Learning outcomes – a useful tool in quality assurance? Views from academic staff

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Published online in Studies in Higher Education 28 June 2016
http://www.tandfonline.com/eprint/SxEWFb2Bpscwga57wAtB/full 28 June 2016,
DOI:10.1080/03075079.2016.1185776

Abstract

While the establishment of quality assurance has been seen for decades as the most significant instrument to secure and enhance the quality of teaching and learning in higher education, the concept of developing more specific learning outcomes has in recent years attracted much interest, not least due to the creation of national qualification frameworks. In this article, we compare the

perceived relevance of the traditional quality assurance approach with the new learning outcomes approach – as seen from the view of the academic staff. Using data from a representative survey among Norwegian academic staff, the study indicates that learning outcomes are perceived as more useful and relevant than traditional quality assurance approaches. The article discusses this finding in light of the current ways quality assurance procedures are functioning in higher education, and points to possible implications for the enhancement of quality in universities and colleges.

Introduction

As a response to concerns about questionable academic standards, the globalization of higher education, and the need for more effective and efficient delivery of educational provisions in higher education, quality assurance has been one of the most significant activities within the sector over recent decades (Dill and Beerkens 2010, Westerheijden, Stensaker, and Rosa 2007). National initiatives with respect to quality assurance have had several implications, not least when it comes to the establishment of new intermediate agencies in the sector (Gornitzka and Stensaker 2014), triggering organizational change in the institutions (Stensaker 2008); however, the general effectiveness of quality assurance as a policy instrument still can be questioned (Shah and Nair 2013).

One of the areas in which quality assurance may have less impact than originally intended is that of its impact on the core processes of teaching and learning. Several studies have indicated that quality assurance is not always perceived as relevant by academic staff (Newton 2000), and unintended consequences may also be identified, for example in the areas of marketization and consumerism (Harvey and Williams 2010). The possibility that quality assurance has not delivered according to its potential is perhaps the reason why one can see another trend in the latter decade, the creation of national qualification frameworks and their implicit focus on learning outcomes in higher education (Stensaker 2014). While the arguments related to the creation of national framework can be linked to several factors beyond that of securing quality, the rapid spread of such frameworks – at least in Europe during the last decade – does show that in many countries there is an explicit link between these initiatives and arguments for improving and securing academic standards with respect to what students learn (Harvey and Williams 2010). This link can be noticed in the establishment of learning outcomes as a central component in national qualifications frameworks, where such frameworks often explicitly require that higher education institutions design and organize their study programs in line with a learning outcome paradigm (Hussey and Smith 2008, Prøitz 2010). As such, it is possible to argue that while qualification frameworks may be seen as part of the overall framework for quality assurance at the national level, these procedures can also be perceived as an alternative way of conducting quality assurance (for recent studies see for example Dobbins et al. 2014, Sin 2013, Trullen and Rodríguez 2011). In this paper, we investigate this issue by comparing how the academic staff perceive the relevance of the traditional modes of quality assurance with a learning outcomes approach.

Analytical framework

Quality assurance is a diverse and multifaceted concept that includes numerous procedures, modes and forms (Dill and Beerkens 2010). As indicated above, in many countries, the interest in learning outcomes is integrated in existing quality assurance procedures, opening up for yet another set of criteria for quality assurance agencies to use in their assessments and evaluations (Harvey and

Williams 2010). Measuring the learning of students seems to be the new quest in accountability-driven policy initiatives in a number of countries (Shavelson 2010). However, regardless of the number of criteria used there is so far much evidence that traditional quality assurance in the form of assessments, accreditations and audits has had more organizational and structural effects rather than effects on teaching and learning activities (Shah and Nair 2013, Stensaker 2008). One might assume that if learning outcomes are seen as parts of, or even integrated with, existing quality assurance procedures, they might be perceived to be tools and measures more related to the need for organizational and managerial control rather than for teaching and learning improvement (Allais 2014).

However, one could also argue that learning outcomes may represent a different approach to quality assurance to the traditional one where evaluations and accreditations are externally initiated (Hussey and Smith 2008). Although the requirement to develop and to design learning outcomes in many cases is a result of external policy requirements, identifying learning outcomes nevertheless is an activity that potentially addresses academic issues more than the organizational dimensions that tend to be the focus of traditional quality assurance. Learning outcomes are usually expressed in terms of what students should know, their skills and competencies (Pascarella and Terenzini 2005), while quality assurance procedures are usually expressed in form of organizational procedures, rules and regulations that many academics perceive as further away from the core activities within the disciplines. Hence, one could imagine learning outcomes as a measure closer to the norms and values held by academic staff due to its link to disciplinary characteristics (Clark 1983). While many academics perceive traditional quality assurance as too focused on reporting, bureaucracy and managerialism (Newton 2000), learning outcomes could – in principle – be seen to speak to the academic ethos by their direct link to the content of the discipline or subject area. The latter ambition is not least visible in recent initiatives taken to measure student learning through assessment techniques that emphasize learning outcomes such as critical thinking, analytical reasoning, problem solving and communication (Shavelson 2010).

One might also assume that the introduction of learning outcomes in higher education could have quite mixed effects, conditioned by disciplinary, institutional and even individual characteristics (Prøitz 2014). As underlined by Pascarella and Terenzini (2005), the greatest knowledge gains of college can be found in the student's major area of study. However, with respect to disciplinary characteristics, it should be noted that national authorities have a long traditional of keeping quite strict control over some disciplines and professional subject areas (teacher training, nursing etc.), while granting more autonomy to others (Kyvik 2009). In many professional areas one can identify a long-standing tradition of developing national standards and national curriculums, which could be assumed to have an impact on the effects of learning outcomes, as this measure could easily be interpreted as a continuation of the way the sector has been governed. Hence, a key assumption is that in subject areas and professional fields such as teacher training, engineering and nursing, one would expect academic staff to be quite positive towards the idea of learning outcomes, while other disciplines not exposed to these traditions could be expected to be more reserved.

A related, although still conceptually discrete condition potentially affecting the perceptions of learning outcomes, is the different institutional autonomy between universities and university colleges in Norway. For years, the Norwegian higher education system could be described as binary, differentiating between the institutional types regarding the educational programs they could offer,

at what level, and under what autonomy (Kyvik 2009). Although this difference in autonomy has been substantially reduced during the latter decade, institutions accredited as universities still have considerable more autonomy than university colleges concerning their educational offerings (Kyvik 2009). In this case, an assumption could be developed arguing that since research-intensive universities traditionally have had full autonomy concerning curriculum design and teaching methods, any attempt which could be interpreted to limit such autonomy can be expected to be met with skepticism among the academic staff.

Finally, concerning individual characteristics within the academic staff, one could assume that, in general, the concept of learning outcomes could be perceived as an external intrusion into their academic freedom (Hussey & Smith 2008), a measure that could also hamper individual creativity and the development of new forms of teaching (Shavelson 2010). One could advance this assumption by suggesting that for those having the longest and most comprehensive experience in teaching – the professors – the introduction of learning outcomes could be perceived as an even more radical reform effort than for those having less experience and perhaps less established ways of conducting teaching.

Of course, such assumed effects of learning outcomes should not be taken for granted. In recent years there is much literature that critically addresses the current interest in learning outcomes, suggesting that also this initiative may have effects that can cause bureaucracy and have unintended consequences for higher education (Allais 2014, Prøitz 2010). However, we consider these issues to be empirical rather than normative, and suggest consequently, in line with the discussion above, that a learning outcomes approach in principle can be interpreted along three perspectives: First, that learning outcomes initiatives are seen as similar to traditional quality assurance and that academic staff perceive them to be quite identical measures interpreting learning outcomes initiatives as yet another bureaucratic tool. Second, that initiatives advocating learning outcomes represent a different approach to quality improvement, closer to teaching and learning, and much more positively assessed by the academic staff. Third, that there are quite mixed effects of the learning outcomes approach conditioned by disciplinary, organizational or individual characteristics of higher education and those working there.

Data and methods

This paper is based on data from a survey conducted in 2013 among academic staff members in all public higher education institutions in Norway. The sample contained 80 percent of the total population of staff members. Of the gross sample of 8,460 persons, 4,440 or 52.5 percent, completed the questionnaire. The survey was conducted electronically, but the respondents were also given the option to use a paper questionnaire.

The sample was drawn from a register of all academic staff in permanent positions. The data were weighted to correct for staff being excluded and minor response bias, but the data set is highly representative.

The main purpose of the survey is to explore how the academic staff conduct their main tasks in teaching, research and external relations and their views on a broad set of aspects of their work conditions.

The usefulness of quality assurance and learning outcomes – descriptive analysis

In our analytical framework, we reasoned that the introduction of learning outcomes can take three different routes in higher education, and formulated these as three different assumptions:

1. Learning outcomes are seen as an approach similar to existing quality assurance procedures
2. Learning outcomes may represent a different approach to quality assurance than the traditional quality assurance system
3. Learning outcomes may have quite mixed effects conditioned by discipline, type of institution, and characteristics of individuals working in higher education.

In the following, we compare how academic staff assess the relevance of institutional quality assurance systems and learning outcome schemes and descriptions. First, we compare faculty views of the quality assurance system and learning outcomes by descriptive analysis (this section). Then we conduct two different linear regression analyses to find out how the views on quality assurance and learning outcomes differ according to type of institution, field and position (see next section). The responses are related to the specific bachelor program in which the respondents have the highest teaching load, and hence staff members who do not teach at bachelor level in the academic year 2012-2013 are excluded from these analyses.

Table 1 about here

Descriptive statistics (table 1) show that the academic staff's experiences of the extent to which the quality assurance system contributes to quality may be characterized as neutral: neither especially positive nor negative. The percentage who disagree is about the same as those who agree, only a small proportion strongly agree, and a high proportion strongly disagree. The opinions may also be characterized as highly divided. This may be due either to differences between departments, but may also vary between individuals. However, the differences by type of institution are small, with the exception that the staff at specialized universities have considerably more positive experiences.

Table 2 about here

Descriptive statistics of faculty's use of learning outcome descriptions (table 2) shows that a clear majority of the staff members indicates that learning outcome descriptions play a role in their teaching. Between 40 and 48 percent respond that learning outcomes "to a great extent" play a role in curriculum planning, teaching and assessment of students, and in addition, about 40 percent indicated "to some extent". The results should be interpreted carefully. On the one hand, learning outcomes have been introduced in Norwegian higher education only recently, hence the responses may be said to be surprisingly positive. On the other hand, the respondents may have reflected upon their own attitudes and experiences with the generic LOs in their own teaching.

Hence, it is difficult to determine from the discussion of the survey itself how valid and reliable the questions are in effectively measuring the differential views of respondents on current QA mechanisms versus current LO mechanisms for a number of reasons. First, as noted above, we do not know whether respondents had the only recently formally-encouraged LOs or their own teaching practices and generic LOs in mind. Second, one should be careful in comparing the responses about the quality system and learning outcomes directly, since the questions are worded quite differently. While the statement about the quality system was raised rather generally, the statements about

learning outcomes directly concerned the respondents' own use. In addition, the scales were different, agreement/disagreement vs. degree of utilization. Nevertheless, we may conclude that learning outcomes seem to be more accepted among academic staff than the quality assurance system. This may support our second assumption, that learning outcomes represent a different approach. However, to explore fully these relationships a more fine-grained analysis is needed.

Investigating the differences between QA and LOs by multivariate analyses

Description of variables

In this section, we investigate how the views on the quality system and learning outcomes vary by a number of contextual and individual factors. To do this, we conducted two different linear regression analyses. As suggested in the analytical framework, we expect that these views are related to type of institution and field of study, and that there is more resistance within traditional universities and academic disciplines than within more professional-oriented departments. Furthermore, we expect that it is easier to accept such quality measures if the leadership at the department is characterized by good communication, follow-up of teaching, and good administrative support. Finally, we would expect that the views may be related to the hierarchy of "academic capital" measured by type of position and scientific publishing.

In the following, we present the variables included in the analyses.

The two dependent variables are constructed in the following way:

- Quality system: the distribution is close to a normal distribution, and hence we can use the responses as a variable in linear regression with the values ranging from 5 = strongly agree to 1 = strongly disagree
- Use of LOs: value 3 = to a great extent, value 1 = to little or no extent, are added to an index to include all three statements about learning outcomes

To illustrate the explanatory variables, we will show how they are distributed in the dataset.

Table 3 shows the distribution of three statements about organizational climate and leadership. While a clear majority support the statement that there is good communication between leaders and staff, only a minority support the statement that the leaders offer feedback on teaching. Given the "private" character of teaching, which still prevails in higher education, this is not surprising. The statement about good administrative support to the study is supported by half of the staff members, while about one in four disagrees. All these three variables are treated as continuous.

Table 3 about here

Table 4 shows the distribution of the background variables: type of position, type of institution and field of study. The associate professors are the largest group, containing a little more than one third, while 30 percent are professors or lecturers. This pattern varies by type of institution, and the old universities have the highest proportion of professors. Type of institution is classified as old universities, specialized universities, new universities (former university colleges upgraded as well as the former Agricultural university), and we have further distinguished between university colleges located in one of the three largest cities, and other. Old universities and university colleges are almost identical in size as measured by number of staff members (university colleges have a higher

proportion of the students). Among the university colleges, the institutions outside the big cities are the largest group. New universities and the specialized universities are much smaller.

The largest number of staff members is found within social sciences, including business administration and law, followed by medicine and health and humanities.

All the background variables have been transformed into dummy variables.

Table 4 about here

The final variable to be included in the analyses is a measure of the number of scientific publications (article equivalents) during the last three years, termed "publishing points" in the analyses.

The old universities have the highest number of publications, followed by the specialized universities and the new universities (table 5). University colleges have a considerably lower publication rate. These differences reflect different roles within the higher education system, different traditions, and different levels of academic qualifications. The publishing rate is used as a continuous variable in the analyses.

Table 5 about here

Results from regression analyses

To be able to answer the third assumption, we conducted regression analysis to see how the staff's assessment of the quality assessment system and learning outcomes varies according to several factors. The analysis should not be interpreted as a causal model.

Two separate linear regression analyses were conducted, one each for the two dependent variables: views on the QA system, and learning outcomes. The explanatory variables are the same in both analyses.

Table 6 about here

The first remarkable result is that the explanatory power of the model is much stronger for the QA system than for learning outcomes, but both models have a satisfactorily-explained variance (see table 6). The difference between the two models may indicate that the use of LOs is somewhat more randomly distributed than the views on QA. This may support our third assumption, that learning outcomes may have quite mixed effects, which may be due to the fairly recent implementation of LOs. Furthermore, there is both considerable overlap between the two models, some factors have significant effect on both dependent variables, but there are also important differences. This is contradictory: the differences of the two models points in the direction against the first assumption, that learning outcomes may be integrated in existing quality procedures, while the overlap between the two models tends to support this assumption.

One of the most important findings is that the indicators about departmental climate and leadership have a stronger explanatory effect on QA than LOs. This indicates that positive quality effects of the QA system strongly depend on how leadership and administration is conducted within the

department. This also has some importance for the utilization of LOs, but to a much weaker degree. This supports the assumption that learning outcomes are different from traditional quality assurance.

Another interesting finding is that professors seem to make use of LOs to a much smaller degree than those who have a lower academic rank, while there are no differences according to position for QA. The differences according to type of institution and field are not very clear, but LOs in medicine/health score higher, and math. & sciences and technology score lower, than the other fields. Medicine/health also seems to report more positively on the relevance of QA, while there are no differences between the other fields. Publication rates have no effect in either models, which may be due to type of position catching most of the effects of academic capital. The fact that professors tend to make less use of learning outcomes may be interpreted that LOs are not strongly integrated in the academic culture, and therefore contradicts the assumption of being different for quality assurance. Another explanation is that the professors have more experience, and that they – over a long time – have internalized the academic standards. They might feel that they do not need the tool of learning outcomes to the same degree as those with less experience. The differences between academic fields support the assumption of mixed effects.

Reflections

Our results indicate that learning outcomes – at least in the Norwegian context – are a measure that is perceived quite differently than traditional quality assurance. While academic staff are reluctant regarding the usefulness of the quality assurance system, one might argue that they express more positive attitudes towards the introduction of learning outcomes in Norway. Even with the need to be careful in comparing the two factors because of different questions and response alternatives, this is still a clear impression based on our data. Learning outcomes have been introduced quite recently, while the quality assurance systems have been in operation for a longer period, so this result may be a surprise, not least since higher education is known for being quite resistant to the introduction of rapid changes and mandated schemes. One of the main aims of this paper is therefore to analyze the reasons for the more positive attitudes towards learning outcomes than quality assurance. Even if the statements in the survey are subjective, they reflect individual and institutional practices, not merely attitudes.

Furthermore, the potential usefulness of these two forms of quality measures are affected quite differently by institutional factors. A positive outcome of quality assurance depends on relations between academic staff and administration, while type of position and field has a stronger impact on learning outcomes. Professors tend to make less use of learning outcomes in their teaching and assessment of students. In addition, the views on learning outcomes seem more randomly distributed.

There are different ways of interpreting these results, but they point in a direction that learning outcomes represent a new and different approach. First, this result may be related to the symbolic nature of the learning outcome concept, which academics may perceive as being closer to their inherent values and norms (Clark 1983). This result is somewhat surprising given that many critical views on learning outcomes have been launched in recent years (Allais 2014, Prøitz 2010). While learning outcomes in Norway certainly can be linked to an accountability agenda (Prøitz 2010), our

results may suggest that the implementation process perhaps was launched in a way that has been received as quite positive by the academic staff. The fact that we can see quite a number of factors influencing the views on LOs may suggest that the implementation process can be characterized as one with much local autonomy – at institutional, disciplinary and individual level. Of course, this might be a result linked to the early stages of implementation. In the longer run, learning outcomes may also run the risk of becoming more standardized as a governance tool, suggesting that the long-term effect can mean reduced flexibility and creativity for the teachers (Shavelson 2010).

Second, the result may also be explained by taking into account the recent reforms in Norwegian higher education in that the modularizations of the study programs have led to less ownership of the content of the study program, and where descriptions of learning outcomes may have a function of being an instrument for re-coupling academics to what modules and programs are all about. Clark (1983) has suggested that there is much tacit knowledge in higher education and that socialization into values and norms has been the traditional way of linking younger academic staff to disciplinary norms and values (see also Pascarella and Terenzini 2005). The fact that professors are the group less positive about learning outcomes fits with well with this view, as they also – presumably – are the ones with the tacit knowledge to use when conducting their teaching activities.

Although both LOs and quality assurance can be seen as measures to address the issues of quality, our results indicate that these are measures that relate to higher education in different ways; while learning outcomes seem to be related to academic norms, successful implementation of quality assurance to a stronger degree depends on formal steering and the climate between academic staff and administration. This is an important distinction and leads to the conclusion that learning outcomes in the Norwegian context so far have been perceived as quite useful by academic staff, and that this measure is considered to possess different characteristics than those related to traditional quality assurance. However, with the recent interest by quality assurance agencies in using learning outcomes as a starting point for their future activities, one could argue that this picture might change in the coming years – both positively and negatively. Positively, in the sense that the existing perceptions of quality assurance as of little relevance (Harvey and Williams 2010) might change. Negatively, as the LO concept might be "co-opted" by quality assurance, and seen as just another policy instrument for accountability purposes (Newton 2000). As many quality assurance agencies, especially in Europe, seem to opt for using LOs as a new way to revitalize old assessment and accreditation procedures (Stensaker 2014), the agencies need to be careful in how they use the new tool at their disposal.

Hence, at this point one should be careful to conclude that LOs are the new instrument to replace traditional quality assurance. The critical factor seems to be how these instruments are embedded in the academic norms and values, and do not only remain as bureaucratic and managerial measures. This argument is supported by the fact that both instruments seem to be harder to implement within the traditional universities than within the more professionally-oriented institutions.

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Table 1: “The quality assurance system at my department contributes to improved quality”. By type of institution

	Strongly agree = 5	Agree = 4	Neutral = 3	Disagree = 2	Strongly disagree = 1	Total
Old university	9	27	32	17	15	1029
Specialised university	11	37	30	16	5	125
New university	9	27	29	20	15	501
University college	7	27	31	20	16	1537
All	8	27	31	19	15	3192

Table 2: “What role does the learning outcome descriptions play for your teaching?”

	To a great extent = 3	To some extent = 2	To little or no extent = 1	Total
For curriculum planning	48	38	15	3200
For my own teaching	43	41	16	3202
For my assesment of students	40	41	18	3199

Table 3: Statements about organizational climate

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't know	Total
At my department, there is good communication between leaders and staff	33	30	10	15	11	0	4386
The leaders at the study program offer feedback on teaching	8	20	23	20	29		3194
The study program has good administrative support	18	33	22	18	9		3195

Table 4: Background data

POSITION						
PROFESSOR	Associate professor	Lecturer	Leader			Total
30	37	31	4			4400
TYPE OF INSTITUTION						
OLD UNIVERSITY	Specialised university	New university	University college, large cities	University colleges, other		Total
40	3	12	15	30		4400
FIELD						
HUMANITIES	Social sciences	Math. & sciences	Technology	Medicine & health	Agriculture, fishery & veterinary medicine	Total
16	36	12	13	21	2	4400

Table 5: Number of publications by type of institution

Old university	**2,63**
Specialised university	1,97
New university	1,82
University college, large cities	0,68
University colleges, other	0,74
Total	1,66

Table 6: Results from regression analyses

	LOs	QA
No. of publications	0,003	0,009
At my department, there is good communication between leaders and staff	-0,001	**0,188*** **
The leaders at the study programme offer feedback on teaching	**0,029** **	**0,191*** **
The study programme has good administrative support	**0,036** **	0,329***
Type of institution (old uni. = ref.)		
Specialized university	**0,192***	0,321**
New university	**0,093***	0,026
University college, large cities	**0,142*** **	0,035
University colleges, other	**0,091** **	**0,141** **
Field (humanities = ref.		
Social sciences	-0,04	-0,051
Math. & sciences	**-0,085***	0,038
Technology	**-0,085***	-0,097
Medicine/health	**0,213*** **	**0,272*** **
Agriculture, fishery & veterinary medicine	-0,198*	0,002
Position (professor = ref.)		
Ass. professor	**0,186*** **	-0,081
Lecturer	**0,417*** **	0,009
Leader	**0,376*** **	0,254
Explained variance (Adjusted R Square)	0,119	0,346

Significance level: *** p<0,001, ** p<0,01, * p<0,05