Aalto University

University Review 2018

School of CHEM

March 2

Research and Innovation

Self-evaluation: key findings on the implementation of school's strategic plans (performance agreement) utilizing KPIs and evaluations;

Key achievements

1. School restructuring and development of the departments research strategies (focus areas) has started successfully
2. Bioeconomy infra development continuation successfully towards world-class research environment: the best A classification in the Academy FIRI interim evaluation; RAMI showed its potential
3. External competitive research funding continued to increase (AoF, EU)
4. Strong activity and co-operation with Industry: ANDRITZ Oy and AaltoCell™ to the global market
5. A good number of prizes, awards and distinctions: ERC grants, Ioncell

Challenges

1. Research quality KPI´s have not yet shown an increase (several new recruitments part of the reason)
2. Newly formed departments are not yet completely coherent
3. Only small number of research groups globally in leading positions
4. International activities and networking should be increased further

Art and Creative Practices

Self-evaluation: key findings on the implementation of school's strategic plans (performance agreement) utilizing KPIs and evaluations.

Key achievements

1. ***Sharing and Co-creating multidisciplinary artworks and events (Excellence, visibility&impact):*** CHEM hosting Designer in Residence (shared position with ARTS), *New Biomateriality Lab* at Enter&Encounter exhibition in Design museum Helsinki (March - October, 72 000 visitors), CHEMARTS lab at ABio Centre (May) *Lost in the Wood(s)*- book launched (September), CHEMARTS Summer School exhibition at Habitare fair (September, Helsinki fair centre), art documentation at CHEM *Shadows* exhibition at CHEM main lobby
2. ***Embedding design and design thinking (Broader art-based offering, enabling creative practices):***

   CHEM students participating in UWAS courses, multidisciplinary team including designer in iGEM competition, Plant Biomass course opened for design students (period I), two creative workshops with NewSilk research team (June, November), several design students working with research teams at CHEM

Challenges

1. Scaling up creative practices and collaborative activities between ARTS and CHEM, both in education and research
2. Further spreading knowledge of UWAS (University Wide Art Studies) for CHEM staff who is working with study plans and giving student advice
3. Need for more support in communication (practical help)

Education

Self-evaluation: key findings on the implementation of school's strategic plans (performance agreement) and development action for all schools (tutoring and counselling system) utilizing KPIs and evaluations.

Key achievements

1. *Attractive programmes*: Bachelor program renewal and Attractive programme pilot
2. *E-learning* solutions: 5 A!OLE pilots and 7 courses in 2017
3. *Success of students:* significant improvement in share of students with ≥ 55 cr/a (increase from 29.7 to 33.5 %) as a result of several development actions (bottleneck courses analysis, scheduling of studies, school's trainee positions + summer courses, etc.). Student Career Forum ~300 participants!
4. Targets in *student exchange* (3043/3000 cr) and number of *degrees by foreign students* (23/15) were reached successfully by increasing the offering and marketing, as well as by enabling the crediting of the courses.
5. *Academic advising* system was developed and implemented both in B.Sc. and M.Sc. programmes.

Challenges

1. The number of B.Sc. degrees dropped dramatically from 181 to 67 (target 170). The drop in M.Sc. degrees was modest (from 179 to 166, target 180). The target for number of B.Sc. degrees is unrealistic taking into account the past and present *student intake numbers.*
2. The number of eligible first choice applicants remained below the intake in both B.Sc. and M.Sc. programmes. The low attractiveness is a threat for achieving the target level in B.S. and M.Sc. degrees.

Summary of the Degree Programme Review

- The need to increase the attractiveness of both B.Sc. and M.Sc. programmes was identified. Different actions will be needed to increase the number of first choice applicants among both Finnish and foreign students. The actions include e.g. CHEM's participation in Aalto University Junior activities and Aalto University's marketing pilot program.
- The need to update the structure and content of B.Sc. programme was identified. The planned changes are expected to improve the attractiveness of the programme, improve student satisfaction and enhance students' professional skills development.
- The need to promote students' study success was identified. The actions agreed to improve the situation include at least implementing the academic advisor system also in the B.Sc. programme, analysis of the bottleneck courses and changes for removing the bottlenecks by splitting courses, revising the content and/or lowering the workload.
- The challenge of early summer working positions in the industry was identified. CHEM promotes students' relationship with the industry and looks for actions that would allow combining the study success and successful career development. The means include scheduling of compulsory presence requiring parts of courses in the spring term and offering possibilities for distant learning (e-learning tools and materials) and summer exams.

Additional comments

JSI process

- **Deans do not have the big picture related to JSI. Now individual lecturers and professors are proposing development actions that are not prioritized at the school level. JSI topics that school will contribute should be agreed as a group of projects with dean/ vice deans and VP´s latest 3 months before the work should be started. Then school has time to reallocate resources. If the funding is short term and scattered, no additional persons are hired to take care of JSI-projects but e.g. lecturers will do it and then both JSI-projects and teaching are suffering.**

Service performance

- **Grant writing support has improved very much during the recent years. However, the persons are overloaded close to given dead-lines such ERC and AoF.**
- **We should have a longer term perspective and more strategic discussions about the innovations made and the project agreements related to them. Contracts and innovation disclosures need more risk and potential analyses. We should prioritize the innovations, since we do not have resources to take care all of them with the same prestige.**