

Student and industry involvement in quality assurance

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INTRODUCTION

Over the last decade, the idea that Higher Education Institutes (HEI) need to adopt facets of Total Quality Management (TQM) has firmly taken root. This evolution was initiated by the changing demands society imposes on HEI's, "where a continuing dialogue with relevant groups is demanded, while providing accountability, quality, effectiveness and efficiency".[1] HEI's are slowly moving from a collegial to corporatist mode, where the roles of various stakeholders are being fundamentally redefined.[2] This paper will not discuss whether this is a positive or negative evolution, but will focus on the specific challenges HEI face in balancing their purpose as providers of education on the one hand, and the increasing importance of stakeholders that partake in the HEI's quality assurance processes on the other.

The relationship between HEI and its stakeholders has changed and is still evolving. Students are not "works in progress" anymore, but have become customers

demanding service and transparency. To guaranty a continuous supply of resources, a close relationship with the HEI's stakeholders is absolutely necessary. State funding is decreasing worldwide, and HEI's are relying more and more on private resources. The increasing participation of stakeholders who are funding research is therefore indispensable.

The Faculty of Engineering Science at the KU Leuven recognizes this change and wishes to be pro-active, while still acknowledging the need for the HEI's to be independent and autonomous. Staff members of education analysed the current role of several important stakeholders not employed by the university itself, and took action to improve communication and participation, thus improving the Faculty's quality assurance processes themselves.

1 CHALLENGES IN IMPLEMENTING TQM IN A HIGHER EDUCATION INSTITUTE

As the role of the state in the governance and funding of the HEI's decreases, the HEI's autonomy and the role of the market increases, leading to the deepened integration of the HEI's into society. This leads Sobremisana to state that "universities are no longer considered an icon placed in ivory towers, but rather they are regarded as centres of national and international labours".[3] This may lead to overwhelming demands from this same society, causing the HEI to lose perspective on its most important role, providing students with an academic education. Jongbloed et al. warn us that "steering universities out of this dilemma and preventing them from being overburdened by stakeholder claims requires careful management".[1] They also remark that both parties, i.e. the HEI and stakeholder, may not enter the partnership with the same goals. Companies may wish to gain access to new research and influence curricula to fit the profiles they specifically need, while this is not necessarily in the HEI's best interest.

On the other hand, in order to be successful when involving stakeholders in quality assurance, Assif and Raouf remarked that because of the complex nature of the new customer-supplier relationship, HEI need to include stakeholder perspectives when designing the programme instead of "making narrow attempts to identify and address customer requirements only".[4] In other words, the HEI need to involve stakeholders at every level of its programmes design and updates, rather than consulting them at the final stages of the quality assurance process. Both intense cooperation and keeping a careful eye on the HEI's own interests seems to be necessary.

Balancing the university's autonomy and stakeholder claims proves to be a challenge. The Faculty of Engineering Science, and the KU Leuven in general, chooses to partly solve this issue by only allowing student votes in faculty and university matters, and inviting other stakeholders in an advisory capacity. In the next chapter, this paper will elaborate further on the different roles of each of the three main stakeholders identified by the Faculty of Engineering Science.

2 STRENGTHENING OF STAKEHOLDER INVOLVEMENT

All quality assurance measures need to be implemented systematically, and the same goes for actions aiming to improve stakeholder participation. The staff members of education of the Faculty of Engineering Science therefore first inventoried the existing means of consulting important stakeholders, and noticed large differences between the Faculty's departments. Several scenarios were therefore devised, depending on protocols the departments already had in place, and supervised actions that were taken to improve stakeholder participation. Three main groups of important stakeholders were identified: students, representatives of

industry, and the Faculty's alumni. This paper will now discuss the actions staff members of education took to actively involve stakeholders and the challenges they encountered during this process that lasted over a year.

2.1 Student involvement

The KU Leuven has a long tradition of student participation at all levels of university governance and quality assurance. Student representatives are appointed every year through elections organised by student organisations. Every faculty has its own student organisation, and their members are present at the faculty's standing educational committees. These committees advise the faculty council on all matters educational, and also include programme directors, other professors and TA's. Students also have an important vote in the faculty councils, the governing organ of the faculty. The same holds for the highest level of governance, the university council. Research shows that student participation, next to improving quality assurance, also positively influences development of the student's meta skills, such as communication, analytical skills and leadership. They also become aware of their institution.[5]

Of course, the abovementioned level of participation is already beneficial to the university's and faculty's quality assurance processes. However, at the Faculty of Engineering Science, staff members of education felt that not all students were heard in their opinions on the quality of education they received. The Faculty therefore decided to enhance the KONDOR-survey, developed by the KU Leuven, to fit topics specific to our faculty. [6] KONDOR loosely translates into Quality system concerning Education Development and Realisation. It is a concise questionnaire concerning (among other topics) quality of education, transparency of information and international opportunities. Normally, the survey is conducted every four years in a rather generalized form by the university's central services.

Within the context of current developments in quality assurance, the Faculty decided to conduct the survey a little differently. The matter was brought to the Faculty's standing educational committee, and each programme director was asked to submit suggestions for new questions concerning the Faculty's education, both at faculty and programme level. After all input was received, staff members of education set about selecting questions that were submitted multiple times by different programme directors. The number of questions was limited, since a large amount of questions seems to deter students from completing the whole survey, which will also be discussed later. After the questions that would be added faculty wide had been selected, programme directors were able to submit four more questions specific to their own programmes, which would only appear to their own programme's students. The survey was sent out to the Faculty's students in May of 2014, and was closed on the 3rd of July of the same year. Response rates varied greatly, ranging from 17.1% to 76.5%. The average response rate was 43.9%. Central services assisted the Faculty in processing the results, and these were delivered to the programme directors in August. They were asked to present these results to their respective standing educational committees. An extensive curriculum evaluation ensued when these results were combined with the curriculum mapping the Faculty conducted last year[7], and the input from the Industrial Advisory Boards and alumni survey, which will be discussed in the following chapter.

2.2 Industrial Advisory Boards

Since the Faculty's engineering alumni are highly valued by the professional field, and students are often already recruited before graduating the Master's programme, companies are rather willing to participate in the Faculty's initiatives. Up until now, the industry was only consequently consulted at programme level when the Faculty's programmes were up for an external review. Representatives from the industry would typically be invited to attend hearings where they would be asked to give input on the Faculty's curriculum, internships and the strengths and weaknesses of our alumni when they enter the professional field. These comments would be taken into account when drawing up the programmes' SWOT-analyses, and were also used when reviewing the curriculum.

At Faculty level, the so-called Faculty Senate has been gathering twice a year for a long time. It consists of 18 members, all representatives from the fields where the Faculty's alumni are typically employed. The exact composition of the Senate can be found at the end of this paper.[8] They convene in spring and autumn to reflect on the Faculty's initiatives and quality of our alumni in an advisory capacity. In 2004, the department of chemical engineering founded its own Senate specifically for the programmes of chemical engineering, engineering rheology and safety engineering. The panel, called Industrial Advisory Board (IAB) has a more narrow scope, limiting its comments and reflections to the aforementioned programmes. Its members were recruited from the chemical industry, including alumni from our own faculty. This way, they can perform a deeper analysis of the specific programme that is put before them. The chemical engineering IAB proved to be a success and has been convening twice a year, its functioning reflecting the Faculty Senate's.

In light of evolving stakeholder relationships, the installation of a programme-specific Senate for each programme was proposed to and approved by the Faculty's standing educational committee. To facilitate the establishment of the IAB's in every programme, the staff members of education assisted the programme directors by providing a scenario for the first meeting of the IAB. It consisted of a small number of questions, ranging from 'Which knowledge, skills and attitudes do you expect from the graduates?' to 'Do the graduates of the KU Leuven-programme have a specific profile in comparison with graduates of (related) programmes in Belgium/Flanders or abroad?'. The scenario also advised programme directors to discuss the recently executed curriculum mapping to the IAB, focussing on the new learning outcomes that were updated last year, and course contents.

It has been a year since the decision was made to install an IAB for every programme, and the Faculty is pleased to say every programme has recruited a sufficient amount of members and has convened at least once this academic year. Overall responses were positive, both from the industry as the programme's themselves. It is too soon to report on the long-term effects and impact of the IAB's, but the preliminary findings from their gatherings have been recorded and will be used in the Faculty's next curriculum review.

2.3 A large scale alumni survey

The Faculty's alumni are the third important stakeholder with whom the Faculty wished to improve communication. Many of the members of the Faculty's Senate and IAB's are alumni, so some of them were already being reached systematically. But, as was the case with the student representatives versus the entire student

population, the Faculty was not communicating with as many of them as it would have liked. Members of the Senate and IAB's were also mostly alumni that had graduated more than 15 years ago, so input on the recent curricula was scant.

Part of this problem was solved by the alumni survey the university's central services conduct every year. They systematically target the group that graduated two years before, sending a standardized questionnaire to all of the university's alumni of the same graduation year. The survey focused on employment after graduation, reflection on the curriculum and the tuning of the curriculum to the needs of the professional field. Alumni surveys are unique in the sense that they have the capability of documenting students' assessment of the quality of their educational experience tempered by their experiences since graduation.[9]

Again, as with the student survey, staff members of education wished to take the alumni questionnaire a few steps further. The existing list of questions was thoroughly revised and adjusted, taking into account the comments received from the Faculty's programme directors, who were asked to deliver input on the standard questions. They were again given the opportunity to add some extra questions, which some of them did very enthusiastically. All programme-specific questions the programme directors added to the survey for their own programme were added. This proved to be an inefficient decision, since some of the questionnaires became very long and a lot of respondents eventually did not fill out the entire survey. Staff members of education would strongly advise to limit the number of questions when conducting this type of survey, since almost 50% of our respondents abandoned filling out the questionnaire halfway through, and response rates were rather low for some programme's (no exact numbers are available, since the link to the survey was placed on the Faculty's social media, and there is no way of telling how many people saw it there).

Staff members of education cooperated with the alumni and student organisation of the Faculty, respectively Alumni Ingenieurs KU Leuven (Alumni Engineers KU Leuven) and VTK (Vlaamse Technische Kring or Flemish Technical Society) in spreading the link to the survey to as many alumni as possible. The link was open to alumni from every graduation year. In order to draw relevant conclusions, the results were analysed in three sets: one set for alumni who graduated more than five years ago (which is less important to the review of the current curriculum, but does give us insight into the long-term employment and advancement of our alumni), one set for alumni who graduated during the last five years (relevant to the current curriculum with a large scope), and a final set singling out alumni who graduated the previous academic year (relevant to the current curriculum with a narrow scope). After analysis of the results, reports were drawn up and sent to the programme directors. Together with the aforementioned student survey and input from the IAB's, the standing educational committees of each programme now have sufficient material to review their current curriculum and draw up a detailed SWOT-analysis, also containing a concrete action plan for the programme aimed to improve the curriculum further.

3 SUMMARY AND ACKNOWLEDGMENTS

The Faculty of Engineering Science at the KU Leuven has made the decision to voluntarily submit itself to an external peer review in 2016, although these reviews were temporarily suspended by Flemish government. The Faculty made this rather unorthodox decision because it wishes to maintain and assure the high level of

quality in education it has been providing in the past. This decision was also made in the context of a broader reflection on the Faculty's quality assurance processes, and this debate contributed to the realisation that stakeholder involvement could and should be improved.

The results of aforementioned actions staff members of education took to include students, industry and alumni more closely in reflections on the Faculty's curriculum are being gathered as this paper is being written, and will be discussed over the summer of 2015. On the short term, the conclusions drawn from these discussions will be used to write an extensive SWOT-analysis and to plan our future actions. On the long term, staff members of education wish to institutionalize the actions they took over the past two years and transform them into recurring events, as a permanent contribution to the Faculty's quality assurance.

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