Implementation Report of 2020. The documents refer mostly to goals and expectations, general views and experiences. The exhaustive quantitative data mostly stem from EU statistics. Qualitative data as well as narrative explanations were mostly provided by the respective responsible agencies on national level. Stakeholder involvement by some organizations is also referred to. Achieving the different goals requires different approaches. On university level, above all structures and accreditations were forced through first. Other "goals are confirmed" again and again, meaning that the implementation often is progressing slowly.

Criticism

Criticism in official documents is formulated as "should be addressed" or "action still to be taken". This is true for the documents produced in the Bologna Process, mentioned above, that are obviously a major source of evaluation of achievements (Lorenz, 2006).

Lorenz from the VU Amsterdam points out in his analysis "that the Bologna declaration is an essentially political document, full of 'empty containers', which make it useful for application in any national setting". Lorenz characterizes these documents further: "Therefore policy documents on higher education can be said to form a (more or less) coherent system of speaking and acting or a discourse. Moreover, educational policy discourse is an excellent example of what the German sociologist Niklas Luhman has labelled a 'self-referential system' because its policy documents basically refer to one another and not to the outside world" (Lorenz, 2006).

There was a variety of public and stakeholder expectations for the Bologna Process and of perceptions of the achievements, related to the different goals, but also to the implementation process. Taking the German perspective as an example: The education researcher Wex (2019) named as prominent expectations for the Bologna Process, as perceived in the public, mobility, duration of studies, numbers of unsuccessful students and improvement of teaching and learning. In his harsh criticism he concludes that none have been achieved (Box 2).

Box 2: Conclusions on four expectations for the Bologna Process in Germany, in "Higher, faster, longer – 20th Birthday of the reform: a check of facts" (Wex, 2019):

• Enhanced mobility?	Just a pious wish
• Reduced years of study, Bachelor and Master?	Just a fairytale
• Reduced dropout numbers?	A flop
• Increased quality of teaching and learning?	Not at all

Another expectation – hotly debated during the first years, also in other countries, but seemingly widely forgotten already long time ago – was related to employability: The majority of BSc graduates were to be ready to leave universities for entrance into working life with a final degree qualifying for an occupation (in English: a degree, securing employability; in German: berufsqualifizierender Regelabschluss). They were supposed to leave university and get into a job. In reality around 80% went on as Master students in 2016.

Wex (2019) describes how the self-praise on the occasion of the Bologna anniversary by the German authorities left out such critical issues, while the few figures included even "often prove the opposite of the alleged success"⁷.

Achievements in higher forestry education

On faculty level the implementation process was perceived as strictly top-down. In many faculties of forestry, no room for divergent decisions or refusal existed. Among the goals of the Bologna Process, mobility was named above all in SILVA Network, of course connected with the mutual recognition of credit points on international level. But the traditional great mobility of students of higher forestry education had initially

⁷ All quotations from Wex (2019) translated from German by the author.

suffered. The obstacles mostly have been overcome, with sophisticated amendments, so that mobility may be on the earlier level again.

The implementation of the three cycle study programme structure has meanwhile been completed to a large extent, the new study programmes have been accredited. The earlier frequent refusal of a transition of the one cycle higher forestry education programmes has been mentioned above. Sometimes also employability and occasionally lifelong learning have been discussed. Otherwise the many goals of the Bologna Process do not seem to be of high relevance in higher forestry education, nor in other disciplines. The impacts of the Bologna Process were mostly discussed, quite controversially, in relation to the new study programme structures.

Two annual conferences of SILVA Network were centered on experiences with accreditation and quality assurance (Valencia 2006, Padua 2018). The topics of improving lectures and alternative learning and teaching settings have been taken up related to competence orientation (Lleida 2012) and specialized versus general competence profiles (Thessaloniki 2009 and Vienna 2015).

Learning and teaching

The importance attached to learning and teaching in higher education always has to do with the complementary weight of research, the other key task of universities. The discussions about the priorities between the two tasks are often related to the paradigm of a unity of research and teaching in universities, as ascribed to Wilhelm von Humboldt (Dreijmanis, 2020). Humboldt's ideal of education was also discussed sometimes in conferences of SILVA Network (e.g. Schneijderberg, 2014).

Is this unity or holistic combination of research and teaching living reality or fiction? The analysis of the Bologna Process rather gives the impression of a dominance of administration over learning and teaching, while research is outside its scope – though linking EHEA and ERA is among the goals (Figure 1).

The reality in universities, as repeatedly stressed by university teachers committed to learning and teaching, is, that university careers depend almost exclusively on the merits in research (e.g. Handwerker, 2003). The relevance of research in careers of professors of forest sciences becomes obvious in their publications on learning and teaching, also in SILVA Network, which as a rule are based on broad experience, but not on a theoretical framework – unthinkable in research publications.

Learning and teaching was only mentioned *expressis verbis* from the Yerevan Communiqué (EHEA, 2015) onwards. The goal and the related didactical expertise, knowledge and experience therefore became visible only afterwards to some degree, as can be seen below. Here the learning situation and achieved improvements in the newly structured study programmes are relevant.

A chapter in the Implementation Report of 2018 gives the impression of a growing consideration of learning and teaching (Box 2). Also the need of improving the teaching competence of teachers is stressed. Learning and teaching is also increasingly addressed in documents at national and institutional levels, with a clear emphasis on organizational approaches and on the essential role of teachers for improvement, as in the quotation in Box 3.

Box 3: Learning and teaching in the Bologna Process according to the Implementation Report of 2018 (European Commission, 2020).

"Improving learning and teaching is among the most fundamental objectives of the Bologna Process. Strategies to achieve this objective are now quite widespread across the EHEA, both at national level and within higher education institutions. Steering commonly promotes the development of international opportunities, academic staff development and measures to improve teaching. Digitally enabled teaching and learning is also increasingly addressed strategically at national and institutional levels. [...]

Higher education teachers are the key players in enabling students' learning, and appropriate training in teaching skills both before being employed and throughout careers is an essential pre-requisite for a high quality system. Yet, regulations rarely require academics to hold a teaching qualification, and the development of teaching skills is often left to ad hoc measures."

Learning paradigms, student-centered learning environments

The Bologna Declaration was adopted 25 years after a paradigm change from the Instruction Paradigm to the Learning Paradigm was formulated in the groundbreaking publication on self-directed learning by Knowles (1975). There were different other concepts and terms for basically the same thing, the focus on centring activities of learning and teaching on the "active and self-organized student".

Barr and Tagg (1995) contrast several criteria of success, among them "Learning and student-success outcomes" (Learning Paradigm) and "Inputs, resources" (Instruction Paradigm). The authors conclude: "A Learning Paradigm college is concerned with learning productivity, not teaching productivity."

The theoretical foundation has been laid by didactics experts in publications on the paradigms associated to learning and teaching. During the last few years they, and also students and their organizations, not the celebrating ministers, have been elaborating on this topic at Bologna follow-up conferences.

The learning process of students, its structures or approaches, have been highlighted by Klemenčič (2020) in her keynote for the Bologna conference of 2018: "Successful Design of Student-Centered Learning and Instruction (SCLI) Ecosystems in the European Higher Education Area". Now mostly the shortened term Student-centered Learning⁸ is used.

⁸ Student-centred Learning (SCL) though seems to be a curtailed term and as such at the same time redundant and a misnomer, as not the learning but its environment is student-centred.

What is the state of Student-centred Learning Environments 20 years after initiation of the Bologna Process; is there any significant change? There are more encouraging related texts, in the proceedings of the Bologna follow-up conference of 2020, that are attempting to give answers. The ESU students Hovhannisyan and Šušnjar (2020) made their analysis from the students' perspective and conclude that "the 'paradigm shift' has not actually occurred", partly because of misconceptions. Different understandings are also pointed out by the Vice-Chair of BFUG, the historian Isaacs (2020), who described the roots of SCL before the Bologna Declaration and developments independent of the Bologna Process.

Also chapter 11 of the ESU evaluation (ESU, 2018) deals with SCL. It concludes that European Credit Transfer System (ECTS) seems thoroughly implemented, though in most cases not based on learning outcomes but on the student workload⁹. In contrast, the implementation of a learning outcomes methodology, on which SCL depends, has not made enough progress, nor that of the more ambitious SCL. "Part of the reason for this could be that the nature of SCL makes it difficult to implement top-down, in the way that many other Bologna Process tools were embedded" (ESU, 2018).

Impact of the Bologna Process on higher forestry education, perception in SILVA Network

Emphasis in this keynote is on the learning and teaching situation, also the development ahead would be relevant. How to find out about a possible improvement of learning and teaching in higher forestry education related to the Bologna Process? The learning situation may primarily be analyzed by research based evaluations that are hardly found.

The contributions in SILVA Network as a rule are based on the experiences of the teachers attending the annual conferences, and thereby anecdotic evidence more or less systematically collected. An exemplary study has been conducted by Nippala *et al.* (2016). Learning and teaching are regularly addressed at the conferences of SILVA Network, e.g. also included in contributions at Lleida (2014). "From teaching to learning" was the topic of the conference in Istanbul (2013). There Dohrenbusch (2015) underlined, referring to the cited publication by Barr and Tagg: "This change means turning away from an input-management system which is based on contents to an output-management system, which is focused on the so-called learning-outcomes. While the traditional system is mainly orientated to the presentation of teaching contents, the proposed new system regards the results of learning." But he concludes that an adoption of the Learning Paradigm may not be suitable for higher forestry education as it may not be successful with achieving sufficient professional knowledge of the graduates. This would certainly deserve more discussion, which is still to happen, and more proper research.

⁹ Student workload obviously not defined and used in a convincing and comparable way.

It is to be suspected that with a more stringent organization of the new, shorter study programmes less room will be left for partly or fully elective courses like that presented by Paz Arraiza *et al.* (2014). This should be given more attention, as the options for choice of courses is regarded an essential quality factor as perceived by teachers and students (Schneijderberg and Lewark, 2014). Appropriate assessments are missing.

Jansen-Schulz in her keynote at the same conference pointed out that the shift from teaching to learning would "require a change in the teaching role as well as a change in methods" (Jansen-Schulz, 2015). She names and describes research-oriented learning, inter- and transdisciplinary learning, problem-oriented learning and transfer-oriented learning. There are but few examples describing their performance found in SILVA Network proceedings, so far.

Lifelong learning

In the Paris Communiqué (2001) lifelong learning was mentioned as a Bologna goal for the first time. Obviously this is a broad subject – the question here is what could have been an impact on higher forestry education. The Bologna implementation documents and the national reports tells that lifelong learning refers to open universities for non-traditional students, with a vocational qualification and work experience, but according to literature it may be much more than that. The official expectation is that national qualifications frameworks are to be developed, based on the European Qualifications Framework for Lifelong Learning (EQF). This latter includes descriptors of knowledge, skills and competences on eight levels, which deserve attention.

But the way from the Bologna conceptions to implementation in study programmes seems to be a long one. Certainly lifelong learning and achieving the described learning outcomes is connected to many aspects of teaching and learning, which is not to be detailed here. It has to do with employability and with learning methods of adult education and, together with that, with course organization, and also with practice orientation as dealt with at the SILVA Network conference in Bern (2014)¹⁰.

Learning to learn and other generic skills, also attitudes like openness for continued learning and the insight into the need of lifelong learning must belong to it, as studied by Rekola *et al.* (2015) and Nippala *et al.* (2016). Concrete steps, on formal and informal level, that can be taken, concern problems from working life, or inviting experts from working life as expert teachers into courses. Also other measures should be considered, like opening university courses, e.g. introductory courses or selected

¹⁰ When referring to SILVA Network annual conferences only the place and the year are given, while the respective proceedings are found under www.silva-network.eu, and a complete list is found in the end of the proceedings. Single contributions at these conferences, if referred to, are included in the list of references.

others, to participants from working life, including giving certificates. Part-time courses and distance education may become more important for life-long learning, with their associated challenges (Rayment, 2016).

What is happening in this respect in higher forestry education? There are some notable examples, but it is assumed that these activities have been undertaken independent of the Bologna Process, hence they will not be covered here.

Quality assurance

Similar conclusions may be drawn for quality assurance. Certainly accreditations were triggered by the Bologna Process. Standards and guidelines by different agencies have been formulated. But quality assurance should be seen in connection with the quality of learning and teaching, before all other aspects. Can quality assurance be seen as most important driver, or at least of some relevance, for learning quality? From the Implementation Reports and the national reports one cannot see if there were evaluations of accreditation processes. The description on the state of quality assurance is again based on data provided from the national agencies. Still quality assurance does not seem to be the powerful motor of change of the learning situation. One reason for that may be that it is conducted mostly by peers, professors of forest sciences in our case. So their attitudes are deciding about the accreditation process which are obviously mostly aimed at structures and organization, not on quality of learning outcomes. An appropriate analysis of impacts and focus would be desirable, but there seems to be no broad evaluation of accreditation processes for higher forestry education.

What did the Padua conference of SILVA Network in 2018 ("Quality management and accreditation for study programmes in forest sciences and related disciplines") reveal about quality assurance in higher forestry education? Again, most information is about the process of accreditation and about structures of study programmes, as indicators of quality. Course evaluations by students are presented a few times, while student satisfaction does not automatically imply information about the learning outcomes. To the extent that learning and teaching is addressed it is clearly mostly from the perspective of teachers and teaching as already the summary of the conference proceedings shows.

Short résumé

The rather late inclusion of learning and teaching (Klemenčič, 2020) again sheds light on the overall goals of the Bologna Process that are not directed to the learners' level. Basically, all improvements over the last fifteen years have been achieved in the study programmes in the new structures. At best some have been encouraged by the Bologna Process, perhaps through the growing need of the faculties and the study commissions to occupy themselves with study objectives, contents and evaluations. Sometimes project money given may have been helpful.

But certainly most improvements were not directly dependent on the Bologna Process regulations. Some learning conditions also certainly are more difficult under the new structures and regulations, often perceived as restrictive by the students, like the frequent exams. More studies on these issues are urgently needed.

Gender and diversity in forest sciences curricula

The Bologna documents wave the flag of gender equity in a few places, seemingly in duty bound, as this is EU policy, based on Treaty of Lisbon (2007). So e.g. gender equity is mentioned in the quality assurance standards on Bologna and national levels.

In reality, gender and diversity orientation apparently is not an issue of any relevance. In higher forestry education one finds some elective courses, given by engaged teachers. These courses often appear in the study programmes and disappear together with them. In spite of the topic belonging to the quality assurance standards and detailed examples published on how gender and diversity can be included in curricula and courses (e.g. in Becker *et al.*, 2006) no general change may be expected. The reason for its absence in accreditation processes is probably the same as for the limited role of student-centred learning environments, the subordinate role of these aspects in the attitudes of the peers. This assumption should be verified in appropriate evaluations respective studies.

In SILVA Network gender and diversity topics in study programmes of forest sciences sometimes have been presented in an exemplary way, but mostly repeatedly by the same teachers, for the last time so far by Jansen-Schulz and Lewark (2016).

E-learning in forest sciences curricula

At the assumed time of the publication of these proceedings the Corona pandemic will have caused at least three semesters of a hitherto unknown challenge, with severe limitations to hold classroom courses. By far most courses have been held since summer of 2020 in a digitized format as it is now called. This is a forced exercise of e-learning, without special preparation – perhaps it would rather be considered e-teaching.

So when presenting my keynote at the conference in 2019, ignorant of the coming Corona pandemic, I asked about an observable significant impact of the Bologna Process and new developments since my analysis of e-learning in higher forestry education at the SILVA Network conference at Thessaloniki in 2009 (Lewark, 2013). Some of the statements of 2009 were still relevant enough to be mentioned again, ten years later. They are outlined here, partly in order to challenge the presentations of the planned next annual conference.

In the résumé in Thessaloniki it was stated, that e-learning (e-teaching) courses were the domain of some engaged teachers, not offered sustainably, reliably over time. E-learning methods had been used widely for on-campus functions, but distance education was found to a very limited extent. No change seemed to be under way (Box 4).

Box 4: E-learning in higher forestry education in 2009 (Lewark, 2013).

"The main reason [for only few distance courses held] may lie on the side of the potential organisers, the universities, faculties and responsible professors: there seems to be little need and not sufficient will, which is needed in addition to competence and supporting organisational framework [...]. In the universities there seems to be little incentive, on the level of the faculty there is not much demand anchored in study programmes, and only few professors have the competence and the drive to do it. Most professors in forest sciences – as in other disciplines – do have a high workload, often an overload, in teaching and other duties. They have their obligations in the traditional or many new study programmes. Why should they bother with e-learning? Those who do seem to do it because of their individual interest in developing their own e-learning competence or a special need they see for it for their specific course(s). Certainly courses existing for such reasons are interesting enough to learn from the experiences, though this kind of motivation does not show up in the accessible course information, but would require a deeper analysis."

Michalek described few years later, at the SILVA Network conference in Bern in 2014, that students, activating uses of the e-learning platform at BOKU, the University of Natural Resources and Life Sciences, Vienna, increasingly play an important role in many courses (Michalek, 2016).

Meanwhile also the Helsinki ICA Edu conference of 2016 was held, with the topic: "e-learning in the life sciences: exploiting open source materials in the curriculum". It added new perspectives with experiences from some universities, in particular with massive open online courses (MOOCs). Also the relevance of didactical design, of blended courses and of interactions between teachers and learners and among learners was stressed.

A new interest in these aspects seems to grow, also related to the current teaching practice during the Corona pandemic. I perceive this from readings of older publications on e-learning of my own working group. Indeed this is demonstrated by numerous readings¹¹ of publications like Längin *et al.* (2004), and another one in German, on e-learning experience (Lewark and Längin, 2007), related to the dissertation of Längin (2006).

Digitalization of courses in higher education initially has been partly industry driven and pushed by governments. But e-learning so far performed is not an achievement of the Bologna Process. Between technology and didactics, it does not need Bologna. But it needs realization of didactical opportunities, so that there will be more than just recorded lectures.

E-learning will be the topic of the next annual conference of SILVA Network, hopefully to happen in 2021¹². It was announced with the title "Digitalization in higher

¹¹ In www.researchgate.net.

¹² This annual conference actually took place in July 2021; the proceedings are planned to be issued in 2022.

forestry education – teaching and learning revisited", when nobody knew about the new importance of the topic. A review of the state of the art of e-learning in forest sciences curricula was intended. In the current situation, certainly also some learner-centered e-learning courses, not so much for distance education, have been developed and tried out. It would be good to see them presented at the conference.

Conclusions and outlook

The Bologna Process induced fundamental changes of the structures of study programmes throughout Europe. Also the introduction of ECTS and regular accreditations were triggered by the associated activities and documents in the process and subsequently on national level. Is this enough reason for a celebration, in particular from the perspective of higher forestry education?

All considerations are or should be about the learning process of students, what students learned, what knowledge was acquired, what competences have been achieved. The celebration at the University of Bologna in 2019 showed a good deal of self-praise of Bologna actors in robes, the ministers of education celebrated assumed achievements of Bologna process. But their interest seems not to be aimed at a proper evaluation on the level of study programmes and learning and teaching. Lamentably, there are not many proper studies found that would give better-founded evaluations than the Bologna Implementation Studies referred to.

Learning and teaching was the – indeed subjective – focus of these observations. It could not always be sorted out, what are accessory phenomena, what are intended impacts. And, not all related issues could be covered, other issues – also often criticized in SILVA Network conferences and many discussions about the new situation of higher forestry education – had to be left out, like

- the frequent division of the study programmes into a minute course structure (in German *Kleinstrukturiertheit*) in the study programmes, with permanent evaluations and the related pressure on the students;
- the reproach that the new study programmes are too similar to schoolwork (which probably has not much to do with the actual reality at highschools), in a regimented system of the three cycles, even of the doctorate phase, connected with the need to compress traditional contents into less teaching time as perceived by the teachers;
- the recommended and the real use of Diploma Supplements and related experiences;
- the academic freedom, recently discussed in Bologna documents, including the questioned compulsory attendance at courses and bindingness of more and more regulations;
- the juridification of the performance in the new three cycle study programme structure;

- finally, the cost and the cost efficiency of the Bologna Process, including the related accreditations.

There are institutions, however, that engage in the future of higher education, with results like the "AHEAD-study on the university landscape 2030: departure from classical studies" (Orr *et al.*, 2019). The study concludes: "Digital change is creating completely new learning paths. The currently predominant model of a three- to five-year study block followed by lifelong work is losing relevance. It is replaced by more flexible, often lifelong study models. Universities and politics must create the conditions for this" (AHEAD, 2019). Four models of development are presented symbolized by popular games (as illustrated during the keynote presentation): Tamagotchi, Jenga, Transformer, Lego (Box 5).

Box 5: The four models of future university studies according to the AHEAD-study (AHEAD, 2019).

Tamagotchi: the "classic" model of the direct transition from school to higher education.

Jenga: a shortened first degree course, which is extended by new learning blocks in the further course of one's life.

Transformer: the concept of later transition to higher education, e.g. after completion of training and gainful employment.

Lego: individually combinable educational modules; based on the assumption that learners request different modules and learning units from different education providers; put together to form a degree.

Would it not be the time for visions like that in higher education and their discussion, also in higher forestry education? The ongoing activities related to higher forestry education within IUFRO and IFSA, make some expectations look justified (Rekola *et al.*, *s.a.*). Also Stähli, at the SILVA Network conference in Bern in 2014, showed possible ways for quality development, by outlining how self-reflection of the teacher may contribute (Stähli, 2016).

After all in this résumé, with respect to higher forestry education, one should not forget the top-down process of implementation, with little chance of participation and against much resistance, with a delayed or fragmentary perception thereof at university and more so at faculty level. One is almost inclined to speak of an application of an Administrative Paradigm rather than of a Learning Paradigm. Looking at the achievements and situations in the faculties of forestry, at "our" universities, "our" students and "our" teachers of forest sciences "we" realize that on the whole the faculties have come to terms with the impacts of the Bologna Process that for the most part do not seem to have been welcome. The teachers seem to be tired of efforts of protest, while the students of today only know the present reality.

In summary, true also for higher forestry education, one may state: Didactical changes did and do not need the Bologna Process – it contributed little to improved learning and teaching, if anything at all. Whether the aforementioned changes that have been induced by the Bologna Process, may help to overcome the challenges of the Corona pandemic for learning and teaching seems to be questionable.

References

- AHEAD, 2019: AHEAD-study on the university landscape 2030: departure from classical studies. <https://hochschulforumdigitalisierung.de/en/news/ahead-study-landscape-2030>.
- Barr, R.B. and Tagg, J., 1995: From teaching to learning: A new paradigm for undergraduate education. *Change*: 12-23.
- Becker, R., Jansen-Schulz, B., Kortendiek, B. and Schäfer, G. (Eds.), 2006: *Gender-Aspekte bei der Einführung und Akkreditierung gestufter Studiengänge – eine Handreichung*. 3rd Ed. Studie Netzwerk Frauenforschung NRW. Essen.
- Deutschlandfunk, 2014: Bologna-Prozess – Man muss ein Studienprogramm nicht in Module teilen. www.deutschlandfunk.de/bologna-prozess-man-muss-ein-studienprogramm-nicht-in.680.de.html?dram:article_id=293641
- Dohrenbusch, A., 2015: The shift from teaching to learning. The shift from teaching to learning. Is this reform necessary for the forestry academic education? Pp. 21-27 in: Schmidt, P. and Lewark, S. (Eds.): *From teaching to learning – when will we take it seriously in forest sciences education?* SILVA Publications 11.
- Dreijmanis, J., 2020: The Humboldtian ideal of the teacher-researcher is a myth. World leading higher education information and services. <https://world.edu/the-humboldtian-ideal-of-the-teacher-researcher-is-a-myth>.
- ESU, 2018: Bologna with Student Eyes 2018. <https://www.esu-online.org/publications/bologna-student-eyes-2018-2/>.
- European Commission, 2018: The European Higher Education Area in 2018: Bologna Process Implementation Report. https://eacea.ec.europa.eu/erasmus-plus/news/bologna-process-implementation-report-2018-update-european-higher-education-area_en
- European Commission, 2020: The European Higher Education Area in 2020: Bologna Process Implementation Report. https://eacea.ec.europa.eu/national-policies/eurydice/content/european-higher-education-area-2020-bologna-process-implementation-report_en
- EHEA, 2015: Yerevan Communiqué. https://eha.info/Upload/document/ministerial_declarations/YerevanCommuniqueFinal_613707.pdf
- EHEA, 2020: European Higher Education Area and Bologna Process: Conference's website. <https://eha.info/>
- Handwerker, H.O., 2003: *Einheit von Forschung und Lehre – eine fromme Lüge?* Friedrich-Alexander-Universität Erlangen-Nürnberg. https://www.physiologie1.uni-erlangen.de/de/History/Einheit_von_Forschung_und_Lehre.pdf
- Hovhannisyana, G. and Šušnjar, A., 2020: Challenges of Student-Centered Learning from the Students' Perspective. Pp. 151–158 in: Noorda S, Scott P, Vukasovic M (Eds.) *Bologna process beyond 2020: Fundamental values of the EHEA*. Bononia University Press, Bologna.

- Isaacs, A.K., 2020: Can "Student-centered learning" become a key element in the European Higher Education Area Global Policy Dialogue? Pp. 159-164 in: Noorda, S., Scott, P, and Vukasovic, M, (Eds.) Bologna process beyond 2020: Fundamental values of the EHEA. Bononia University Press, Bologna.
- Jansen-Schulz, B., 2015: How we teach the teachers – An example from Germany. Pp. 9-20 in: Schmidt, P. and Lewark, S. (Eds.): From teaching to learning – when will we take it seriously in forest sciences education? SILVA Publications 11.
- Jansen-Schulz, B. and Lewark, S., 2016: Integrative Gendering in Higher Education in Forest Sciences: A Strategy for University Structures, Teaching and Didactics. Pp. 115-130 in: Schmidt, P., Hasenauer, H. and Lewark, S. (Eds.) Should all forestry students learn the same? SILVA Publications 13.
- Klemenčič, M., 2020: Successful Design of Student-Centered Learning and Instruction (SCLI) Ecosystems in the European Higher Education Area. Pp. 41-60 in: Noorda, S., Scott, P. and Vukasovic, M. (Eds.): Bologna process beyond 2020: Fundamental values of the EHEA. Bononia University Press, Bologna.
- Knowles, M.S., 1975: Self-directed learning: A guide for learners and teachers. Associated Press: New York.
- Längin, D., 2006: Blended learning in der forstlichen Hochschullehre: Eine Untersuchung im südlichen Afrika. Freiburger Dissertationsreihe Forst- und Umweltwissenschaften, vol 10. Rombach, Freiburg i. Br. <https://freidok.uni-freiburg.de/data/2410>
- Längin, D, Ackerman, P. and Lewark, S., 2004: Internet based learning in higher forestry education. *Unasyuva* 56/216 39-44.
- Lewark, S., 1998: Studying forest sciences at the University of Freiburg im Breisgau. Pp. 219-228 in Schmidt, P., Huss, J., Lewark, S., Pettenella, D. and Saastamoinen, O. (Eds.): New requirements for university education in forestry. Demeter series, vol 1. ICA, Heverlee-Leuven.
- Lewark, S., 2002a: Blockstudium und Modularisierung. Prozess und Ergebnis einer umfassenden Studienreform am Beispiel Forstwissenschaft an der Universität Freiburg im Breisgau. *Das Hochschulwesen* 50 (1) 32-36.
- Lewark, S., 2002b: Blockstudium und Modularisierung im Studiengang Forstwissenschaft in Freiburg (Teil 2): Erwartungen und Erfahrungen. *Das Hochschulwesen*, 50 (3) 98-104.
- Lewark, S., 2008: Higher forestry education under the auspices of the Bologna Process. Proc. 7th Biennial Conference on University Education in Natural Resources. https://ir.library.oregonstate.edu/concern/conference_proceedings_or_journals/cv43nz000?locale=en
- Lewark, S., 2013: E-learning in forest sciences – demand and perspectives. Pp. 35-42 in: Schmidt, P., Lewark, S., Aravanopoulos F.A. (Eds.): Development of forest sciences curricula in Europe. SILVA Publications 7.
- Lewark, S. and Längin, D., 2007: Lehren und Lernen im forstwissenschaftlichen Studium über das Internet – Beispiele aus Arbeitswissenschaft und Genderlehre. Pp. 149–160 in: Schneider G (Ed.): Neue Medien als strategische Schrittmacher

- an der Universität Freiburg: Wie Informations- und Kommunikationstechnologien Studium, Verwaltung, und Forschung verändern. Universitätsbibliothek, Freiburg i. Br.
- Lewark S., Müller-Starck G. and Schmidt P., 2014: Concluding remarks. Pp. 87-88 in: Schmidt, P., Müller-Starck, G., Chubinsky, A. and Lewark, S. (Eds.): Bologna cycles 1 to 3 and higher forest education – objectives and reality. SILVA Publications 9.
- Lorenz, C., 2006: Will the universities survive the European Integration? Higher Education Policies in the EU and in the Netherlands before and after the Bologna Declaration. http://www.lsa.umich.edu/UMICH/ces/Home/Resources/Michigan_Paper_Series/Lorenz_Will_Universities_Survive.pdf.
- Michalek. C.R., 2016: Today's teaching and learning with new media in the forestry education at the University of Natural Resources and Life Sciences, Vienna. Pp. 60-64 in: Schmidt, P., Lewark, S., Müller-Starck, G. and Ziesak, M. (Eds.): Practice orientation in forestry curricula in universities and universities of applied sciences. SILVA Publications 12.
- Nippala, J., Rekola, M., Tynjälä, P. and Virtanen, A., 2016: Future competence needs in the forest sector and the role of university – a review of Finnish forest sector professionals. Pp. 28–34 in: Schmidt, P., Hasenauer, H. and Lewark, S. (Eds.): Should all forestry students learn the same? SILVA Publications 13.
- Noorda. S., Scott, P. and Vukasovic, M. (Eds.) 2020: Bologna process beyond 2020: Fundamental values of the EHEA. Bononia University Press, Bologna.
- Orr, D., Lübecke, M., Schmidt, P., Ebner, M., Wannemacher, K. and Dohmen, D., 2019: AHEAD – Internationales Horizon-Scanning: Trendanalyse zu einer Hochschullandschaft in 2030: Hauptbericht der AHEAD-Studie. Arbeitspapier, Berlin.
https://hochschulforumdigitalisierung.de/sites/default/files/dateien/HFD_AP_Nr_42_AHEAD_WEB.pdf
- Paz Arraiza. M., Mendiola, M.A. and López, J.V., 2014: Industrial use of medicinal and aromatic plants: A free choice e-learning course at the Technical University of Madrid. Pp. 63-68 in: Schmidt, P., Vega-Garcia, C., Müller-Starck, G., and Lewark, S. (Eds.): Do our students learn what they will need later? About expected learning outcomes and competences of graduates: SILVA Publications 10.
- Rayment, M., 2016: Harmonising part-time distance learning and full-time residential MSc forestry programmes. Pp. 77–83 in: Schmidt, P., Hasenauer, H. and Lewark, S. (Eds.): Should all forestry students learn the same? SILVA Publications 13.
- Rekola, M., Abbas, D., Bal, T., Burns, J., Lackner, M., Rodriguez, S. and Sharik, T., *s.a.*: Global Outlook on Forest Education (GOFE): A Pilot Study Report. GOFE is a part of the Joint IUFRO-IFSA Task Force on Forest Education (JTF), Helsinki.
https://foresteducation.files.wordpress.com/2017/09/gofe_final_report.pdf
- Rekola, M., Lautanen, E. and Kilpeläinen, R., 2015: Perceptions of Learning Outcomes and Employability among Forestry Graduates in Finland. Pp. 77-83

- in: Schmidt, P. and Lewark, S. (Eds.): From teaching to learning – when will we take it seriously in forest sciences education? SILVA Publications 11.
- Schneijderberg., K., 2014: How to make the Bologna tree grow? Pp. 92-95 in: Schmidt, P., Vega-Garcia, C., Müller-Starck, G., and Lewark, S. (Eds.): Do our students learn what they will need later? About expected learning outcomes and competences of graduates: SILVA Publications 10.
- Schneijderberg, K. and Lewark, S., 2014: The role of competences in higher education institutions in the European Union and the United States of America. A comparative study. Pp. 82-91 in: Schmidt, P., Vega-Garcia, C., Müller-Starck, G., and Lewark, S. (Eds.): Do our students learn what they will need later? About expected learning outcomes and competences of graduates: SILVA Publications 10.
- Stähli, R., 2016: Quality development in teaching – opportunities and limitations related to the teacher's self-reflection. Pp. 65-71 in: Schmidt, P., Lewark, S., Müller-Starck, G. and Ziesak, M. (Eds.): Practice orientation in forestry curricula in universities and universities of applied sciences. SILVA Publications 12.
- Weber, N. and Lewark, S., 2004: The new curriculum of forestry science in Freiburg – response to changes in the field of profession. Pp. 117-126 in: Lewark, S. and Schmidt, P. (Eds.): Modern forestry curricula – response to changes in the field of profession: Schriftenreihe Freiburger Forstliche Forschung 29.
- Wex, P., 2019: Bachelor und Master. Höher, schneller, weiter. Süddeutsche Zeitung. <https://www.sueddeutsche.de/bildung/bachelor-und-master-hoher-schneller-weiter-1.4470569>

All online documents accessed in January 2021.