May 11, 2019

Excellence in Education at Sabanci University: A Case Study of Oxford University

Drafted by:

Meral Güçeri

(PhD in Educational Sciences)

Sabbatical Report for Spring 2019

meralg@sabanciuniv.edu
SABANCI UNIVERSITY

OUTLINE

1. **Definition**
2. **Purpose of the study**
3. **Data collection**
4. **Course Content**
5. **Brief Description of the College System**
6. **The Teaching Excellence Framework in the UK**
7. **Tutorials**
8. **Seminars**
9. **Use of Technology**
10. **Assessment**
11. **Faculty Development**
12. **Student Evaluation**
13. **Lessons from the Oxbridge System**

Definition

Higher education institutions seek to excel in teaching through a wide variety of pedagogies to enhance the knowledge, skills, connections and values which are necessary for students to succeed in today's world. The idea is to prepare students to an environment where they approach problems with a broad vision, work across disciplines, and collaborate in teams. They help students to build an entrepreneurial approach, empowering them to be innovative and creative. Education excellence '*prepares students to navigate ambiguity, to utilize their intellectual curiosity to identify and realize opportunities, and to evolve into visionary leaders who seek impactful and ethical solutions for the local, national, and global challenges of our time.'*[1]

Purpose of the Study

Globalization, technology and increased supply of human capital mean that educational tools, curriculum and assessment systems evolve rapidly. Following these developments, learners' needs have been revised, rendering the pursuit of high-quality education a multi-dimensional endeavor for the institutions that seek to offer it.

For universities around the world, achieving excellence in education is a highly complex area. Universities tend to evaluate the quality of education under two streams: teaching quality and research. At Sabanci University in Turkey, we strive to reach the forefront in the education that we offer to our students, while also producing world-class research.

This report focuses on the teaching side of our objectives, and aims to provide an example of a top quality institution's ways of working. In many respects, Sabanci University's education system resembles the North American model more than the Oxbridge model, but I believe that the insights from the Oxbridge model offers a fresh viewpoint for some useful adjustments for our university. As a model for an international, historic and top quality education institution, Oxford University is a useful case study, as it has maintained teaching and research excellence for hundreds of years. Most recently, Oxford University has been ranked no 1 in the Times Higher Education World University Ranking for 2018.

With the target of becoming a leading center for excellence in education in Turkey, Sabanci University regularly organizes multi-disciplinary search conferences. These inform our education

[1] Source: University of Southern California's Center for Excellence in Teaching.

practices, along with other teaching assessment exercises. In this report, I study how the quality of teaching and research are measured at Oxford and subsequently explore ways to implement some of these practices at Sabanci University. I hope that the findings of this report can complement our regular teaching assessment procedures in a useful way. Moreover, I believe that Sabanci University is very well-placed to lead a movement of teaching excellence in Turkey. Such a movement would try to ensure that our students are placed in top institutions around the world for further studies, or employed by successful private and public organizations that improve the well-being of our overall society. It is my wish that our students, when they go abroad for further studies, or when they are in public or private organizations for work, are well-equipped to take on the challenges of their new environments.

Data Collection

I collected data by conducting interviews with Oxford University staff who are involved in teaching and research at the university's undergraduate and graduate programs. Therefore, a number of faculty and researchers were interviewed by making appointments in advance. I used the set of questions that I list below. These questions were confirmed in advance by the interviewees. Each interview lasted between 20-30 minutes. During the interview, when some questions were already answered, those questions were avoided. Interviews were recorded after obtaining the permission of the interviewees. Then, I transcribed the recorded answers in order to identify the key areas. All the interviewees answered the questions by providing detailed answers.

I administered the following questions during the interviews:

<u>Introduction</u>

1. How long have you been a faculty /researcher at Oxford University?

    a. What has been your path to be there?
    b. Could you tell me why you chose Oxford?
    c. What courses do you teach and in which term (Michaelmas, Hilary, or Trinity) do you teach?

2. What strategies do you employ to provide the high quality teaching that Oxford is known for around the world?

<u>Content</u>

3. What criteria do you use to decide on the content of your course?
    a. Do you teach a core course or a specialization?
    b. What supporting course materials do you use?
    c. Do you focus your teaching on the specific learners?
    d. How do you plan your teaching?
4. Do you do tutorials within your college or department?
    a. How many hours of lecturing, how many hours of tutorials do you do?

    b. How many students attend lectures/tutorials? Is attendance compulsory?
5. How does the tutorial support the lecture? Are they designed to complement the lecture?

Use of Technology in the Classroom

6. Do you allow laptops/cellphones in your lectures?
7. How do you integrate technology into your teaching? Which of the web tools do you use while lecturing?

Assessment

8. May I clarify if attendance is required in your course? Does it have any weighting in overall assessment?
9. Do you give assignments? Do they count towards the final grade?
    a. If yes/ what is the percentage contribution to overall grade?
    b. If not, what sanctions are there?
10. What kind of assessment procedures do you employ? Are there mid-terms or final examinations? What are their weightings?

Faculty Development

11. What are the procedures for decision-making about the content of further training for faculty and the wider teaching community at Oxford?
12. What are the key professional competences in terms of attitudes, knowledge and skills needed by the teaching staff? How are teaching related competencies assessed?
13. Reward system by department

Student Evaluation

14. What actions are taken if/when students complain about the attitude/knowledge or skills of a faculty member or teaching staff?

15. What is the impact of student evaluation of teaching on:
    a. faculty's approach to teaching?
    b. faculty's career progression?

16. Do student evaluations have an important role in achieving quality?

Any Other Areas?

17. Are there any other areas that contribute to excellence in teaching you would like to add?

18. In the UK, I am aware that there is an inter-university teaching assessment system called 'the teaching excellence framework (TEF).' Could you tell me about it?

The interviews were conducted by Oxford University staff who are in predominantly teaching and research roles, rather than in administrative roles. From a central university administration

perspective, each of the University's four divisions (Medical Sciences; Social Sciences; Humanities; Mathematical, Physical and Life Sciences) are reviewed once every six years by the central 'Education Committee' to ensure top quality standards. Further information on this centralized review can be found at http://www.admin.ox.ac.uk/edc/qa/internalreviews/reviewguidance/

This report focuses mostly on the findings that have resulted from open and honest interviews based on personal experiences by the lecturers.

Data Analysis

Years of experience in teaching or research at Oxford University varies between 1 to 15 years for the interviewees. Each and every interviewee from Department of Engineering Science, Department of Economics, Said Business School, Law Faculty, Department for Continuing Education and the Blavatnik School of Government openly and honestly answered my questions. Data was collected by using the questions, then, the answers are collated under the titles as highlighted on the outline. Some of the lecturers and researchers are teaching only undergraduate courses while others teach graduate programs. There is also a group that covers both levels. Therefore, after I collected data, I analyzed them under two separate titles, 'graduate' and 'undergraduate' programs if/when any difference occurs.

Course Content

Undergraduate: Course outline is drafted by the faculty member by making use of the pool of existing content. The course outline is then approved by a panel of academics. After the content of the course is approved, the lecturer can add some materials if/when s/he wants to. There are some differences between departments in practice but the common practice requires a lot of cooperation and collaboration within the department. Courses are shared between faculty members, that is, on many occasions, one faculty member covers half, or a certain number of weeks in one semester, and the remaining weeks may be covered by another lecturer, or other lecturers. That is why sharing ideas and opinions at the course preparation stage is extremely useful.

Graduate: Course content is designed by the lecturer herself after she conducts a research study on learner needs, reviews recent literature and takes a look at the innovations in the field. Then, the lecturer decides on what to include in the course. Catering to student needs and wants are taken as priority while designing a graduate course. At the graduate level, lecturers focus on the most up-to-date research and analyses of academic research papers.

For both graduate and undergraduate courses, the workload varies across different programs and the nature of the course (e.g. core/ elective/ specialization). For the lecturer, *staying up-to-date with the latest research and publications is key*. Most lecturers use thought-provoking questions and real world examples to facilitate discussions and to keep students engaged.

At both undergraduate and graduate levels, an example core course may require around 4 hours of lectures (usually in two two-hour sessions) and one hour of tutorials or seminars per week. Content is chosen taking the specific needs of students into consideration. Students are made aware that they matter and the content is decided upon their needs and wants.

The lecturers provide detailed notes to students so they do not have to write a lot in a lecture. The students are encouraged to look at the lecturer and the slides and think about the content. This avoids students who come to a lecture only to take notes. These materials, both slides and the notes, are made available before the lectures on Canvas or the course website (via Weblearn).

Brief Description of the College System

Oxford University is composed of many academic departments and 38 colleges[2]. In most cases, the departments set the curriculum and final examinations for the degrees, while colleges have a bigger role in ensuring the welfare of students. Administratively, each college and each department has a 'head of school', who oversees all activities, hiring, fundraising and student progress within the unit. Colleges and departments have a lot of autonomy over how they choose the course content, and how they monitor student progress. Therefore, there are a lot of different practices across the university.

Undergraduate: At the undergraduate level, admissions are carried out by the college. The college is responsible for the monitoring of academic progress and welfare of students. In most cases, students take tutorials within their colleges, or by college tutors. Again, in many cases, intermediate assessments such as mock exams are also the responsibility of college staff.

Graduate: At the graduate level, most tuition and assessment take place within the department, by faculty within their departmental roles. Almost all departmental staff also have a college affiliation and carry out either supervision or teaching duties within their colleges. At the graduate level, the department admits students, then the college provides accommodation and meals as well as a social environment for the student.

The Teaching Excellence Framework in the UK

In the most recent Teaching Excellence Framework (TEF) carried out by the UK Government, Oxford University received 'Gold' status, alongside Cambridge University and a long list of other universities. Some well-known research universities such as the London School of Economics and Political Science only received 'Bronze' status. The first TEF was carried out in 2017, and it has been repeated in the subsequent years. Currently, the purpose of the TEF is only to provide guidance to students who are applying to university.

An evaluation panel composed of academics, students and employers decide on how well each applicant university to the TEF satisfy some key criteria. The core areas for assigning 'Gold', 'Silver' or 'Bronze' status are listed as follows:

1) Quality of teaching
2) Strength of academic support
3) Progression to employment

[2] This excludes the six permanent private halls, which also operate in a similar way to colleges.

Tutorials

Tutorials are a key component of the Oxbridge system. These cause an Oxford degree to be very costly (not from a 'price for the student' perspective, but from the perspective of administrative cost to the university), but both students and lecturers believe that this education is worth every penny. A typical undergraduate year group in Oxford is composed of 200 students. As an example, they may get paired in groups of 12, so that a tutorial leader has 3 pairs of 2, altogether 6 students in one year. *Departments admit a large number of students, and then the colleges have the tutorial system for much smaller groups. Therefore it is a very expensive system.*

Numbers are small in tutorial groups, mostly, students are in groups of two, but the numbers can be as small as a single student or as large as 5-6 students in one tutorial group. *So, the best students are challenged more and the weaker students are helped more.*

Tutorials provide invaluable support as they are conducted in very small groups. Undergraduate students write essays every week so that they can develop skills but these essays do not have any weighting on overall assessment. The aim is to build and develop skills until they sit end of year examinations. All evaluation is based on end of year examinations.

Tutorials allow students to be closely monitored in a system where there is no frequent assessment through midterm exams, compulsory homework or attendance requirement. For each tutorial, students are asked to do some preparatory work, such as handing in essays for verbal courses, or completing problem sets for mathematical or engineering courses. Tutorial leaders[3] have the additional role of monitoring the students' progress and conduct mock examinations to keep the student progress in control. If the tutorial leaders find any student to be underperforming, they have the authority to escalate their observations to the college heads. College heads may then choose to issue a warning to the student or in rare cases, order probation.

Quote from the Interview with an Engineering Faculty Member

*"Oxford has this peculiar **tutorial system.** Students sit through a lot of tutorials. I have 4 hours of lecturing and 144 hours of tutorials per year. These are my hours, and nobody else shares tutorials with me. The college and the department have different tutorial systems. 144 hours for 6 students a year in the college, either one on one or one on two. 144 divided by 3* [for each Oxford term]*, I teach 48 different topics.*

In Oxford, lectures are less important but tutorials are extremely valued. Tutorials are the most intensive components; students have to attend these as they are such a small group that they always turn up and hand in the tasks assigned. Tutorial tasks are assigned and expected to be handed in on time. Assignments are not assessed but feedback is provided. Lectures are complemented by tutorials. We assign work before the tutorials so that the student performs and submits the work before s/he comes to the tutorial. There and then s/he asks questions or gets the clarifications s/he needs. This is what students appreciate enormously in Oxford. We get to know each other very well, we are like a family, they find us approachable and do not hesitate to

[3] In some cases, tutorial leaders are the same as the students' lecturers for the course; in other cases, these are college lecturers designated to help with tutorials and classes; and in some other cases, college lecturers are PhD (DPhil) students that are trained to provide tutorial support for undergraduate students.

approach us for their queries. There are lectures going on in the department and parallel to that, every block of four lectures has one tutorial hour where they come to me with a worksheet that condenses four lectures. In all departments every four lectures are followed with a tutorial."

Seminars

Graduate students are expected to attend seminars given by faculty and external speakers, as well as giving their own seminars when they are ready. These are different from tutorials, although many graduate students also have tutorials in the same way as explained in the preceding section.

Some departments have PhD students lead the seminar sessions, while others may employ designated teaching staff to carry out tutorials and seminars. Seminars provide a lot of reading and discussion opportunity for graduate students who also contribute with their former experiences as well as new reading and research findings. A topic is given for the week where everybody reads, stores knowledge to get ready to comment and comes to the lecture hall to discuss it. They do not submit anything but they are expected to discuss the issue when the time comes.

Use of Technology

Laptops and mobile phones are allowed in lectures, and tutorials are interactive; therefore, laptops or mobile phones are not used. In lectures, some students follow the lecture slides from their laptops. Lecture slides are made available for students before the lecture. Many students see them before the lecture as there is peer pressure. In tutorials as well, peer pressure plays a significant role in getting students to be actively involved in the discussions. *Average student effort is therefore very important for the peer pressure to kick in and induce further progress by weaker students as well as the stronger students, knowing that classmates are performing well.*

In some courses, lecturers require students to have their laptops in front of them – MBA courses, for example. For undergraduate courses, students are allowed to bring laptops to lectures but they do not use them. Professional recordings of lectures are also available online. This does not prevent students from attending the lectures.

Most lecturers use Canvas to share materials with students. Some lecturers have expressed a degree of worry about students using laptops, as they are distracted and tend to learn less. Not only students who use laptops but those who sit next to them are also distracted. To tackle this problem, the School of Government has a laptop policy*. In the lecture theatre, those students who want to use their laptops sit in the one side of the room, the others on the other so they can not distract each other. '*Banning is another solution but can not be done as students will complain too much'[4]. If the students prefer to sit in the 'no laptop area', they do not use their laptops and concentrate on the lecture. The ratio of how students sit is about 50%-50%.

Tutorials are very old fashioned; students come with their worksheet and tutorial leaders give them individual feedback. Some students use tablets but usually the tutorial leaders use the whiteboard.

[4] Source: interviewee transcript

Assessment

Requirements for graduation: For most courses, assessment is based only on end-of-year, or even end-of-degree examinations. Attendance or course participation are not calculated when overall assessment is considered. For undergraduates, this is usually the only assessment that determines the marks that go to a student's transcript upon graduation. For graduates, some taught master's programs have theses or projects that count towards 25% or more of the graduation mark. In each exam or assessment, the pass grade is 50%, and students that score above 70% are awarded a distinction. Some graduate courses have no exams for assessment. In such cases, weekly assignments or project work count fully towards the final grade (see Interview with Faculty Member from the Department for Continuing Education).

All marking is done blind by two anonymous assessors. The assessor does not see the students' names and therefore there is no room for any flexibility outside what the student has written in their paper. External examiners review the marking process; they check how the lecturers are marking, whether the marking is fair or if papers are marked objectively.

Attendance: In some departments, students tap in when they go to lectures, and a record of attendance is kept; however, this is not taken into consideration when end of year grades are concerned. In other departments, lecture attendance is not even monitored. Attendance to tutorials is usually strictly compulsory. If/when the department or college recognizes that some students miss a lot of lectures, they are warned. The department or the college usually tracks attendance. For example, in the School of Government, students come to lectures and the department tracks their ID cards. If the school recognizes high degree of absence, they warn the students but there is no enforcement for anybody to attend lectures. Attendance is taken electronically to ensure who is coming and who is not. Usually, students come not to miss the lectures and the opportunity to ask their questions directly to the lecturer or the tutorial leader.

Intermediary exams and assessments: Most courses do not have midterm exams, but most courses assess students' progress (without counting towards the final grade) via termly mock exams. Some graduate courses administer weekly quizzes and these usually do not count towards the final grade. The aim of such frequent intermediary assessments is to collect feedback regarding students' understanding and progress in each course.

Faculty Development

To begin with, schools and colleges aim to recruit people who like teaching (which is not always the case at research universities). If one does not like teaching, Oxford is not the right place to get recruited.

The University has a training center where there is some formalized training on offer. In addition, there is an informal support system where academics help each other.

'Teaching, research and service are the three key competencies to teach in Oxford. Love of teaching is the key, research is what an academic should always be conducting to keep up-to-date and service is self-explanatory.' (Quote from Engineering Faculty interview)

In-house courses are offered for further training for those who are interested, but these are not compulsory. Many lecturers do not choose to participate in these courses. There is an online teaching module that all lecturers need to complete before teaching any course, but this is only about the basics of teaching.

Assessment of teaching-related competencies:

1) *External examiner*s: assess the course and assess the examination system. They check if the internal examiners' marking is efficient and fair. External examiners come from outside Oxford, and is usually an established professor in the field. In some departments, such an external examiner may conduct a session at the end of the 8th teaching week only with the students to receive feedback, and then writes a report. There is a lot of accountability.
2) *Student barometer survey*: a university-wide survey filled out voluntarily by students.
3) *Student feedback*
   All three above are reviewed by the university.

4) *Training identification:* each academic has their own assessment with their line manager, who provides their own assessment. But this is not a very strict evaluation.
5) *Continuous evaluation:* the tutors are self-aware about how they can improve their skills. There are a lot of resources to benefit from: (a) *the university has a certificate called "PGCRT higher education",* which provides some guidance. Even if this is a time-consuming course, a lot of people do it. (b) *seminars* (c) *college morning coffee sessions* where college lecturers get together as faculty from different disciplines and discuss their teaching experiences.

Because there are many checks and balances, any formal or informal feedback is evaluated by different bodies.

Teaching Evaluation and the Role of Student Evaluation

Tenure review: in year 2 and year 4 in a tenure-track position, a reviewing faculty member watches the lecturer teach for at least 10-15 minutes. This is an important component of the tenure review. Key teaching related competencies are assessed in this review, such as whether one explains the subject clearly, whether he/she answers students' questions carefully and whether they facilitate discussions in lectures.

Reward system: Each division decides whether to give a specific teaching-related reward or not, and what to give. The Mathematical, Physical and Life Sciences Division (MPLS) has a Divisional Teaching Award scheme to encourage 'excellence in innovative teaching'. Any member of teaching staff (faculty, college lecturers, PhD students, postdoctoral fellows, departmental lecturers) is eligible for an award nomination. There are up to 10 awards that focus on either innovativeness or leadership in teaching practices.

Strategic Areas for the MPLS Divisional Teaching Award

- *Promoting the benefits of teaching and public engagement in a research-intensive environment;*
- *Improving the prominence and effectiveness of measures that enhance students' study skills and their long-term educational development (for instance their understanding and engagement with academic standards in their discipline);*
- *Introductory teaching and other means of educational support for students less well prepared for Oxford;*
- *Embedding graduate studies;*
- *Improved support for research supervisors;*
- *Innovative methods of assessment;*
- *Educational initiatives to promote access (e.g. summer-schools);*
- *Opportunities for raising students' awareness of and engagement with international research and scholarship;*
- *Opportunities for raising students' awareness of and engagement with industry and commerce;*
- *Opportunities for raising students' awareness of and engagement with the public;*
- *Improved mentoring arrangements for new members of teaching staff;*
- *Improved support for graduate students undertaking teaching and/or public engagement activities;*
- *Set-up of new or revised undergraduate or postgraduate courses;*
- *New materials to support courses;*
- *Teaching and support for students in Colleges that best complement the new and evolving courses provided by departments;*
- *The use of information technology in teaching;*
- *Interdisciplinary teaching and learning;*
- *Improved collection and analysis of feedback from students;*
- *Bringing active examples of research into teaching where possible.*

Student evaluations: In most cases, students evaluate teaching at the end of term, but these evaluations do not entail a penalty or a reward. They provide valuable feedback for the lecturer for future improvement. Some lecturers, especially for teaching-heavy programs such as the MBA offer evaluations every week to cater their teaching to the specific audience, but this type of practice is rare across the university. The end-of-term evaluation goes to the Faculty Development Review Panel which is composed of the dean/head of the school, faculty mentor and faculty or research dean. The downside of such student evaluations is that students who are unhappy about a certain aspect of the course usually submit evaluation forms therefore the reliability of these tools may be questionable.

Some departments seek to receive a lot of student feedback to make sure what they offer caters for their needs. At the Business School and the School of Government, feedback is collected on a weekly basis so the lecturers can modify and adapt their teaching upon feedback.

National teaching survey: The Teaching Excellence and Student Outcomes Framework is carried out by the Government to assess the quality of undergraduate teaching in universities. Currently, state funds are only allocated through the Research Excellence Framework but there are discussions to formalize the role of teaching in allocating state funds.

Student-led teaching awards: Oxford University Student Union (OUSU) leads the student-led teaching awards, which honors all nominated members of teaching staff in an annual dinner where the winners are announced and are expected to make a short speech. Students from each department or division nominate their lecturers or tutorial leaders and winners are provided a monetary award alongside this prestigious award. The receipt (or not) of this award usually has no implications regarding career progression.

Lessons from the Oxbridge System

1) *The tutorial system is invaluable*

   The Oxbridge tutorial system is by far the most expensive education system in the world. Faculty agrees that the benefits far outweigh the costs for Oxford University. Our system at Sabanci University of offering tutorials to Freshman English students can be considered as a good practice example and may be further formalized.

2) *A 'Center for Excellence in Education' may help turn Sabanci University into a region-wide teaching powerhouse*

   Sabanci University takes pride in conducting cutting edge research and top-class teaching at the intersection between Europe and Asia. A center focused solely on achieving teaching excellence could continuously monitor progress towards teaching excellence and offer faculty members, tutors, PhD students and postdoctoral fellows a one-stop-shop in improving their teaching-related competencies. An example is the University of Southern California's *Future Faculty Teaching Institute* within their Center for Excellence in Teaching. The Institute offers a certificate course that covers best practices, essential pedagogy, teaching strategies, practical guidance and offers peer review opportunities.

3) *Departmental autonomy in procedures gives lecturers flexibility in catering to students' needs*

   In Oxford, the central university administration has a multi-faceted monitoring system to ensure top quality education by each department of the broader divisions. The systems employed by each department is not required to follow a 'one size fits all' system. The lecturers follow their department's guidelines, but also report enjoying the autonomy and the ability to change aspects of their courses based on students' needs.

4) *Technology use is limited to specific, beneficial activities*

   Laptops are not at the center of the teaching practice in Oxford. The 'laptop policy' to cluster students who would and who would not like to work with laptops enables students who want to only focus on the lecture and the lecturer to not be affected by laptop users around him/her in the classroom.

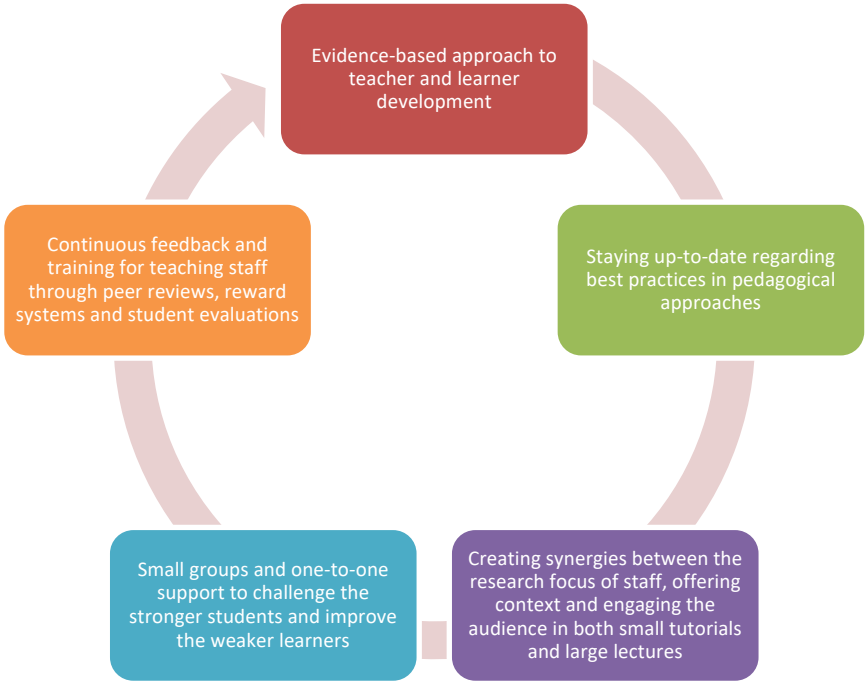
5) *Overall student quality is high, creating peer pressure, support and synergies. In cases where overall quality is not high, students may be split in groups based on strengths.*

Customized treatment of different learner abilities is important to facilitate peer effects in learning. The teacher is very important, but the other learners around each learner is also a very important force in better quality education. At Sabanci University, we have a wide variety of competencies and we should encourage team work as well as a diverse set of study groups (possibly set up by the teacher).

6) *Increased continued evaluation versus reduced emphasis on standardized student feedback*

Student feedback is very useful for teacher improvement, but there are other means of evaluation that might balance the biases entailed to student evaluations. Nominations of teachers for awards by either fellow teachers or students may encourage more positive reinforcement. Timing of student evaluations is also important. Brief weekly feedbacks solely for the teacher's own approach to teaching appear to be useful inputs for teacher development.

7) *A vision for teaching excellence*



Suggestions

1. Creating an institutional culture that embraces life-long learning, learning to learn, attending lectures and tutorials regularly and modeling this culture for students.

2. Identifying and recruiting qualified faculty is not easy. At the recruitment stage, individual positive qualities, such as a positive, 'can-do attitude' is important but the most important indicator of quality is teaching credentials.

3. Hiring criteria may be reviewed and recruitment focus can shift towards those faculty members who have relevant qualifications and the love of teaching.

4. Personality characteristics of a candidate in the selection criteria is important when team work is concerned; self-confidence, enthusiasm, tolerance, patience, kindness, sincerety, empathy, sense of humor, problem solving, openness to professional development are equally valuable as pedagogic knowledge.