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Engagement for quality development in higher education: a process for quality assurance of assessment

Henriette Lucander and Cecilia Christersson

Faculty of Technology and Society, Malmö University, Malmö, Sweden

ABSTRACT
This paper reports on the design, development and evaluation of a novel process for quality assurance of assessments for entire educational programmes. The process was developed and tested by multidisciplinary teaching staff and consists of five phases: inventory, analyses, evaluation, planning change and realising change. The process for quality assurance was evaluated in three diverse programmes. The results show that the process forms a solid base for decisions on short-term as well as long-term quality improvements. It was also found to encourage the development of a quality culture and had an improving effect on the curriculum design, enhanced internal quality work and supported documentation for external quality assurance. The results show that the process has the capacity to engage and involve teachers and other internal stakeholders in the quality development of a range of educational programmes, promoting engaged change for improved quality in a higher education institution.

KEYWORDS
Quality development; evaluation; assessment; quality culture; teacher participation; higher education

Introduction
Quality assurance of higher education has been promoted for several reasons (Brown, 2017; Westerheijden et al., 2007), from ensuring accountability for the use of public funds in higher education, to providing information to students in their decision-making process for application and admission to higher education institutions. Quality assurance has also become a generic term for external quality monitoring and accreditation (Harvey, 2004–2020). The perceived need for external quality assurance reflects a demand for accountability by stakeholders as well as a global, contemporary decline in trust of public service institutions (Kinser, 2014).

Although there are good reasons for accountability there is a risk that systems for quality assurance, work against the quality of learning and teaching (Jessop et al., 2012). Studies show that academic staff find the impact of quality assurance of learning and teaching to be scant or lacking (Lazerson et al., 2000;
Chalmers, 2007; Cheng, 2011; Brady & Bates, 2016). The self-evaluation processes preceding external quality assurance reviews are seen as having more impact than the reviews themselves (Kis, 2005; Harvey, 2006). Some authors explicitly argue that the quality of learning and teaching is decreasing as a result of adopting industrial quality processes to the complex nature of education with an increasingly diverse group of students (Harvey & Newton, 2004; Harvey & Williams, 2010; Srikanthan & Dalrymple, 2004; Dollery et al., 2006). The cost and time spent on the bureaucracy required for quality assurance has increased (Stensaker, 2003; Harvey & Newton, 2004) and distracted the attention from developing learning and teaching for the benefit of students (Muller et al., 1997; Jones & Saram, 2005).

Those that are proficient at the operational level of learning and teaching are rarely involved in the design of systems for quality assurance. It has even been concluded that ‘the design and assurance of quality assurance is separated from the evaluation and improvement of teaching, learning and research’ (Houston & Paewai, 2013, p. 273). Within the university, the groups that may seem to benefit most by the quality assurance processes are the institutional leadership and the administration while the academic staff and students are less convinced of the effect on learning and teaching (Stensaker et al., 2011). The institutional leadership needs to find translational processes where external quality monitoring schemes are aligned with the internal quality improvements to benefit change within the institution and contribute to the benefit of external evaluation systems as a dynamic improvement outcome (Pratasavitskaya & Stensaker, 2010).

From 2011 to 2014, the Swedish Higher Education Authority performed a national external quality evaluation of all degrees given at the Swedish higher education institutions. During this period, the European Network for Quality Assurance Agencies (ENQA) excluded Sweden from the network in 2014 primarily referring to the lack of a systematic follow-up system to ensure national quality of higher education in alignment with the European Standards and Guidelines (ENQA, 2014).

The institutional leadership at Malmö University had already decided, at the beginning of this national external quality evaluation process, to take the opportunity to promote the development of a quality culture at all levels of the university, along with the ongoing national process of quality assurance. Bendermacher et al. (2017, p. 41) defined quality culture ‘as a specific kind of organisational culture which encompasses shared values and commitment to quality’. According to the European University Association (2006) the development of a quality culture requires a balance between top-down and bottom-up approaches in order to promote the enhancement of quality and coordinate individual efforts for a collective responsibility.

Another perspective on quality enhancement is given by Elken and Stensaker (2018) where they add the concept of quality work that takes a practice-oriented approach and focuses on the formal and informal processes and different actors that continuously shape the daily practice to enhance quality in higher education.
This study reports on the process of engaging and involving teaching staff, and students, in the development and pilot-testing of a process for quality improvement of higher education and its acceptance by both teaching teams and academic management. The purpose of this study was three-fold.

First, to design, develop and evaluate a process for quality improvement of higher educational programmes, accepted by academic staff, based on assessment of students’ learning (Ramsden, 2003) and competence in relation to constructive alignment (Biggs & Tang, 2011). By assuring the quality of assessment and examinations throughout an educational programme, the quality of the entire educational environment and students’ performance should be positively affected. Learning and instruction are increasingly competence-based (Baartman et al., 2007). Competence, however, is complex and not always easily assessed (Dierick & Dochy, 2001; Birenbaum & Rosenau, 2006; Gijbels, 2011), requiring diverse assessment methods that are attuned to the learning outcomes being assessed. According to Baartman et al. (2011), competence assessment in higher education programmes can be evaluated using a comprehensive quality framework.

Second, the purpose was to develop a quality culture by involving teaching staff from all faculties in the collaborative development of the process and by involving teaching staff as well as other internal stakeholders (students, programme directors and academic management) in the pilot-testing of the process.

Third, the pilot-test aimed to evaluate whether the process had an improving effect on the curriculum design and whether the process promoted the development of a quality culture as well as supported the self-evaluation documentation for the external national quality assurance system.

Method

Participating in the development of the process (the development team) were the Deputy Vice-Chancellor, one representative involved in teaching from each faculty as well as representatives of the students and the librarians. They were appointed by the Board of Education at Malmö University with the task to:

(1) Develop a process for quality assurance of assessment (PQAA) that could contribute to the improvement of teaching, learning and assessment.
(2) Engage teachers and students to test and contribute to the process.
(3) Pilot-test the outcome of the applied process and the process of work.

Developing the process for quality assurance of assessment

The Swedish quality assurance system for higher education, at the time, was mainly focusing on assuring students’ academic competence at graduation. The format of the quality assurance was based on peer review of student theses.
within pre-defined groups of disciplines, making it difficult to compare and benefit from the results across the university.

Malmö University has a strong foundation in education of different professions, combined with academic education and offers professional degrees as well as general academic degrees. The challenge of creating curricula that enables students to acquire scientific competences, professional competences and generic competences (Gijbels, 2011) is hence ever present. Thus, the PQAA needed to support both types of degrees, including the assessment of professional competence as well as academic competence. The PQAA should also make it possible to learn from processes as well as the results across the university.

Competence is used in this study in accordance with Taconis et al. (2004), who define competence as the ‘integration of knowledge skills and attitudes into situation-relevant actions in order to master relevant tasks’. Within this area, Baartman et al. (2011) developed and evaluated a survey for self-evaluation of entire competence assessment programmes. This self-evaluation consists of 12 quality criteria (fitness for purpose, self-assessment, comparability, reproducibility of decisions, transparency, acceptability, fairness, meaningfulness, authenticity, cognitive complexity, educational consequences and cost and efficiency). For each of these criteria, 4–7 indicators are defined, resulting in a total of 65 indicators. An example of indicators to one of the criteria, ‘reproducibility of decisions’, includes: multiple assessors, equal discussion between assessors and assessors reach same decisions. The criteria and indicators have been validated, in earlier studies by Baartman et al. (2011).

The criteria and indicators in the survey by Baartman et al. (2011) were adapted to the Swedish context resulting in the following 10 criteria: (1) constructive alignment, (2) formative assessment, (3) reproducibility, (4) transparency, (5) acceptability, (6) comparability, (7) fairness, (8) cognitive complexity, (9) authenticity and (10) cost and efficiency. (The Dutch criteria: fitness for purpose and meaningfulness were integrated in the Swedish criteria for constructive alignment. The Dutch criteria for educational consequences were integrated into formative assessment, cognitive complexity and authenticity.)

In order to work with quality improvement, the current status of, in this case, the educational programmes need to be identified and documented (Lewis, 2015). The PQAA utilises a survey and a programme visualisation for this purpose. The different parts and the five phases in the PQAA are shown in Figure 1.

The PQAA survey

The PQAA survey is used to identify different stakeholders’ view of the competence assessment in the programmes. The purpose of distributing the survey to different stakeholders (students, teachers, programme directors) is to obtain the view of the present status of competence assessment from all parties involved
in the assessment. The survey evaluates criteria 2–10 (listed above); indicators were partly adapted from the Dutch survey (Baartman et al., 2011) and partly developed for the Swedish context, resulting in a self-evaluation survey. The survey was adapted to suit three groups of respondents: programme directors (40 questions), teaching staff (54 questions) and students (44 questions). The selection of questions for the three groups was based on the respondents’ access to information needed to answer them. Each question could be answered by a rating scale from 0 (not at all in agreement) to 100 (completely in agreement). The mean value and standard deviation of each item, for each stakeholder group in the PQAA survey were calculated with the purpose to identify similarities and discrepancies between the stakeholders’ view of the competence assessment in the programmes.

The PQAA survey asks questions related to the entire programme. With the purpose of visualising the assessments in different courses in the programme, increasing the transparency and the involvement of teaching staff, thereby promoting the development of a quality discussion and culture, the development team decided that the first criteria (constructive alignment) and part of
the second criteria (formative assessment) were to be evaluated outside of the PQAA survey in the PQAA programme visualisation. This decision was based on Srikanthan and Dalrymple's (2002) discussions on the importance of the involvement of internal stakeholders, such as teachers and students, in order to develop an embedded culture of quality management.

According to Sharabi (2013) and Zelnik et al. (2012), the involvement of staff in quality work, increases the possibilities of employees taking ownership of problems and responsibility for solving them. Another purpose of evaluating these criteria outside of the survey was to make it possible to identify and discuss local practices and differences in institutional settings; the local quality work (Elken & Stensaker, 2018).

**PQAA programme visualisation**

Constructive alignment and formative assessment were to be visualised and evaluated through a curriculum mapping and assessment documentation, produced by the teaching staff and evaluated by the critical friends in the development team. According to Sridharan et al. (2015), there is a lack of confirmation that the qualification descriptors (programme outcomes) are incorporated in the curriculum in an efficient way. In order to minimise this risk, the curriculum mapping (Uchiyama & Radin, 2009) visualises how the learning outcomes of the courses needed for graduation, build up, combine and progress in order for the students to be able to reach the qualification descriptors in the statutes linked to the *Higher Education Act*. Each programme consists of courses comprising 180 credits in total.

The assessment documentation consists of assessment plans and assessment rubrics for each course needed for graduation, providing a representation of how the assessment tasks are aligned with the learning outcomes of each course. The assessment plans show the learning outcomes of the course and their respective formative and summative assessment forms. In Sweden, the summative assessment forms need to be stated in each course syllabus. The documentation of the formative assessments is based on the importance of formative assessments together with timely and constructive feedback from a learning perspective (Biggs & Tang, 2011; Gibbs & Dunbar-Goddet, 2009). The assessment rubrics describe the criteria, indicators and their appropriate quality levels for each assessment method. Elaborating on the assessment rubrics is a way of expressing and developing a shared understanding of standards and quality among the teaching staff as well as to help students understand teachers’ expectations (Sadler, 2009).

**Pilot-testing of the process for quality assurance of assessment**

Three programmes were chosen for testing and evaluating the PQAA; English studies (P1) (a three-year academic bachelor programmes), Graphic design (P2) (a three-year academic bachelor programmes with a professional focus) and
Production management within publishing (P3) (a three-year academic bachelor programme with a professional focus).

The programmes were chosen to reflect the range of disciplines at Malmö University. The choice was also made to be able to judge the process’s relevance in relation to the Swedish national external quality evaluation system for degree evaluations in higher education. One programme had previously been evaluated in accordance with the national external quality evaluation system, one being concurrently evaluated and one was to be evaluated the following year.

In order to promote the development of a quality culture all the internal stakeholders were involved. All the teaching staff engaged in all the courses leading to a degree, the programme directors, the academic management as well as representatives for the students, were invited and encouraged to take part in the study. These participants in the evaluation of the PQAA formed the three testing teams, one for each programme.

**Introducing and using the process**

The PQAA consists of five phases; inventory, analysis, evaluation, planning change and realising change (Figure 1). Each phase shows the involvement of stakeholders and the process for developing commitment and shared ownership in order to improve quality and develop a quality culture. Involving all stakeholders in discussions to ask questions and identify challenges related to quality is a prerequisite to develop a quality culture (Harvey & Stensaker, 2008). The process of gathering relevant information, analysing this information and planning change is frequently used within quality systems and improvement science (Lewis, 2015).

**Phase 1: Inventory.** Phase 1 was introduced at an inventory workshop by representatives from the development team. Participants were the programme directors, the teaching staff and the academic management. The goal of the workshop was to introduce the PQAA and involve the entire teaching staff in the work with the inventory phase. At this introduction, it was stressed that the process is aimed at improving the quality of learning and teaching thereby not focusing on control. In this phase, an inventory of the current status for each programme was made, where four types of documentation were compiled:

1. The PQAA survey was distributed to programme directors, teaching staff and students.
2. Curriculum maps.
3. Assessment plan for each course (required for graduation).
4. Assessment rubric for each course (required for graduation).

During a three-week period, the three pilot-testing teams responded to the surveys and worked with the documentation (curriculum maps, assessment plans and assessment rubrics).
Phase 2: Analyses and peer review by critical friends. The members of the development team, acting as ‘critical friends’, analysed the documentation and the results from the inventory phase. Critical friends is a concept that provides structure for giving and receiving feedback from colleagues with the aim to make improvements (Andreu et al. 2003).

The three surveys had the following overall response rates: 2/3 programme directors, 23/29 teachers and 25/115 students. The results of the survey were processed by one participant in the development team. The mean value and standard deviation of each item was calculated and displayed. This calculation was made for each group of respondents, for each programme and as a total. The results of the surveys were used to compare answers from the different groups of respondents within a programme as well as a comparison between the three programmes.

The development team, acting as critical friends, evaluated the curriculum maps produced by the pilot-testing teams. This evaluation revealed gaps and duplicates, as well as showed the progression in learning objectives in courses in the curriculum. Thereby identifying risks of not ensuring the possibility of reaching the qualification descriptors in the statutes linked to the Higher Education Act. The relationship between formative and summative assessments, the variation of assessment methods as well as the constructive alignment, were analysed through the assessment plans and assessment rubrics. This documentation of learning objectives and assessments gives a complete visualisation of the students' path through the programme towards the qualification descriptors.

Phase 3: Evaluation. The development team and the three pilot-testing teams were invited to an evaluation workshop to discuss the results of the inventory and the analyses. The results of Phase 2 were presented by the development team acting as critical friends. Following this, the participants in the workshop reflected on and discussed the experiences of the inventory and the analyses.

Phase 4: Planning change. Directly following the discussion, three groups were formed, one for each programme. Each group continued to discuss the experiences and findings, relevant for their programme and made a plan for immediate improvement and for a long-term continuation of quality development.

Phase 5: Realising change. In the last phase, plans for improvement were discussed and decisions were made on how to realise the improvements in the upcoming courses. In accordance with the PQAA, a new iteration of inventory, analyses and so forth is undertaken in order to evaluate changes and work with constant improvements.
Evaluation as meta-reflection on the PQAA

As a closure of the evaluation workshop, the three pilot-testing teams were asked to reflect on the applicability of the PQAA (Meta-reflection 1). This was carried out as a discussion in the large group with all participants and with a possibility to add comments in writing.

Immediately after the evaluation workshop the development team also reflected on the PQAA and the results of applying it (Meta-reflection 2). The reflection was carried out as a focus group discussion with all participants in the development team.

Four months after the evaluation workshop a follow-up survey with the participating academic management and programme directors was performed (Meta-reflection 3). This follow-up survey sought to evaluate the implementation of the planned changes.

Results of the tests of the PQAA

Inventory and analyses: survey

The PQAA survey aimed at evaluating criteria 2–10 for competence assessment. The mean value and standard deviation of each item for each stakeholder group in the PQAA survey were calculated and displayed. Table 1 shows excerpts of the results from the survey on three criteria in the three programmes. The study followed the same distinction of agreement between students and teachers as in the Dutch study. Each question could be answered by positioning a slide on a rating scale from 0 (not at all) to 100 (completely). There were no low results (0–35) for any indicator or by any group of respondents, indicating that there were no really alarming results. The analysis identified medium scores (36–65) for some indicators, where teachers and students were in less agreement, and high scores (66–100) for good agreement. For example, in Table 1, the total calculation of the indicator ‘acceptance’ shows that the students in P2 were more positive than the teachers, while the teachers in P3 were more positive than the students in this programme. This survey result was seen as a tool to visualise similarities, differences and needs for communication and for further discussions with the students in order to reach a mutual understanding of the course structure. However, the discussions later at the evaluation workshop indicated that all three programme directors and teaching teams wanted to keep on working with several of the indicators in the survey, in order to improve the competence assessment in the programme as well as to involve all stakeholders in this improvement work. All three programmes also found the survey to be a good way to prioritise indicators in the future work to further improve the competence assessment in the programme. The survey was also considered as a good instrument for comparing overall groups and programme syllabi over time, according to both the development team and the testing teams.
Table 1. Excerpt of results of the survey

<table>
<thead>
<tr>
<th>Excerpt from results of survey</th>
<th>P1 Teachers</th>
<th>P1 Students</th>
<th>P2 Teachers</th>
<th>P2 Students</th>
<th>P3 Teachers</th>
<th>P3 Students</th>
<th>Total Teachers</th>
<th>Total Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproducibility</td>
<td>Mean SD</td>
<td>Mean SD</td>
<td>Mean SD</td>
<td>Mean SD</td>
<td>Mean SD</td>
<td>Mean SD</td>
<td>Mean SD</td>
<td>Mean SD</td>
</tr>
<tr>
<td>The same learning outcome is assessed in multiple ways</td>
<td>55 34</td>
<td>65 22</td>
<td>72 24</td>
<td>64 28</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment by multiple assessors</td>
<td>75 28</td>
<td>66 19</td>
<td>80 21</td>
<td>74 23</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transparency</td>
<td>50 37</td>
<td>74 28</td>
<td>65 28</td>
<td>63 32</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students are informed of learning outcomes</td>
<td>84 21</td>
<td>89 15 82 21</td>
<td>93 12 84 22</td>
<td>88 17 83 21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students are informed of assessment criteria</td>
<td>88 21</td>
<td>91 16 86 16</td>
<td>98 7 87 22</td>
<td>92 16 86 18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acceptance</td>
<td>80 21</td>
<td>86 15 78 24</td>
<td>88 15 82 23</td>
<td>84 17 79 23</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students accept the assessment criteria</td>
<td>67 30</td>
<td>49 31 63 24</td>
<td>72 27 62 27</td>
<td>67 27 63 25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students accept the assessment methods</td>
<td>78 27</td>
<td>77 14 81 15</td>
<td>93 15 87 14</td>
<td>83 20 83 15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students participate in the development of assessment criteria</td>
<td>85 14</td>
<td>80 12 61 24</td>
<td>80 15 78 12</td>
<td>82 13 67 22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 34</td>
<td>43 8 55 24</td>
<td>53 24 40 20</td>
<td>49 24 50 23</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The same distinctions as in the Dutch study were followed for the evaluation of the results: low (0–35), medium (36–65) and high (66–100) scores. The medium and high scores are marked yellow (light highlight) and green (darker highlight) respectively (there were no low scores).
Inventory and analyses and evaluation: programme visualisation

The inventory and analyses of the documentation (curriculum mapping, assessment plans and assessment rubrics) for each of the pilot programmes were performed by the development team acting as critical friends.

To evaluate criteria 1 (‘constructive alignment’) and criteria 2 (‘formative assessment’), assessment plans and assessment rubrics, produced by the three teaching teams were analysed. The analyses of the documentation as part of the PQAA process will reveal the balance between formative and summative assessment, the variety of assessment methods as well as the consistency and progression of assessment criteria and quality levels. Furthermore, the suitability of certain assessment forms for certain learning objectives was evaluated and discussed separately within the teaching teams and the development team and later jointly at the evaluation workshop.

The results showed that some qualification descriptors were assessed progressively but somewhat exhaustively in all courses leading to a degree. The development team acting as critical friends suggested to the teaching team to evaluate whether all the assessments were necessary or whether some of them should be altered or removed. On the other hand, the curriculum mapping for P2 showed that some qualification descriptors were only taught and assessed in the final course in the curriculum. The development team suggested to the teaching team to discuss whether these descriptors should be introduced earlier to the students, thereby giving them the opportunity to practice and get formative feedback earlier in the curriculum.

The development team found that there was considerably less formative assessment than summative assessment and that the formative assessments were neither transparent nor specific in the documentation. The (im)balance between formative and summative assessments was discussed at the evaluation workshop and all three teaching teams found it to be an important factor to change.

When analysing the assessment rubrics, the development team acting as critical friends could identify learning outcomes that were not assessed, as well as assessments that did not relate to any learning outcome. The teaching teams had also observed this problem when they worked with the documentation. They found this kind of visualisation transparent and helpful for discussions of improvement.

The evaluation workshop that followed the analyses made it possible for the teaching teams to exchange ideas and suggestions with the development team. As the discussions related to the documentation and the results of the analyses made by the critical friends, all the participants found the documentation helpful in making the dialogue easier and more constructive. It was also beneficial in allowing for presentations of different perspectives and an opportunity to discuss local practices and conceptions for enabling a holistic view on quality
work in different subjects and contexts. Unfortunately, no students could attend the evaluation workshop as the semester had already ended, reducing their involvement to having participated in the two initial phases of the PQAA.

Results of the meta-reflections on the PQAA

Meta-reflection 1: teaching staff and programme directors

The three pilot-testing teams consisting of teaching staff and the programme directors reflected on the PQAA. The results showed that by producing the documentation of the students’ path towards the qualification descriptors, the teachers were able to critically assess and discuss the progression as well as the formative and summative assessment methods. They found that the inventory helped them to identify and make the components visible for the entirety of the current status of the programme. ‘The PQAA process resulted in documentation that we can use for short-term as well as long-term change and improvement’ (Teacher, P1)

The teaching staff and programme directors also stated that they had found the joint effort in producing documents worthwhile.

What was particularly valuable was that the process engaged the whole teacher team, and all the teachers found it a valuable assignment. It also clearly highlighted problems in learning outcome-assessment alignment. (Teacher, P2)

We have reached a mutual understanding of what we are doing and what we need to report to the Swedish Higher Education Authority thereby facilitating the work with the external quality assurance evaluation (Teacher, P1).

Through engaging the teachers in the collaborative responsibility of producing the documentation (curriculum mapping, assessment plans and assessment rubrics) they stated that one important benefit was the development of a better understanding of each other’s roles, resulting in stronger teamwork and better relations. Furthermore, a mutual understanding of the educational programmes’ progression by learning objectives and assessments had been gained.

We identified several problems in the program. For example, we saw that we have various oral assessments in the program, but that they were not well anchored to the learning outcomes, nor was there any planned progression in how the students were expected to be able to perform. (Teacher, P2).

A negative aspect that the teachers pointed out was that they had found the inventory phase of the process time-consuming which had generated a certain amount of strain and stress. Initially it took time to understand what was expected in completing the documentation. At the start of the pilot, the teachers expressed some reluctance to participate as they were hesitant about the potential outcomes based on former experiences with quality evaluation processes. Views of doubt and reluctance to comply to externally initiated
accountability were expressed. These concerns were met by openly discussing the importance of involving teaching staff in the continuous development of quality systems and by emphasising the clear intent to enhance quality in teaching and learning rather than control. It was also stressed that there had been difficulties finding time for collaborative work.

The teaching staff and programme directors also reflected on the results of the analyses by the critical friends and the evaluation workshop. The results showed that the critical friends added an external peer perspective, and that it was important that the feedback was given in a positive and constructive way with the aim of quality improvement rather than quality control.

The teachers pointed out that certain aspects had been confirmed and to some extent clarified by the critical friends whereas other issues were new to them. The teachers appreciated that the outspoken aim of the feedback was strictly advisory as opposed to evaluations carried out by the Swedish Higher Education Authority.

We appreciated getting an outside perspective on our activities. It is too easy to get blind to flaws at home. We also appreciated getting both positive and constructive feedback from our critical friends and from the teachers from the other programmes.

(Teacher, P3)

Having a mutual evaluation workshop where analyses were presented and issues discussed across the programmes was appreciated by the teaching staff as well as the academic management. The discussions were found to reveal tacit knowledge and local definitions and practices concerning quality work. Thus, making it possible to mutually critically reflect on quality management issues in relation to the different subjects and teaching teams. Ending the evaluation workshop with constructive planning for change within each programme was found to be a good way to start working with continuous improvement of quality.

When asked to evaluate the PQAA for quality assurance, the teaching staff and programme directors acknowledged and appreciated the value of their own work as well as the feedback from the critical friends and the discussions at the evaluation-workshop. As the application of the PQAA had resulted in concrete suggestions for improvement as well as a shared view of the current state and possibilities for development, the teaching teams thought the process should improve quality and thereby also increase assurance of quality.

**Meta-reflection 2: the development team acting as critical friends**

The members of the development team acting as critical friends found the work with developing and evaluating the PQAA both time-consuming and rewarding. They considered it a privilege to act as critical friends and stressed that they had gained insights from the project regarding different assessment
methods as well as acting as critical friends. They found that the different background of the members in the development team had contributed to an understanding of a variety of ways of conceptualising and articulating assessment practices.

Furthermore, the documents from the programmes differed in complexity as well as in quantity and the critical friends felt pressed for time. The development team met once prior to the evaluation workshop to inform each other about their findings in order to get a mutual overview of the respective analyses and to find relevant points to feed forward. As a result of the differences in participant background as well as documentation, the feedback varied somewhat in extent and depth but provided a shared learning experience.

The overall conclusion on behalf of the development team was that the PQAA has the potential as a powerful means to develop a quality culture as well as evaluate and develop assessment practices in a programme due to: (1) the framework of the process gives structure and direction; (2) the process is based on collaborative work on behalf of the teachers also inviting students; (3) the competent analyses with good supportive intentions provided by the critical friends.

**Meta-reflection 3: follow-up survey**

In the follow-up survey four months later, the programme directors stated that by using the PQAA, the teaching staff had developed a shared language and view on competence assessment within their programme. ‘This has already resulted in an improved assessment structure and the revision of the curriculum’ (Programme director, P2). They also expressed that they now felt enthusiastic about developing their assessment practices further.

We were also inspired by the process to develop new ways of grading. As a first step, we have completely been re-thinking the assessment of one of the courses … where we have built very tight links between learning outcomes, community rubrics and community comments on students’ written production. (Programme director, P1)

The academic management found that the project had contributed to the external quality assurance process by clarifying the contribution of quality assurance to the learning environment. ‘This type of quality work can contribute to the improvement of teaching and assessment’ (Academic management, P2).

They also found that the PQAA had made an important contribution to the quality work and the creation of a quality culture. ‘The process can be a part of the pedagogical action plan’ (Academic management, P3). The academic management suggested that the prerequisites for implementation of the PQAA are to minimise the surplus work related to the inventory phase and to involve and engage the teaching teams in the process.
The effectiveness of the PQAA

The main purpose was to design, develop and evaluate a process for quality improvement of higher educational programmes, based on assessment of students’ competence in relation to constructive alignment and achieve acceptance from academic staff. The resulting PQAA encompasses five phases based on ideas of cyclic quality work. The systematic way of visualising the current status of the students’ path towards the qualification descriptors was found to create transparency and a shared view of the current status within the teaching teams. This transparency and shared view of quality work generates the opportunity for the teaching teams to discuss the cross disciplinary learning outcomes, different assessment methods and progression throughout the educational programmes.

The PQAA was found to promote mutual work, which resulted in stronger teamwork and better relations within the teaching teams. This is an important benefit, supported by Bendermacher et al. (2019) that relations within a teaching team have a significant correlation with empowerment, commitment and ownership, which in turn is important for improving quality enhancement practices.

One challenge during the implementation of the PQAA was allocating time to the inventory phase of the process. The teaching teams were not given any extra time to produce the documentation as it was considered as tasks within the normal range of teaching. Even though they had problems finding time for collaborative work and producing the material they thought that the time had been well spent. The perceived increased workload in Phase 1 is a necessary prerequisite to improve relations within the teaching teams, encourage involvement, support a shared view and of a quality culture. This work has to be seen as an investment in quality of the institution. The first time the PQAA is used for a programme, an investment of time for quality is necessary. The academic management indicated in Meta-reflection 3 that the time spent in the inventory phase needed to be minimised. This statement could be an indication that management had not fully understood the importance of involving all teaching staff as well as student representatives and allocating time to build strong relationships within the group in order to promote empowerment, commitment and ownership (Bendermacher et al., 2019). The collaborative work could be seen as a key factor to build a quality culture as well as involving teaching staff in continuous quality enhancement. For the coming years, when the PQAA is fully implemented, the documentation will be revised periodically, and thereby reducing the workload.

The second phase, analysis and feedback from critical friends in the development team based on the material gathered in Phase 1, contributes with external valuable perspectives on progression of learning outcomes and the quality of assessment and examinations throughout an educational programme. This may,
according to Bendermacher et al. (2017), lead to increased staff knowledge, a contributing factor to the development of a quality culture. Providing feedback in a positive and constructive way enabled open discussions on quality improvement, between the teaching staff from the three educational programmes and the critical friends. These discussions are an important part of quality work as they provide the opportunity to critically analyse and reflect on the external and internal criteria for quality management throughout the institution.

The critical friends were found to provide staff with ‘new lenses through which the learners can refocus on their work’ (Andreu et al., 2003, p. 32) where the focus is on knowledge development rather than control. These discussions form a base for planning change. The difference in extent and depth of the feedback given by the ‘critical friends’ should be studied further in order to optimise the process as well as the feedback.

The third phase, evaluation, was central to initiating the start of the change-process. The open discussion permitted all participants, the teaching teams as well as the development team to discuss their experiences and make suggestions for improvement. This discussion was found to promote the development of knowledge and of shared ownership.

Immediately following the evaluation, the fourth phase, planning change, was commenced. By allocating time for discussions, within the respective teaching teams, directly after receiving feedback, the work with continuous improvements could commence immediately. The teams identified opportunities for immediate change as well as openings for long-term improvements. The teaching staff as well as the critical friends suggested that the PQAA could be repeated every third year. The participants agreed on the importance of starting the work with planning change directly after the evaluation phase. In the fifth phase, the teams were to realise the planned short-term changes that had been identified and start planning for long-term changes. By starting immediately to implement and realise change, the mutual process for quality improvement is integrated. These changes may be evaluated when the subsequent revolution of the PQAA is put into practice. The results indicate that the PQAA provides a framework for quality enhancement, acceptable to academic staff that is relevant and representative to higher education institutions.

The evaluation of the pilot-testing of the PQAA, by three different meta-reflections, indicated a structure and a process that encouraged the teaching staff to work with continuous improvement. The PQAA was also perceived as contributing to internal quality work as well as to the external quality assurance system.

Meta-reflection 3 performed four months after the evaluation workshop, aimed to test whether the PQAA had had any improving effect on the curriculum design and whether it enhances internal quality work as well as supports the self-evaluation documentation for the external quality assurance system. The results showed that changes to the curriculum had already been made,
which resulted in an improved assessment structure. The improved assessment structure was achieved by using the documentation and ensuring transparency of the progression throughout the programme and by optimising assessments through introducing formative assessments with feedback. The PQAA was also found to be supporting and contributing to the work with external quality assurance.

The purpose was also to develop an inclusive quality culture by involving teaching staff from across faculties in the collaborative development of the process and by involving teaching staff as well as other internal stakeholders (students, programme directors and heads of department) in the testing and evaluation of the process.

By involving teaching staff in the development of the PQAA, the relevance for learning and teaching was ensured. In order to develop a quality culture, staff commitment to quality improvement is crucial (Bendermacher et al., 2017). The first phase of the PQAA started with an inventory workshop where the process was introduced and teaching staff and academic management could express and discuss reluctance to participate based on doubts about the potential outcomes of the process in relation to former experiences. This was found to be a good introduction to the structured work process with a clear focus on the intent to enhance quality in teaching and learning rather than control.

Commitment was stimulated by involving staff in organisational decision-making and by recognition by management (Calvo-Mora et al., 2006). Furthermore, involvement and participation encourages employees to take ownership of problems as well as responsibility for finding solutions to these problems (Sharabi, 2013). Studies have shown that establishing a quality culture positively affects staff satisfaction and staff performance (Trivellas & Dargenidou, 2009) as well as student satisfaction (Ardi et al., 2012). The PQAA supports the development of commitment and shared ownership of problems and solutions.

According to Bendermacher et al. (2017), leadership is a crucial causal factor for developing a quality culture. The PQAA promotes the commitment of academic management as well as teaching staff by providing structure, documentation and an arena for communication where a shared view and shared ownership of quality improvement can be established. The involvement of teaching staff and other internal stakeholders was found to support the development of a quality culture, which is in line with findings by Becket and Brookes (2008).

A main concern during this process was to motivate teaching teams and the academic management to get involved and engaged in the process, as their previous experiences of quality evaluation was seen as a time-consuming writing exercise of self-evaluations that had little impact on teaching and learning.

The PQAA provides a structure for quality work where teaching teams are seen as central to quality enhancement. The teaching teams were motivated by the relevance of the work, the focus on improvement of teaching and learning,
the discussions in the teaching teams and sharing experiences in the workshops. The result of taking part in the process was that teachers considered the work well worth the time and the result to be beneficiary for improving quality. However, it should be noted that a successful implementation the PQAA requires the allocation of time and prioritisation of the process in order for quality work being seen as essential.

Another challenge was the different background and experiences in the development team resulting in differences in the feedback given as critical friends. All of the feedback was given in a constructive and positive way. However, the depth of and the suggestions for improvements varied. It was discussed that further increasing the competence of the critical friends within assessment in higher education as well as process improvement theory could advance the feedback given.

Conclusions

The results show that the PQAA has the capacity to engage and involve teachers and other internal stakeholders in the quality development of educational programmes, promoting change for improved quality. However, it should be noted that motivating teaching teams and academic management to participate and contribute needs to be specifically addressed.

The five phases of the PQAA were found to support systematic planning of change and continuous improvement based on a shared view of the current status and feedback from critical friends as well as the views from three groups of internal stakeholders (programme directors, teaching staff and students). The structure, process and the comprehensive documentation form a solid base for decisions on short-time as well as long-term quality improvements. The process of predating change on an analyses of the current status is in line with research on total quality management and continuous quality improvement (Harvey & Newton, 2004; Mitchell, 2016).

The PQAA was found to promote the development of quality culture where participation, involvement, shared responsibility and continuous quality improvement are in focus. The PQAA also promoted discussions making local quality work visible and critically analysed.

Although these results are from one institution in a Swedish context, they are in line with European quality concepts and general quality criteria for higher education. The five phases of the PQAA (Figure 1) are adapted from the plan-do-check-act process for quality improvement. The PQAA, as it integrates quality management, quality culture and quality work, for continuous quality improvement, could therefore be a useful contribution to the continuous work on quality systems at other higher education institutions.
Disclosure statement

No potential conflict of interest was reported by the author(s).

References


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