Student Feedback and Its Impact on Fostering the Quality of Teaching at the Academia

S. Vanker, A. Aaver, A. Roio, L. Nuut

Abstract—To be sure about the effective and less effective/ineffective approaches to course instruction, we hold the opinion that the faculty members need regular feedback from their students in order to be aware of how well or unwell their teaching styles have worked when instructing the courses. It can be confirmed without a slightest hesitation that undergraduate students' motivated-ness can be sustained when continually improving the quality of teaching and properly sequencing the academic courses both, in the curricula and timetables. At Estonian Aviation Academy, four different forms of feedback are used: Lecture monitoring, questionnaires for all students, study information system subject monitoring and direct feedback received by the lecturer. Questionnaires for all students are arranged once during a study year and separately for the first year and senior students. The results are discussed in academic departments together with student representatives, analyzed with the teaching staff and, if needed, improvements are suggested. In addition, a monitoring system is planned where a lecturer acts in both roles – as an observer and as the lecturer. This will foster better exchange of experience and through this help to make the whole study process more interesting.

Keywords—Student support, learner motivation, feedback, undergraduate education.

I. INTRODUCTION

ESTONIAN Aviation Academy has introduced four forms of collecting feedback from the students. The focus of the presentation is the application and effect of these feedback forms.

There are numerous studies dealing with the importance of assessment for learning (AfL) in higher education. It is claimed that AfL helps to promote students' learning and supports them in becoming self-directed learners [4].

Outcome-based learning and assessment systems accompanied the Bologna process. In the outcome-based assessment system, formative assessment is considered important [5].

The students are the focal point of the whole study process, small study groups enable to apply individual approach to teaching and learning. The students' development is supported by making use of active teaching methods, formative assessment and counseling. The description of the study process of certified training organizations is given in respective manuals and in MTO Exposition and has been approved. During the audits the compliance of the study process with the requirements is checked. The fulfillment of the goals of the study process is assessed by the satisfaction

Signe Vanker is with the Estonian Aviation Academy, Estonia (e-mail: signe.vanker@eava.ee).

survey of the students, the teaching staff and the alumni. The strengths of the study process are the use of individual instruction, continuous assessment, modern learning environment (Moodle, SIS) and teaching aids (simulators, laboratories, well-equipped auditoria).
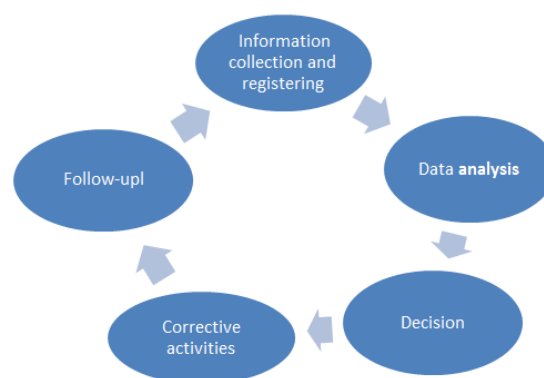
II. CONCEPT OF FEEDBACK

Fig. 1 Principles of feedback system

Constructive feedback from course participants is a relevant information source for each faculty member in order to improve the quality and efficiency of teaching. It provides students' opinions about the quality of the course outcome and refers to those areas that could be improved. Just taking into account the teachers' opinions would be insufficient for increasing the quality of teaching.

First, it is the feedback that reveals whether the instruction of the course was coherent with the course prerequisites set and how it met the students' expectations.

Second, the feedback should serve as a threshold for improvements and for assuring that all requirements set have also been met.

Giving of feedback is indispensable for enhancing the quality of training that the colleges and universities provide. The main respondents are students, alumni, employers (including the internship supervisors). Hence, the feedback questionnaire should cover the aspects such as: Course content and methods of training, course administration, and other relevant aspects related to teaching and learning. Feedback shall involve all forms of teaching (including both, group work and individual work in classrooms, hangars and labs).

With regard to the course content, the feedback questions should address students' opinion and evaluation of course structure, complexity, course credit hours, methods of instruction and the instructor's teaching proficiency; also availability of textbooks and other learning materials, and

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liaison and communication throughout the course. The questions about course administration should also focus on receiving information about the course setting and availability/ use of course/student support services. Also, the questions should relate to the course syllabi and requirements, classroom and dorm facilities, catering, transportation to and from school, library facilities, etc.

Estonian Aviation Academy gathers and analyzes feedback on a regular basis, followed by making of respective decisions as may be deemed necessary. Feedback from stakeholders, directly involved with the training programs offered, is a very important and helpful resource for enhancing the quality of educational programs offered at colleges and universities.

At present, the following methods of collecting feedback from students are used:

1) Students of Aircraft Piloting, Air Traffic Services, and Aircraft Engineering, send in their feedback based on (a) requirements enlisted in the Manuals of International Training Organizations and (b) Class Teaching Efficiency Evaluation questionnaires;

2) All students regularly provide their feedback based on Course Teaching Efficiency Evaluation questionnaires.

Also:

3) Web-based feedback and opinion survey questionnaires are used (in Moodle); and/or

4) Feedback collecting and evaluation is conducted on faculty members' initiative. [2]

In Aircraft Piloting, Air Traffic Services, and Aircraft Engineering majors, it is mandatory to audit classes. This is used as our quality improvement requirement. Similar teaching quality auditing system is currently being developed for the other Major Programs instructed at our Academy. [2]

All information received by different feedback forms is used to improve the quality of training. Such kind of efficiency enhancement and quality improvement policy incorporates all faculty members, curriculum managers and students. [2]

Surveys of students give the teaching staff and the academic structural units consistent feedback on the study process and on teaching of separate subjects. Teaching staff members can use the outcomes of surveys to make improvements to their teaching and to perfect the content and format of their subject courses. The outcomes of the surveys are also used when evaluating the suitability of an applicant to the teaching staff member's position – at professional evaluation.

III. Estonian Aviation Academy Curricula and International Training Organizations

Estonian Aviation Academy curricula include three specialties that are internationally regulated and supervised by aviation authorities:

1. Air Traffic Services
2. Aircraft Piloting
3. Aircraft Engineering

In addition, the curricula include two aviation specialties that are not supervised by aviation authorities:

1. Aviation Management

2. Management of Aviation Communication and Navigation Systems

A. International Training Organizations

The feedback procedure in certified training organizations is described in respective manuals or exposition.

The EC Regulation 290/2008 ORO.GEN.200 stipulates:

✓ Management system: The organization establishes, implements and administers the respective management system;

✓ Under the monitoring of compliance principle, the CEO/ CAO shall be informed about drawbacks and shortcomings in order to ensure a timely implementation of appropriate measures to ensure the desired improvement;

✓ The Quality Manager and a designated evaluator participate in the feedback analysis.

Information documents used in a training organization include:

✓ internal audit reports
✓ CAA reports
✓ class and instruction audit reports
✓ proposals and grievances
✓ course participants' feedback questionnaires

Feedback procedures include:

✓ gathering and grouping of information
✓ decision making
✓ redress procedures
✓ analyzing of information

Feedback channels used with students of all academic majors, include:

✓ feedback questionnaires about the quality of learning and teaching
✓ students' feedback questionnaire in the Study Information System (SIS)
✓ feedback collected on the faculty member's initiative (in Moodle environment)

Estonian Aviation Academy has conducted feedback research that focuses on students' achievement and motivation when studying the general academic program. It has, likewise, researched the opinions of our cooperation partners that offer training and internship programs. Of equivalent importance in those opinion researches has been the involved parties' evaluation of the organization of teaching. [2]

IV. Feedback on Teaching Staff Performance and Their Professional Development

Once a semester the assessment of the subject courses and their teaching takes place via SIS with the aim of collecting students' feedback on teaching and content of subject courses, and thereby enhancing the quality of teaching. The assessment takes place by students and teaching staff surveys and serves as one of the cornerstones of quality assurance of the study process. The survey is conducted by the quality manager in cooperation with the Studies Department. The procedure for conducting feedback surveys in certified aviation training departments is specified in respective training manuals. [6]

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Within the survey, all the subject courses taking place during the semester and the quality of teaching are assessed. The teaching staff member him/herself and the head of the specialty department have access to the results of the survey in the SIS environment. The student surveys provide the teaching staff and the academic structural units with current feedback on the study process by separate subject courses. The teaching staff can use the results to make corrections in their work and advance the content and format of the subject course taught. The results of surveys are also used in regular evaluation of the teaching staff and in drawing up their professional development plan. The teaching staff analyse the results of surveys independently. An in-depth analysis and discussion takes place together with the head of the department. [6]

Evaluating the Teaching Staff Member's Efficiency

The primary feedback on the efficiency of teaching is obtained from student surveys. Once a year the teaching staff members have to draw up their individual work reports (on the previous academic year) which serve as the basis for annual performance review. The work report provides an overview of the fulfillment of the objectives, of professional development, and also, of the new work related objectives for the next period. In addition, all the regular teaching staff members have to periodically pass the evaluation process. The aim of the evaluation is to assess the teaching staff member's performance and their conformity to the requirements set on the position held. Depending on the efficiency and results of teaching the evaluation committee may adopt one of the

following resolutions:
- deem the teaching staff member to be evaluated/ accredited;
- postpone the evaluation for a specified term with recommendations in regard to the person's professional training or self-development; deem the teaching staff member as not evaluated/accredited. [6]

V. THE FEEDBACK SYSTEM OF THE STUDENTS; ALUMNI AND EMPLOYERS

The objective of conducting feedback surveys is to obtain assessment from important to the Academy target groups about its activities and general efficiency of operation, and to identify the opportunities for improvement and areas of further development. It helps to ensure that the corrective and preventive actions are defined and addressed to the people accountable. The questionnaires are prepared and reviewed regularly by the Studies Department and the quality manager, and conducted electronically in the Google Drive environment. In 2015, feedback was collected from cooperation partners, first-year students, students of years 3 and 4, the alumni and from the Academy staff. The results of the feedback surveys are introduced to the speciality departments, and the need for applying corrective actions is analysed thereafter. The students and the alumni receive the results of surveys by e-mail. The results of surveys (Fig. 2) are also analysed and discussed with the Student Council.
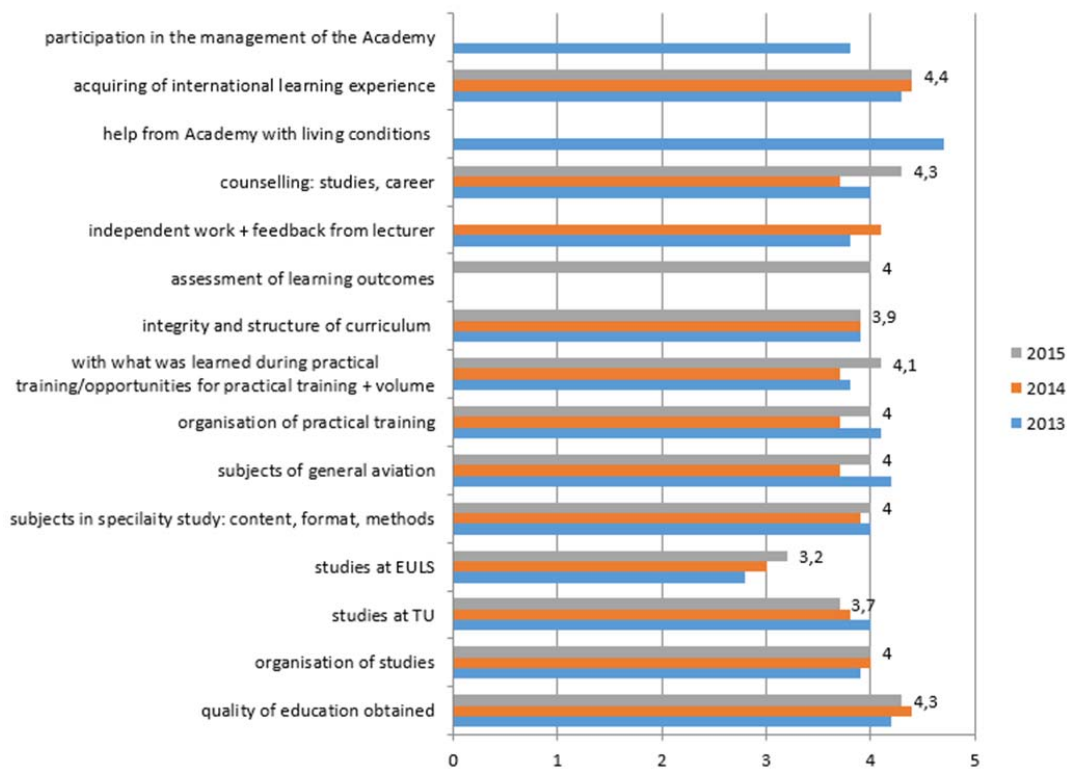

Fig. 2 Comparison of student satisfaction in 2013–2015 [6]

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In the spring of 2015, the Academy conducted a survey to find out the employers' satisfaction with EAVA graduates. Ten organisations gave their responses. [6]

VI. Students' Feedback on Teaching Staff

Students' feedback is a very important tool for the teachers' evaluation but there are also other sources of feedback for the overall assessment of teachers [3].

Students' feedback is of utmost importance to the Academy (Fig. 3). Student satisfaction with the teaching staff is expressed as one of the indicators in the annual application plan.
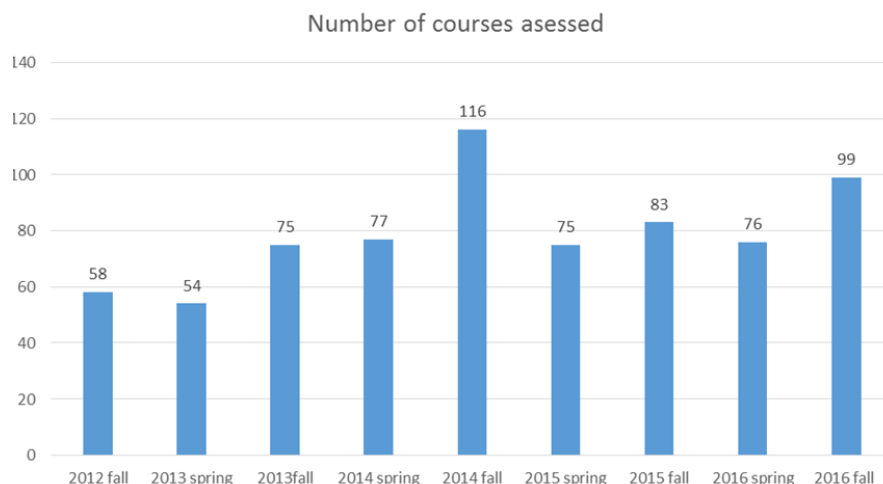

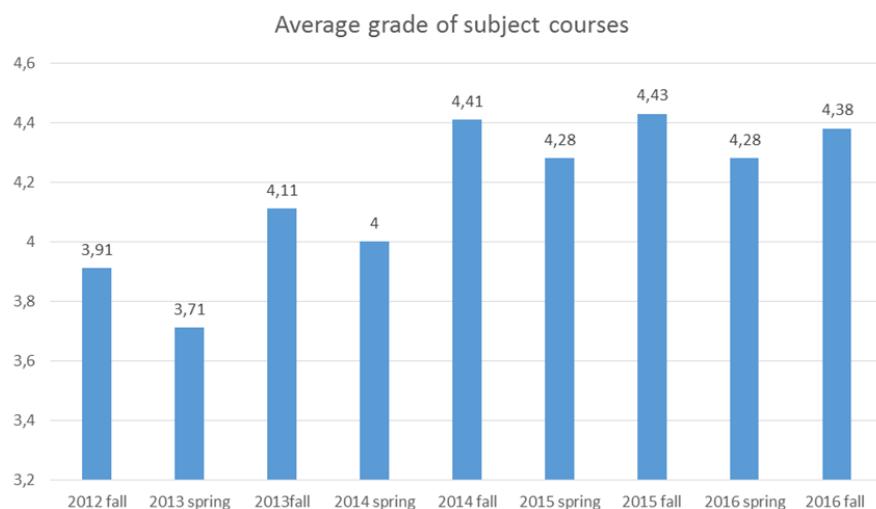Fig. 3 Number of courses (min 20% of registered students have responded)

Fig. 4 Average grade of subject courses

The average grade resulting from the surveys has risen during the last four years (Fig. 4).

The students provide regular feedback on their teaching staff via subject monitoring in SIS. Once a semester the subject courses are evaluated and different aspects of teaching the subject are assessed. The lecturer him-/herself can see the results of the student feedback given in SIS. Conclusions are drawn on the basis of the information obtained and sent to the managers of the curricula. The curriculum manager analyses the results together with the lecturer. If the lecturer's teaching skills need honing, they are offered an opportunity to attend respective refresher courses. The development of a novice teaching staff member is also guided by their mentor. Subject courses conducted in the English language are evaluated by foreign visiting students at the end of the course. So far the students have been of a very high opinion.

VII. Students' Feedback on the Organisation of Practical Training

It can be concluded from the feedback that prevailingly the students are satisfied with the content and organisation of practical training. The students highlight the supervisors' professionalism, helpfulness and strictness. The content of training is considered to be of practical nature and of great

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importance. Based on the students´ feedback changes have currently been made in practical training. For example, in the curriculum of Management of Aviation Communication and Navigation Systems, the number of days of practical training at ENICS Estonia Ltd was cut while its intensity was increased. That change received a positive feedback from the students.

In the curriculum of Aircraft Engineering audits are carried out within the period of practical training during which the quality manager and the examination manager interview the students and, if needed, make recommendations for improving or for further development of practical training. [6]

VIII. CONCLUSION

Summarily, in Estonian Aviation Academy:
- ✓ Evaluation of the instruction provided has improved
- ✓ Curricula are continuously updated and upgraded
- ✓ Based on the feedback outcome, both, students and faculty members have opportunity to perform thorough performance analysis of themselves;
- ✓ Students have become more actively involved with their contributions to teaching
- ✓ Qualities of learning and teaching have improved

By providing their feedback via SIS, Moodle, feedback questionnaires and via the feedback system of the training organizations, all the parties in learning and teaching have become more involved with improving the course administration and enhancing the course quality [1] .

Proposals and suggestions:
1. To exhort students to take more initiative (involving for it the Student Council, faculty members, department chairpersons; communicating the information about upcoming changes)
2. To implement a class auditing policy (course instructor as an auditor; course instructor as an auditee)
3. To use mentoring (mentor-mentee)

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