Changing grading-scales in higher education as a part of the Bologna Process – the case of Denmark, Norway and Sweden

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Abstract

The Bologna process includes social, structural, and curricular reforms in the 46 countries included in the European Higher Education Area. The curricular aspect of the process focuses on a shift to outcome-based and student-centred programmes. Syllabi should now be based on intended learning outcomes (ILOs), estimated student work-load and adjusted to general level descriptors for qualifications. According to ENQA (2005) student assessment should examine the achievement of the ILOs, but the Bologna documents have no explicit recommendations of use of grading scales. In Denmark, Norway and Sweden, the reforms of higher education induced by the Bologna process also included a change of grading scales. Through three case-studies, we describe and analyse the political and educational process and argumentation underpinning the decisions to change the grading scales in each country. This includes the perceived problems with the old grading scales and a description of the various national assessment traditions. The purpose of the change was not the same in each country, but the ongoing adaptation to a seven-step grading scale might ease the translation of the national grades making mobility easier. The new grading scales are not identical and they are implemented in three quite different national assessment systems, which still make transparency a palpable problem, though at other educational levels than before.

1. Introduction

In this paper we will compare the change of grading scales in Higher Education in Denmark, Norway, and Sweden. These three countries are chosen because they are to a large extent alike socially and culturally. Still they show quite big differences concerning the regulation and organisation of their educational systems. They have all used the Bologna Process as a reason to change the grade scales used in Higher Education to a seven-step model, with reference to the translation of grades used in the ECTS (European Credit Transfer System). We are interested in what kind of educational similarity the introduction of a seven-step scale might induce. By studying the process in the three countries we also want to explore the differences in their higher education systems, especially concerning the character of the national and institutional control of the assessment system. These differences emerge and become visible when a new way of grading is developed and introduced.

The alikeness between Denmark, Norway, and Sweden, also called the Scandinavian countries, is seen in for instance that they are more integrated, also economically, than any other group of independent states in the world and the Social Democracy Party in each country have had a principal influence on the development of the countries’ quite similar welfare systems, called the Nordic (Social Democratic or Institutional) welfare states (Bryson, 1992, pp. 110-119). The Scandinavian countries also have a common past, an almost identical language, culture etc. During the last decades the movement towards a common Nordic model has been challenged by several factors. Denmark and Sweden are members of the European Union (EU), while Norway is not. Politically, all of the countries have changed regimes more often than before, swinging between social democratic and conservative governments.

In terms of the education sector, the Scandinavian countries also have the same education policy objectives, which are equal access to (lifelong) learning, teaching democracy, independence, equality, and the development of critical awareness in pupils. The focus is broad and comprehensive as opposed to elitist. The structure of the school system is quite similar; all have a 9-10 year compulsory school. However, there are also some differences between the organisation of the education systems where for instance the Swedish system is single-tracked and does not, contrary to Denmark and Norway, have a separate vocational high school but the high school is mixed between vocational and academic (Dahl, 2003). Differences that also characterises the organisation of higher education (Fägerlind & Strömquist, 2004). Also looking at the national assessment system and grading traditions in each country, there are quite big differences.

In this paper we will describe and discuss how these quite similar countries each have responded to the common challenge of the Bologna Process in relation to grading systems in higher education. The type of analysis is mainly a so-called “studies of policy content”, where we aim to describe the genesis and development of the new grading scales, how a policy emerged, and to some extent how it was implemented and what the results were. This approach is combined with a view on grading-scales as a special kind of classification system (Bowker & Star, 1999). Thus, the focus is not the “policy process” in itself, i.e. all the stages it went through, past attempts or which actors influenced what, although it is naturally embedded in the former. Instead we focus on the design and implementation of the grading scale as a crossroad between policy content, regulations of assessment and the specific grading scale, as a quite rigid artefact used as a tool for policy expectations and implementation at several levels. Our study also has similarities to “evaluation studies” that aims at describing, or prescribing, the impact a policy has on the population (Ham & Hill, 1993, pp. 9-10).

2. The Bologna Process and various types of assessments

The Bologna Process
The Bologna Declaration was in June 1999 signed by the education ministers from 29 European countries and now altogether 46 countries have signed the agreement. It is a commitment freely taken by each country to reform its own system of higher education in order to create overall convergence at European level. It is about (Siedersleben & Dahl, 2003):

- A development of a Europe of knowledge.
- Education of individuals who feel related to Europe as a common social and cultural area.
- Increase student, teacher, and researcher mobility.
- Professionalism of higher education.

The Bologna Process aims to create a mobile European Higher Education Area (EHEA) by 2010 and has therefore chosen to put priority on the following three instruments (EU, 2008a):

1. Introduction of the three-cycle system (bachelor/master/doctorate).
2. Quality assurance.
3. Recognition of qualifications and periods of study.

The Bologna Process is not an EU initiative, but the commitments, goals, and instruments fit a lot of the EU initiatives such as the Copenhagen Declaration from November 2002 that had the purpose of enhanced cooperation in European vocational education and training (VET). The EU Commission has therefore focused on a number of concrete outputs such as for instance a single framework for transparency of competences and qualifications, a system of credit transfer for VET inspired by the European Credit Transfer System (ECTS) in higher education, and common criteria and principles for quality in VET.

ECTS stands for European Credit Transfer System. It was first introduced in 1989 within the ERASMUS framework. Originally it was set up as a system for credit transfer. ECTS is a quantitative measure for student work load where 60 ECTS is equivalent to one year full-time study, i.e. 1 ECTS is around 25-30 working hours. ECTS course credits are obtained following achievement of the course’s specified learning outcomes, preferably stated as competences to be acquired. But the ECTS also includes a kind of grade-system. After the student receives the national grades, ECTS grades are assigned among the passing students on statistical basis as follows (EU, 2008b):

- A: best 10%
- B: next 25%
- C: next 30%
- D: next 25%
- E: next 10%

There are two failing grades: ‘Fx’ means “some more work required to pass” and ‘F’ means “considerable further work required to pass”. The ECTS-grade is not meant to replace but to explain the original grade and it has no legal value of its own. The system was developed to make it possible to better understand single grades from nations where for instance the assessment tradition is to only to give grades at the top levels of their scale.

To create connection between the Copenhagen Declaration and the Bologna Declaration, the EU Commission has proposed the European Qualifications Framework for lifelong learning (EQF), which is supported by the EUROPASS (documents to make a person’s skills and qualifications clearly and easily understood in Europe), credit transfer (ECTS-ECVET), and quality assurance (ENQA-ENQAVET) initiatives. The framework, which was suggested in 2006, is now approved of both by the European Parliament and the Council and will be published in March 2008. EQF should be used as a translation grid for qualifications all over Europe. It is firmly based in definitions of the results of human learning described as learning outcomes, which are expressed in three different forms: knowledge, skills and competence. The framework describes eight levels of qualifications
covering lifelong learning corresponding to the whole educational system, from compulsory schooling to a research degree. Level 6, 7 and 8 in EQF thus are corresponding to the three cycles (bachelor, master, doctorate) in the Framework for Qualifications in the European Higher Education Area (EQF-HE). This framework was approved of in the ministerial summit in Bergen 2005 (BWG-QF, 2005) and is now a central coordinative element in the Bologna process. The framework has the character of an overriding meta-curricular framework describing general intended learning outcomes (ILOs) for each of the three cycles. In this respect the coordination of the three instruments mentioned above depends on the EQF-HE to be carried through.

From 2003, and later confirmed by the Ministerial meeting in Bergen 2005, the Bologna process has increasingly developed a focus on curricular reform. The Bologna Stocktaking Report 2007 (p. 3) emphasizes that all the aspects of the Bologna process are interdependent and linked to each other by the shift to a curriculum based in learning outcomes:

“There are two themes that link all the action lines: a focus on learners, and a focus on learning outcomes. If the Bologna Process is to be successful in meeting the needs and expectations of learners, all countries need to use learning outcomes as a basis for their national qualifications frameworks, systems for credit transfer and accumulation, the diploma supplement, recognition of prior learning and quality assurance.”

In the London Communiqué (2007, p. 2), the Ministers state:

“We underline the importance of curricula reform leading to qualifications better suited both to the needs of the labour market and to further study. Efforts should concentrate in future on removing barriers to access and progression between cycles and on proper implementation of ECTS based on learning outcomes and student workload.”

That a “proper implementation of ECTS” should include a reform of national or institutional grading scales is not mentioned anywhere in the Bologna documents. When problems with the implementation are discussed they are mostly concerned with the introduction of national credit-systems or the shift to describing the scope of a module or a programme in calculated student workload instead of in teaching hours.

Norm-Referenced Assessment and Criterion-Referenced Assessment
Grading of assessment is a very old educational practice and can be described as one of the core activities of teachers’ work. Grading scales and regulations of assessment practices often developed together to guarantee the standard of degrees awarded.

During the 20th century new statistical methods led to the development of Norm-Referenced Assessment (NRA) as a way to promote equal opportunities in society. In NRA the grading of students tells which students that performed better than others. In educational practice the NRA is closely related to the “measurement model” and a quantitative view on learning outcomes. It is based on assumptions that human traits and abilities are regularly distributed over a population as when individual differences concerning stable characteristics in psychology are tested. The rank order is the simplest form. NRA often stipulates a constant proportion of students at each grade awarded as a norm for assessment. To work as stipulated the grading has to be linked to an assessment system where big groups of students are presented the same assessments.
In Criterion-Referenced Assessment (CRA) the grading of students tells of what the student has learned and how well. The grade awarded is thus independent of other grades in the group of students and only related to how well the student meet the criteria for the intended learning outcomes of the course or programme. CRA is designed especially for assessing learning in teaching situations. It is based on the setting of standards (criteria) for student learning as course or unit objectives. If the objectives are arranged in a hierarchy with different levels, the student’s performance can be awarded grades in accordance with the level he/she is performing at after a qualitative assessment. In a CRA distributions of grades cannot be stipulated beforehand.

The relation between NRA, CRA and the grade scales that are used are not at all clear-cut. As classification systems, grade scales are sometimes more long-lived than the assessment practices. Sometimes grade scales are changed when curricula or assessment regulations are reformed, sometimes not. Over time the message contained in one and the same grade from a comparable degree might be very different.

When grade scales are designed they may be more or less related to the assessment system and grading system. NRA as implemented in the school system in Denmark, Sweden and Norway in the 1960’s meant that teachers were supposed to align their grading to results from nationally administered tests, which affected teaching and assessment at the classroom level.

3. Denmark

Higher Education in Denmark

In Denmark, broadly speaking, the Ministry of Education (DME) deals with primary, secondary, and tertiary education such as teacher training college (university colleges) but universities are part of the Ministry of Science, Technology and Innovation (DMSTI). The Danish university sector has experienced a number of major changes in the 2000s. The new Danish government from 2001 (a right-wing minority government of the Conservative People’s Party and the Liberal Party, Venstre) had a new University Law approved in 2003, which made the Danish universities self-governing institutions with boards as the top authority. Board members from outside the university form the majority and the chairman of the board is also external. The new university law is part of the government’s strategy to make Denmark a leading growth, knowledge and innovation society and the rationale for the new law was the rapid change in society’s demand to the universities. DMSTI determines the frames for the universities’ work and the universities set up precise goals for their use of public funds and report how these goals will be fulfilled. Justifying the new law, the government referred to OECD’s evaluation of the Danish university sector in 2003. Not only has the organisation of the universities changed, but also the number of universities. In 2006, Denmark had 12 universities and 15 research institutions. All universities are public funded whereas the research institutions are mixed funded. The Minister of DMSTI wanted to reduce this number to strengthen Danish research and teaching internationally, enhance cooperation with the business life, make it easier to attract EU funding, and make it more possible to do commissioned work. After a process of mainly voluntary fusions, the result in 2007 was 8 universities and 3 research institutions (DMSTI, 2005, pp. 5-10; DMSTI, 2008).

The old and the new Danish grading scales

Since 1963 the so-called 13-scale (see Figure 3.1) had been the national grading scale used at all school levels. At first the scale was NRA at all levels but in 1971 the Ministry decided that the
university grades should be CRA. In 1992 grades in high school were also to be CRA, and finally in 2000 also compulsory education were to use the scale as CRA. However, in the compulsory education level, children were not graded using the 13-scale until the 8th grade, and only in topics in which the leaving examination can be taken. The 13-scale is seen below:

<table>
<thead>
<tr>
<th>Old Grade</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Is given for the exceptionally independent and excellent performance.</td>
</tr>
<tr>
<td>11</td>
<td>Is given for the independent and excellent performance.</td>
</tr>
<tr>
<td>10</td>
<td>Is given for the excellent but not particularly independent performance.</td>
</tr>
<tr>
<td>9</td>
<td>Is given for the good performance, a little above average.</td>
</tr>
<tr>
<td>8</td>
<td>Is given for the average performance.</td>
</tr>
<tr>
<td>7</td>
<td>Is given for the mediocre performance, slightly below average.</td>
</tr>
<tr>
<td>6</td>
<td>Is given for the just acceptable performance.</td>
</tr>
<tr>
<td>5</td>
<td>Is given for the hesitant and not satisfactory performance.</td>
</tr>
<tr>
<td>03</td>
<td>Is given for the very hesitant, very insufficient and unsatisfactory performance.</td>
</tr>
<tr>
<td>00</td>
<td>Is given for the completely unacceptable performance.</td>
</tr>
</tbody>
</table>

Figure 3.1: The former Danish grading scale, the 13-scale.

Parallel to this scale is a grading system of pass-fail and approved-not approved. At the universities maximum 1/3 of the grades can be pass/fail or approved/not approved, whereas these grades are used much more in for instance nursing and mid wife education to avoid competition. When grading, examiners first decide which of the four groups fit the performance best: fail (0-03-5), pass (6), middle (7-8-9) and high (10-11-13). Then afterwards the exact grade is decided upon. Generally the 13-scale is seen as very much in line with Bloom’s Taxonomy (Leth Andersen, 2005) and most often, to get more than 9, one need much more than “just” knowing the material. Furthermore, when the scale was used as NRA, 8 had to be the national grade average of all examination performances at each subject at any given level. Each single class (or school) did not have to have 8 as average, although it was often “the understanding” in practice. Usually a university grade average more than 9 was considered to be quite good, but what really counted was the grade obtained in the Master’s thesis (Speciale).

In addition to problems relating to using the same scale both to NRA and CRA, further problems emerged. One was is that the scale is not compatible with the ECTS scale which means that it is not possible to make a translation that can be used both ways. It is also not possible to translate between the 13-scale and the US grading system. Another problem is that the 13-scale is used differently in different subjects. For instance mathematics tends to use the whole scale, but not so much the middle grades, whereas e.g. Danish tends to not use to very top and low grades but very much the middle grades. Also the different school levels use the grades differently. There has also been a grade-inflation. This is for instance seen in the increasing use of 13, which is an exception-grade only to be used in very extreme cases of students being very far above what can be expected, in fact 11 is the Danish top grade. The 13-scale also tends to be used as a NRA scale even when it is supposed to be a CRA scale. A Grade Commission of DME therefore recommended in November 2004 that the 13-scale should be abolished and replaced by a grading scale comparable to ECTS. In 2006 DMSTI sent out a Departmental Order (no. 886) stating that a new grading scale should be used for examinations at the universities from 1 September 2007. The new grading scale was used in the high schools (gymnasium) from 1 August 2006, and the other levels from 1 August 2007. The new scale is seen in Figure 3.2 below:
<table>
<thead>
<tr>
<th>New Grade</th>
<th>Explanation</th>
<th>ECTS equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>For an excellent performance which completely meets the course objectives,</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>with no or only a few insignificant weaknesses.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>For a very good performance which meets the course objectives, with only</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>minor weaknesses.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>For a good performance which meets the course objectives but also displays</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>some weaknesses.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>For a fair performance which adequately meets the course objectives but also</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>displays several major weaknesses.</td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>For a sufficient performance which barely meets the course objectives.</td>
<td>E</td>
</tr>
<tr>
<td>00</td>
<td>For an insufficient performance which does not meet the course objectives.</td>
<td>Fx</td>
</tr>
<tr>
<td>-3</td>
<td>For a performance which is unacceptable in all respects.</td>
<td>F</td>
</tr>
</tbody>
</table>

*Figure 3.2: The new Danish grading scale, the “7-steps-scale” (sometimes called the 12-scale), translated from Danish.*

**Why does the new grading scale look the way it does?**

The Grade Commission’s first requirement to the new grading scale was international comparability which is linked to the Bologna Process’ goals of ensuring more free mobility and trans-national merit for university students. It was also a prerequisite that the grades should express the degree of meeting the learning objectives, hence the syllabi needed to be formulated as ILOs. It is the same type of goal-management thinking that was seen in the university law mentioned above. The Grade Commission therefore formulated five demands to a new grading scale. Firstly, internationalisation. Referring to an OECD report (Education at a glance, 2004) concluding that internationalisation in time will include the whole education area, the Grade Commission stated that the new grading system must be compatible with the ECTS-scale to make it possible to translate uniquely between the grades. Secondly, uniform use of the grade system throughout the education system as well as the grade expressing degree of meeting learning objectives. This is a change from a content-controlled grading system (and content formulated course syllabi) to a goal/objective-control system where grades are given in relation to clearly stated goals/objectives - ILOs. It is argued that this will ensure a uniform use of the grades which is a predisposition for strengthen the collaboration between the subjects. Thirdly, the same scale should be used in the whole education system to enhance the vertical and horizontal mobility between the educations. Fourthly, there should be clear distinction between the steps wherefore the number of steps should clearly distinct between the grades but also be detailed enough to be used in formal evaluation. Fifthly, it should be possible to calculate an average, which means that numbers are necessary and not just letters. This is the basic reason why the ECTS-scale was not adopted it itself. Below a figure illustrates how the Grade Commission came from the ECTS letters to the numbers in the 7-steps-scale.
Figure 3.3: Explanation of the relation between the ECTS-scale and the new Danish grading scale.

The reason for the addition of ‘2’ in the last row is partly that to have ‘0’ indicating a pass seems illogical, partly that grades should not look too much like the 13-scale.

The implementation of the new grading scale

The different universities, and even faculties, have done it differently. For instance at the Faculty of Science at the University of Aarhus, the implementation consisted of the dean determining that new course descriptions should be formulated as ILOs using the SOLO taxonomy and the principles of constructive alignment. This had been recommended by UPN (Universitetspædagogisk Netværk) at the University of Aarhus. The Faculty of Science at the University of Southern Denmark decided to follow a very similar approach (Brabrand & Dahl, 2008). The other universities took different approaches, some encouraged the use of Bloom’s taxonomy, and others let it be up to the single departments or faculties to decide on how to formulate the ILOs.

Grading traditions

At university level, grades are always decided between the course teacher and either an internal or external examiner. A department decide themselves, within some national rules, what courses should have which type of examiners, but all course examinations should have either. In 1993, national corps of external examiners was introduced by a Departmental Order (no. 332). 1/3 of the examiners were to be from outside the university world. To become part of a subject’s corps of examiners, one can either apply or be invited. The board of each of the subject put together a list of potential examiners, send the list to the Ministry that formally appoints the examiners for a 4-year period. In 2006 the Minister of DMSTI suggested to abolish this system, partly since it is expensive, partly since it is different from what other countries do, but there were many protests from the universities and employer’s organisations. They did not want to go back to the situation before, where each university had its own corps of examiners since this might jeopardize a uniform grading.

Experiences

The use of the 7-steps-scale is still very new in Higher Education in Denmark so it is too early to speculate about it. However, the scale has been used for a year in the high school where it has met a lot of critique. Some of the critique (Wissing, 2006) is that the scale is not good for formative
evaluation due to the fewer amounts of grades to choose between, the large steps between the grades – particularly from ‘7’ to the neighbouring grades, and the presence of a negative grade. It has also been criticised that it does not fit today society’s demand of creativity and invention to have learning objectives clearly predefined and specific and a grading procedure very fixed on what is “missing” from the predefined descriptions of the goals.

4. Norway

The ministry of higher education has given each institution a right to award a specified set of degrees. Included in this right, the institution has its legal basis for doing the examinations. Within this frame, the university faculties do both the formal and practical work of arranging examinations, do the assessments and set the grades. The faculties themselves decide who they will use as examiners. Up to 2003 almost all examinations had their assessments done by an internal examiner (the person with the academic responsibility) and an external examiner. The use of external examiner has been reduced from 2003; it is no longer required, except for the Master’s thesis. Instead external examiner is used more in the preparation stage; assessment of the examination questions.

Previous grading scales

Up to 2003, universities and university colleges in Norway usually adopted a grading scale founded in the national academic tradition. This was a number-based scale with short descriptions in Latin. This grading scale had 1 as the highest ranked mark and 4 as the lowest ranked passing mark. Fail was termed *immaturus* or was marked with a number above 4, up to 6. This meant that even failed results could be ranked. During the last century new academic institutions and subject areas grew up and started their own grading traditions.

At the start of this century there were a great number of different grading scales in use in higher education in Norway. Most of them used a numbered grading scale with different terms for the mark in Latin or a combination of Latin and Norwegian. A few only used descriptive terms. Some of them had 1 as the highest mark for the ultimate result, others had 1 as the poorest mark (and failed) result, starting with 9 or 12 as the highest mark. Some scales used decimals as in the mark: in steps of 0.1, 0.25 or 0.5 - some even with steps of 0.01. Those with 0.01 used only a minor part of the 1 - 6 scale. The binary scale *passed/failed* was used for some subjects and levels, for instance practical work or smaller subjects.

But to make the picture even more complex, apparently identical scales were used in different ways – depending on the tradition in different academic groups. You had to know the specific tradition in the subject area to interpret the value of a mark. For instance, a 2.2 mark in the humanities and social sciences was a really good result, but in the natural sciences the same mark would be satisfactory, but not outstanding. Common for all scales is a large amount of steps. The scale most used had 31 different steps for passed results (1.0 – 1.1 -… - 3.9 – 4.0).

Up to 2003 each institution decided which grading scales to be used. The decision was often linked to traditions. In 2002 the Ministry decided that using grading scale should be one of two for all institutions: either a 6-step scale *A-F* or *passed/fail*. This was realized for all to later than autumn semester 2003.
The secondary school in Norway has for the last 35 years used a common grading system with numbers as symbol: 6 as the highest ranked, 1 (or even 0) as not passed. This system is still in use, and has not been influenced by the reform in the higher education.

**Political reasons for a new grading scale**

The need for communicating the candidates’ ability to employers was the prior political reason for revising the annoying variation in grading scales. Students no longer follow pre-decided professions and there has been a growing tendency to switch between different positions in a crossover working market. The students also have a crossover tendency by mixing subjects from different institutions in higher education that have different grading traditions. But the most important reason for a revision was that Norwegian higher education institutions needed for a simpler and more transparent grading system because of their expanding contact with institutions abroad.

The four universities in Norway (at that time) established a committee which was asked to draw up a proposal about how a new, common grading scale could be designed and described. Since the ECTS scale already was established, primarily for transferring grades from one national system to another, the committee saw that this scale could be a good basis for the new, common national grading scale: a reasonable amount of grading steps, a reasonable use of symbols, a well-known scale in Europe, and there would be no need for transferring from a national scale when comparing with other scales.

The proposal from the grading committee was sent to the official committee considering the educational structure of higher education in Norway, which at that time had reached the concluding stage of their work. The grading proposal was included, and was approved by parliament as a part of the act relating to higher education in Norway in 2002.

**The new grading scale**

At the start of the academic year 2003/04 all the institutions of higher education in Norway converted to the new, common grading scale. The qualitative part of the scale got this general description for each grade:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
<th>General, qualitative description of valuation criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>An excellent performance, clearly outstanding. The candidate demonstrates excellent judgement and a high degree of independent thinking.</td>
</tr>
<tr>
<td>B</td>
<td>Very good</td>
<td>A very good performance. The candidate demonstrates sound judgement and a very good degree of independent thinking.</td>
</tr>
<tr>
<td>C</td>
<td>Good</td>
<td>A good performance in most areas. The candidate demonstrates a reasonable degree of judgement and independent thinking in the most important areas.</td>
</tr>
<tr>
<td>D</td>
<td>Satisfactory</td>
<td>A satisfactory performance, but with significant shortcomings. The candidate demonstrates a limited degree of judgement and independent thinking.</td>
</tr>
<tr>
<td>E</td>
<td>Sufficient</td>
<td>A performance that meets the minimum criteria, but no more. The candidate demonstrates a very limited degree of judgement and independent thinking.</td>
</tr>
<tr>
<td>F</td>
<td>Fail</td>
<td>A performance that does not meet the minimum academic criteria. The candidate demonstrates an absence of both judgement and independent thinking.</td>
</tr>
</tbody>
</table>

*Figure 4.1: The new Norwegian grade scale.*
This is the common national description, used for all subject areas. For each discipline a specific description is made, telling what academic criteria the candidate should fulfil to be awarded grade A, B etc. This level of description is based on a common national agreement.

As a tool for quality assurance, the following quantitative distribution has been made.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
<th>ECTS Frame values</th>
<th>Ranking criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>10 % 8-12 %</td>
<td>Clearly above average</td>
</tr>
<tr>
<td>B</td>
<td>Very good</td>
<td>25 % 20-30 %</td>
<td>Above average</td>
</tr>
<tr>
<td>C</td>
<td>Good</td>
<td>30 % 24-36 %</td>
<td>Average</td>
</tr>
<tr>
<td>D</td>
<td>Satisfactory</td>
<td>25 % 20-30 %</td>
<td>Below average</td>
</tr>
<tr>
<td>E</td>
<td>Sufficient</td>
<td>10 % 8-12 %</td>
<td>Far below average</td>
</tr>
</tbody>
</table>

*Figure 4.2: Distribution of grades.*

After some time in use (minimum 3 years), a complete collection of programmes of study in a particular subject area covering a great number of candidates, should have a distribution of passing grades within these frame values. If so, the grading scale is used as intended. If not, it is probably an indication that it is not a relevant qualitative description for this discipline, and should be revised. So far, it is too early to conclude about the use of a quality assurance system like that.

**How the new grading scale has been implemented**

From the start of academic year 2003/04 all institutions in Norway were instructed, by law, to use this grading scale. The Norwegian Association of Higher Education Institutions (UHR) has established several national panels, covering different disciplines. The mission is to overlook the use of the scale for each discipline by analysing the grade distribution, to ensure that the scale is used as intended. All institutions deliver their own examination results, which are gathered into a national statistical database. Also here, it is too early to see what effect this coordinating work will have. Anyway, it is a good initiative that surely will be followed with great interest from the higher education institutions. These panels also have the responsibility to make the common disciplinary description.

The ministry has not been strongly involved since the parliament’s approval. The association UHR – the voluntary cooperation between higher education institutions – has taken the opportunity to solve the usage coordination. The ministry seems to be very satisfied with this initiative, probably hoping that the institutions themselves will solve conflicts and problems!

**Experience**

After four years of use, the new common grading scale has become the national scale, as intended. Students and professors – as well as institutions outside higher education – have become familiar with it. The transition did not result in the turbulence some expected. However, some problem areas have been uncovered:

- Using A’s, B’s are confusing for some of those who are in contact with higher education in the USA, where they have quite another distribution and use of these grades. However, this is quite a limited problem which is mostly solved by a diploma supplement.
- It seems that examinations in higher degree programmes have a grade distribution that covers more of the A’s and B’s than lower degree examinations. The discussion has therefore considered the following: should the description take into consideration the fact that higher degree students...
are more experienced than lower degree students? Or should all examinations within a discipline be looked upon as a unit – giving credit to those who have been studying for a longer period? The conclusion so far is that there must be different sets of criteria for higher and lower degree students if the intention is to have a normal Gauss distribution of grades that is separate for the higher and lower degrees. However, it is interesting to observe that this was not stressed as a problem when using the old grading scale. Probably, converting to a new scale has uncovered latent conflicts.

5. Sweden

Grading in Sweden
In Sweden, grading in schools and in higher education is treated as different policy domains. Grading based in NRA was applied both at compulsory school level and in upper secondary education from the end of the 1960’s until 1994, when a shift to grading based in CRA took place. The introduction of norm-referenced grading, with a grading scale 1-5, where 5 is the highest grade, was underpinned by extensive educational research and was part of the intention to create equal opportunities in the development of the welfare society. This long period of grading based in NRA also meant that much of Swedish educational debate and research bypassed the movement to frame educational activities by behavioural goals or student learning objectives. Since the 1970’s Sweden developed a grading-hesitant educational culture. Children at compulsory school level are not graded at all until they reach their seventh year in school. The shift from NRA to CRA in schools, which also included the shift of grade scales (to scales with three or four levels), turned out to be a slow and complicated process (Selghed, 2006). In March 2007, the new right-wing Government (from the election in 2006) declared a marked shift in the old policies, when setting up a committee to try the introduction both of earlier grading at compulsory level and a new grading scale with seven levels “like the ECTS” in schools. The proposal was presented in February 2008 (Ds 2008:13) and outlines a grade scale in six levels A-F, where F is failed. When expressed in numerical values E (passed) is worth 10 and A 20, and each level in between equally adds 2.5. If the scale will be approved of it will be launched in 2010.

Higher education in Sweden
Towards the end of the 1960’s, Sweden created a unitary system for higher education, which besides traditional university education also includes most vocational programmes, such as nursing, paramedic education and teacher training. A general credit-system was introduced, which led to a rapid shift to modular structures. The whole sector is covered by a comprehensive legal framework in the HE Act and Ordinance. The main part (about 95%) of higher education and research is carried out at the 14 state universities and at the 22 state university colleges. There also is a small group of private HEIs partly funded by the state. (Ministry of Education, 2005 & 2006).

The explicit political intention, supported by a long row of social-democratic governments, was the endeavour to support unity and uniformity (“enhetlighet”) across all institutions in Sweden. An example of this policy is the centralised system for admission to programmes at the national level, with common entrance requirements across institutions for the larger part of the programmes. From 1977 to 1993, the structure of programmes in higher education was firmly regulated at the national level by centrally decided “study plans”. Also the number of students admitted into different programmes at each institution was decided by national authorities. Thus, the control of the system was mainly exerted by the in-put factors: planning based in the common structure. In 1993, a
deregulation was launched. The responsibility for programme structure was transferred to the institutions. An impressive creation of new degrees and courses took place after the deregulation of the system (Bauer et al. 1999, p. 258).

The examination system and grading traditions

The formal curricular system in Swedish HE from 1993 onwards can thus be described as a decentralised, loosely-coupled and modularised system, with very few national regulations or policies concerning teaching, assessment or exams. In most HEIs, the decisions concerning syllabi and assessment are made close to the teachers at the department or unit level, where also the local culture of the specialised subject might be strong. The system relies on extensive teacher responsibility for assessment and grading and for the design and maintenance of syllabi. Very few HEIs have developed institutional policies of their own concerning examination and assessment. These aspects are mostly handled at faculty, or even at department level.

The “course” became the basic entity of all programmes in the 1960’s, and still keeps this status. A course consists of a module with a syllabus. Only courses are assessed and graded. The single teacher appointed “examiner” has the full responsibility for assessment and the grading of students at the end of the course. Thus, in Sweden all assessment is framed by a course, and assessment practices are integrated into the teaching and learning of each course/module. No concluding or final exams are allowed for general or professional degrees. There are no traditions of external examiners or censorship at the level of degree. The decision to award a full degree is therefore basically an administrative one, verifying that all the required courses are registered as passed. Grades from different courses are not aggregated or summarised to a final grade, which means that the student gets no final mark or grade linked to the Diploma.

Since 1993, ILOs for all professional degrees (but not for general ones) are specified in the HE Ordinance, replacing the nationally decided and structurally oriented study plans. These goals, though, are not ascertained in final examinations or in any kind of assessment. They first have to be interpreted and transferred into a syllabus for a regular course in the programme, in order to be assessed. General degrees never had any ILOs expressed at the level of the degree. The qualification is acquired by passing the required courses. But before 2007, there were no legal demands on syllabi for courses to include student learning objectives or ILOs.

The nature of the Swedish grading system is not formally defined at the national level as either norm- or standards-based. The scale mentioned as normal is fail/pass/high pass, but HEIs can choose any other grade scale or grading system they want. From 1977, HEIs could also choose a grading-scale with only pass/fail if they so wished. Several important professional programmes, leading to recognised professions such as doctor, psychologist or social worker, since then grade all their courses only pass/fail. Thus, large groups of academic teachers have no professional experience of designing and marking assessments with grades other than pass/fail. Grading practises vary, also within institutions, since faculties and departments can have their own system. Still, grading of credits more specific than “high pass” is uncommon. The different traditions were up until 2006 mostly linked to the field of study. For instance most programmes in Engineering used a grading 1-5 (where 1 and 2 were failed), whereas Faculties of Law mostly used the old grading-scale Ab-ba-B-C (where C was failed). The varied traditions also meant that large institutions, as universities, with a great variety of study fields and programmes, normally did not interfere with faculties or departments by trying to compare or synchronize grading processes or
assessment traditions from different fields of study. The distribution of grades is not followed up at national or institutional level.

The Bologna process and the Swedish grading system

When the first Government Report concerning the Bologna process was presented (Ministry of Education, 2004), it included a proposal of a new three-tiered system. But it also put forward that explicit ILOs for general degrees should be developed and a new credit system introduced. Furthermore, it suggested that the various grade scales used in different fields of study should be supplemented with an ECTS-scale based in CRA with seven levels. Any student could then ask to have an ECTS-grade as well as the original grade. The main arguments were that these changes would support the international recognition of Swedish HE and facilitate the mobility of Swedish students. The proposal raised a fierce debate along two lines, since the report labelled the suggested criterion-referenced grade scale “ECTS-grades”. Many thought this was strange and quite improper regarding the nature of the ECTS-grades, as being mainly norm-referenced. The other part of the debate concerned the Swedish assessment culture, and consisted of clashes between negative and positive conceptions of the grading of students in several levels. The resistance was especially outspoken in medicine, where the ongoing development of problem-based learning is nurtured by the simple pass/fail grading.

Initially the Bologna Process in Sweden in many cases was framed as mainly concerning grading. The process was often described in the media as “changing to a grading scale with seven levels as the rest of Europe, to prevent problems for Swedish students when their grades are compared with students from other countries.” Since the old grade scales in the education system all have had fewer levels than seven, several voices in the pedagogical debate expressed doubts about the value of increasing the number of levels. They also lifted forward the eventual detrimental effects on student learning by the foreseen change of assessment practices linked to new demands on grading (Dahlgren & Fejes, 2004; Silén & Harrysson, 2004). During 2004, the internal debate in HE often focussed the pros and cons of a new grading system, though even more attention was directed toward the possible conditions for the two-year master degree that was envisaged and its relation to the doctorate. But when the Government bill (2004/2005:162) was presented in 2005 it did not put forward any suggestions concerning grading at all. When, in 2006, all decisions were finally made it turned out that the legislation connected to grading in higher education was not changed in any way.

Results of the reform: Grading is changing – but how?

In the course of the reform launched in 2007, Swedish assessment traditions and grading initially were at the centre of attention. When the Government bill did not include a new grading system, these discussions ended or were replaced by all the other aspects of the rapid implementation of the reform. But a very noticeable outcome of the reform is the new tendency that institutions decide on new grading systems to be applied to all programmes at the institution. For instance, Stockholm University, Luleå University together with several other HEIs, has opted for criterion-based grading in seven levels. At the same time, Uppsala University has chosen a grading scale in four levels based in CRA, while several other institutions have decided for three levels, and yet others, like Lund University, have kept the tradition with different scales in different fields of study. The variation has increased and comprises new paradoxes, since the same professional degree studied at different institutions now can have a grading in two, three, four or seven levels. There is also a variation concerning how institutional grade scales are linked to CRA and NRA, since it is optional for HEIs to choose which system to use. Probably the topic of grading will reappear on the agenda when the students start to compare their situations.
6. Comparison and discussion

In this section we will focus on three issues emerging when comparing the three countries, namely the different grade systems, the level of state control, and finally some general discussion about the difference between NRA and CRA types of assessments.

Grades

Figure 6.1 below illustrates the different grades used before and after the change of grading system.

<table>
<thead>
<tr>
<th>Grades &quot;before&quot;</th>
<th>Denmark</th>
<th>Norway</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades &quot;now&quot;</td>
<td>ECTS-like scale, with numbers</td>
<td>ECTS-scale</td>
<td>More diversion – some institutions have ECTS-like scales</td>
</tr>
<tr>
<td>Direction of change: number of levels</td>
<td>Decreasing</td>
<td>Decreasing</td>
<td>Some – No changes Some – Increasing</td>
</tr>
</tbody>
</table>

Figure 6.1: Overview of the grade systems in Denmark, Norway, and Sweden.

It is seen that although the situation in the three countries were different “before”, it is by no means the same “after”. In Denmark and Norway, one of the main purposes of having a scale that in fact was identical to the ECTS scale was to make it easier to compare grades between countries. Both countries therefore seem to have “merged” into the ECTS ideal and have now grades scales that are alike, except that Denmark uses numbers, calculated inventively (see Figure 3.3), but otherwise the same. However, while beforehand the grade systems were obviously different, easily seen in the variety of scales and letters, they are today only seemingly alike. The common use of the ECTS scale disguises that behind the ECTS-letters is a different interpretation of the grades. Firstly, the Norwegian qualitative description of valuation criteria is not formulated as learning objectives (ILOs) which the Danish grade explanation is. This indicates two quite different education philosophical approaches to grading (and teaching). Secondly, the different use of numbers linked to the ECTS-letters will in some cases result in very different averages as seen in the example below. We see the students D (Danish) and N (Norwegian) who both have studied the same topic, gotten the same four grades in courses that each were of the same size.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Student D</th>
<th>Student N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Translate to numbers</td>
<td>12 12 4 4</td>
<td>A A D D</td>
</tr>
<tr>
<td>Average</td>
<td>32/4 = 8</td>
<td>14/4 = 3.5</td>
</tr>
</tbody>
</table>

Figure 6.2: Example of same national grades giving different ECTS-average.
The reason for the different averages is that the Norwegian scale has similar distance between the letter grades, which the Danish scale does not have. When compared as classification systems they are different (Bowker & Star, 1999). As long as the students are in each of their own country, this might not cause problems, since within the country, people are familiar with the specific grading system and the same grade system have been used on all students. However, one of the main argument for the Danish grade scale change was to secure easier access to foreign universities than with the 13-scale where ‘13’ was often misinterpreted as A, hence many Danish students were refused access to foreign universities requiring top grades. The example above is invented, but the risk of unfairly treatment of both Danish, Norwegian, and Swedish students in competition with each other (and other nationalities) still exists. What furthermore complicates the situation is that in Sweden, the institutions that have changed to ECTS-like scales, they may have designed their scales differently, since they can choose to base the grades in NRA or in CRA or in combinations of both. In Denmark, if a student applies to a foreign university, the student sends his diploma/transcript (with numbers) to the foreign university along with the grade explanation, including the letters. It is then up to the foreign university to evaluate the student’s level based on this. Hence, even though the Danish diplomas do not actually include “an ECTS-average”, foreign universities might choose to calculate an ECTS average following the Danish instructions as a means to compare students and sort applicants from various countries. Also the task of calculating average grades is actually not even applicable in the Swedish grading system. The grade for each course is a final whole and there are no legal means to calculate the average grade for a cluster of courses or for a degree. Each of the Swedish grades has to be supplemented by a separate ECTS-grade. Hence, the new ECTS-like grade scales have not resulted in an “easy” situation, even though it might be “easier” than before.

**Level of state control**

As described above, the path to the new grade scales were different in each of the three countries, which is illustrated in Figure 6.3 below:

<table>
<thead>
<tr>
<th>Initiative origin</th>
<th>Denmark</th>
<th>Norway</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Government</td>
<td>Institutional collaboration between universities</td>
<td>Higher Education Institutions</td>
</tr>
<tr>
<td>Educational sector covered by the new scale</td>
<td>Education as a whole</td>
<td>Higher Education</td>
<td>Higher Education Institutions or different fields of study</td>
</tr>
</tbody>
</table>

*Figure 6.3: Overview of the different steering instrument and scope of the decisions in Denmark, Norway, and Sweden.*

We see that Denmark has a very high level of state control, where the state initiated the change of grade scale by law even though it let it be up to the single universities to implement it. The decision though, covered the whole sector of education. Sweden seems to be in the opposite end, with a very low level of decentralised state control. The failed Ministry attempt, to include a new grade scale in the Government Bill, kept the initiative clearly at the institutional level. The collaboration between Swedish HEIs is organised by SUHF (The Association Swedish Higher Education). A proposal for institutional collaboration, concerning a CRA based grade scale in four levels was put down by SUHF. A recent search on the official parts of the SUHF homepage (www.suhf.se in 08/03/02) gives zero hits for “grades” or “grade-scales”. In Norway the initiative was born and bred by the collaboration between four Norwegian universities and the government implemented a suggestion from this group to adopt the ECTS scale.
Norm referenced or criterion referenced scales – classification and control?

The ECTS grade scale is presented as a NRA scale, but it is only supplemental and not really a grade scale and the “ECTS-grade” is added as an explanation to the original grade. Therefore it cannot really be labelled NRA. What an ECTS-grade may display must be judged by looking at the original grade and the supplement together as a pair. When the ECTS-scale is adopted by a nation or a HEI as their original grade scale, what might be meant by the label “ECTS” linked to a certain grade scale is not clear cut. As our example above shows, there are several options. Both in Norway and Denmark the ECTS-like scale is used as a CRA scale. This might seem as a contradiction, but the way both countries have chosen to deal with this is to emphasise that the distribution 10-25-30-25-10 is something that will hopefully be seen over a number of years, it is not something that should be of concern for examiners when they give grades. In other words, the purpose is not to see this distribution within each single course, programme, or even year; instead it is hoped that this pattern will be revealed over the years. It is also (in Denmark) stated that in case this pattern is not seen over the years, it will be necessary to adjust the (absolute) criteria for getting each grade so that later this pattern will emerge. The reason for this is international mobility and Danish students being able to compete with students from other countries. Time will tell if this pattern indeed will emerge, and in case it does not, how Denmark and Norway will act – and what the action will be. In both Denmark and Norway this means that nationally or institutionally based quality systems will have to include statistical reporting of distributions of grades, so they may be compared. This question is not even discussed or regarded in the Swedish decentralised grading system or in the ongoing changes of the national quality assurance system (Högskoleverket, 2007). One can say that in Sweden the topic of grade distribution is invisible at most educational levels and also, regarding the fields of study where only pass/fail grading is practiced, a topic totally void of valuable information.

What is an ECTS-like grading scale?

The three Scandinavian countries in this study all have relied and replied on the supplemental grade scale that is a part of the ECTS, for to shape their new policies concerning grading in connection to the Bologna Process. Looking at the transition of the ECTS grade scale to a national or institutional grade scale, several differences and also difficulties have been displayed, when the grade scales are regarded as classification systems with multiple functions at several levels of the educational system (Bowker & Star, 1999). Some of the difficulties are related to the relation between the grade scales and NRA and CRA, respectively. But also the specific design of the grade scale, when levels are named or numbered, may result in different classification of the learning outcomes evaluated in assessments. This study suggests that the common trait signifying all ECTS-like scales is that it contains five levels for grades passed and so far nothing more.

7. Conclusion

In this paper we have described and discussed how Denmark, Norway, and Sweden each have dealt with the common challenge of the Bologna Process and the issue of changing the grade scales in Higher Education. We saw that even though the three countries in many areas are quite similar, from an outset they had very different grade scales and assessment traditions. Their response to the Bologna Process were quite different, as each country had a national political agenda of its own concerning issues higher education, in which the Bologna Process was utilised as a means for initiating internal change. Here we saw that the three countries used very different steering instruments with Denmark being much centralised, Sweden much decentralised, and Norway in the
“middle”. The actual differences both in the new grade scales designed to be “ECTS-like”, and in the implementation process, point to the trouble with bringing about transparency in higher education. When transparency at one level increases – for instance if all Scandinavian students in the future will have their passed grades expressed in five levels – that this view, thus opened, in a new way also displays the differences in assessment and grading traditions that previously were hidden behind the impenetrable fabric of different grade scales.

References


http://www.uhr.no/utdanning/en_felles_karakterskala


