



Final report

Teaching Sabbatical Fall 2019

Duke-National University of Singapore

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1. Summary and Conclusions

First of all, I like to express my sincere gratitude to STINT and the Duke-National University of Singapore (Duke-NUS) Medical School for giving me this opportunity to deepen my knowledge and experience of assessments within the field of medical education. My sincerest thanks to Vice Dean of Assessment, Kathrine Boursicot, Head of the Unit of Progression and Assessment at Duke-NUS, who has taken such good care of me (and my family) both professionally and privately. I am very impressed by the systematic determined work Ass prof Boursicot and her staff does in order to create an assessment system that is in accordance with the learning outcomes, the outcomes for the whole program and the needs of the local society. I also want to thank Prof Ian Curran for providing me the possibility to stay at the Duke-NUS and to Ass Prof Claire Canning for generously sharing her knowledge in assessments with me. Finally, my thanks and appreciation for the administrative support that facilitated my arrival and stay in Singapore.

In summary, the preparations with the medical school went smoothly. My main goals were to enhance my knowledge in assessment in general and in creating an assessment system in special. Further, I wanted to develop my skills in blueprinting and implementing a portfolio system. My main activities were attending to all the assessment team activities, faculty development activities such as assessment training for Objective structural clinical examinations (OSCE) and follow-up of the portfolio system. The most important lesson is that we need a system thinking to achieve an integral program. Secondly, an assessment team and a committee that gives advice and helps teachers at different institutions and oversees the assessments may ensure that the assessments are in line with each other and the learning outcomes. The assessment of core competencies has to be ensured and these has to be assessed in a logic manner. These were also the biggest differences between the host university and my institution, in addition to the use of IT in education. My first recommendation is: if you ever have the possibility for a teacher exchange, do it! My practical recommendations are: try to get detailed information about the university, housing and other important issues for make your everyday life to function. Finally, when you move, do it with some time margin. To adjust and find in your new environment is going to take same time.

2. Preparation and planning

I've visited Singapore several times before but only as a tourist. During the Asian-Pacific Medical Education Conference in Jan 2019 I had the opportunity to visit the Duke-NUS Medical School and meet the Vice Dean, prof Ian Curran and Ass prof Kathrine Boursicot and discuss the possibility of a shorter teacher exchange. No visits were done after the funding was approved but we have Skype meetings to make more detailed plans. The housing was arranged by myself. I arrived in Singapore a few days before starting my exchange, which in the hindsight was a little bit too tight schedule.

Unfortunately, the property where I had rented a studio was closed just a couple of days before the date I was due to move in so I got some hectic days trying to find a place to stay with a short notice. With the help from the HR department, the work pass application was smooth. I completed in the application at home and then booked a meeting with the Ministry of Manpower when I arrived in Singapore. The whole process was completed in about a week.

3. Tasks and responsibilities

My goals with the visit at Duke-NUS Medical School were to learn more about their medical program and specifically to learn how they work with assessments and follow-up of students' progression. Except participating in their everyday work (see below: Activities), meetings and faculty development activities I participated in structuring a follow-up of the implementation of their e-portfolio system. The first survey had been carried out among the students a few months earlier. I carried out an extensive literature search and based on these results, I created together with Dr Limin (responsible for e-portfolios) two new structured questionnaires for follow-up of student' and staffs' perceptions of using the e-portfolio system. That process required several meetings and revision of the documents. Then, the questionnaires were piloted, revised again based on the feedback, finalized and submitted to students and teachers just before my return back home. The aims were to find out possible weaknesses and new areas of development and importantly, to get more information about how the portfolio functions in the clinical setting. The analysis of these results is not yet ready but the plan is they are going to be presented at an international conference and going to be published. The next follow-up using the same questionnaire is going to be carried out after summer 2020, i.e. we are going to conduct a long-time follow-up.

My tasks included also attending to on-going faculty development activities, such as training of teachers before practical examinations (here OSCE, Objective structural clinical examination) and item writing workshops, which were in line with the goals with my sabbatical.

Considering assessment blueprinting I got as a task during my stay to search the literature for recent publications regarding the different steps in blueprinting and consider writing a review of the process for future use. There are quite few publications in the area but after reading those through and presenting my results at a teacher meeting we decided that a new outline was not necessary.

4. Activities during the stay abroad

During my stay I attended the assessment team meetings, which were basically held each week. During these meetings the team discussed the practicalities with the assessments and made long term plans for their work. In addition, I attended the assessment meetings for teachers from different years (and Year leads) as well as the Assessment Committee meeting (held only once during my stay). That committee comprises teachers from different years/courses/specialities. Issues such as the scheduling the upcoming assessments and needs of staff were discussed. I also attended the faculty development activities the Unit of Assessment and Progression arranged, e.g., blueprinting workshops for teachers from different courses and OSCE workshop during which the marking was trained with help of a videotaped patient encounter. Further, I attended an assessment/OSCE course for colleagues from KK Women's and Children's Hospital.

I also attended a formative 2-day OSCE for last year medical students. This formative assessment that was arranged about 4 months before their actual finals included totally 16 stations where except procedural skills with standardized patients also patient encounters, communication skills and diagnostic skills were assessed. This OSCE was followed (a week later) by a debriefing meeting with the students during which difficulties, common mistakes and student's problems/questions were raised. The assessment leads, the vice dean of education participated indicating how important the training and assessing students' competence were. Finally, I also attended meetings where different e-portfolio systems were presented and discussed with the leadership of the program as The Duke-NUS Medical School has recently implemented a new e-portfolio system

(MyKnowledgemap) and was in a process of further developing this system or perhaps acquiring a new one.

I also attended the STINT med-term seminar that was held in Singapore in November 2019. It was an incredibly interesting day giving the possibility to learn more from other academic areas, and other universities.

5. Important lessons

To visit a Medical School in a completely different context has been valuable in various ways. It's a challenge to try to summarize all the impressions and lessons shortly but here comes my top priorities: The most important lesson is that we need a system thinking to achieve an integral program. When the responsibility for the courses is shared between different institutions, each of which works quite independently with assessments it is difficult to create a uniform system in which students and teachers are aware of what is going on during other courses. This is frustrating and causes also extra work load on different levels. We do need an assessment team and a committee that gives advice and helps teachers at different institutions and oversees the assessments.

For the second, we have to create a strategy when and how knowledge, skills and professionalism are assessed during the program ensuring that students know what the core competencies are and ensure that these competencies are assessed in a logic manner. It is going to take some time to establish an organization like this and it takes time for teachers to get used to it but it is essential if we want to ensure that all students attain the intended learning outcomes. The analysis of the latest portfolio surveys is not finished but what is clear in that making learning visible is one of the main ideas of using portfolios!

6. Comparison between the host and the home institutions (in Sweden)

Differences between the medical programs/curricula

The Duke-NUS Medical School is a graduate entry 4-year medical program, created in collaboration with the Duke University in North Carolina and National University in Singapore. Students are awarded the degree of Doctor of medicine (MD) jointly by Duke University and the NUS. The program has admission once a year and accepts about 60-70 students in each cohort. All applicants must have completed, or be in the final year of a bachelor or honours degree, and all the listed applicants are interviewed. As the cost of

medical education at Duke-NUS is subsidized by the Singapore Government, all graduates of its MD program or MD-PhD track are required to fulfil a service commitment. This period is 4 years for Singapore citizens and 5 years for international graduates.

At KI (and in Sweden in general) we have undergraduate medical program, i.e. no previous degree is required. However, many students have previous studies in many different areas and also degrees from other programs before they start their studies. In that way they may get compensation and make their medical studies shorter. Less than 30% of the students at KI have been admitted through alternative intake (so called PIL, personal interviews in addition to the Swedish Scholastic Aptitude Test). One important difference between the programs is the size. At KI the intake is almost 370 students a year. No service commitment in Sweden is required.

Use of technology/IT in education

The Duke-NUS medical School use more IT technology in their program. The IT system used to follow students' progression – electronic portfolio is not used at the medical program KI. Another IT solution that the Duke-NUS was about to obtain was curriculum mapping system. There are several programs available today for these purposes. However, as the medical programs vary the available programs have to be adjusted in one way or another to local circumstances. In addition, the Duke-NUS just started to use a new program for handling of assessment data with the possibility to calculate learning analytics. Both universities use learning management systems (LMS) for all courses.

The status of pedagogical merits compared to research merits

In comparison, my impression is that KI has higher requirements considering research merits for teacher positions than the Duke-NUS Medical School. The general attitude to research is positive but the leads for different parts of the program at Duke-NUS do not have to write and defend a thesis (as a basic scientific education). My colleagues at the Unit of Assessment and Progression had no requirements to do research, sooner the opposite, they were encouraged to concentrate on establishing their assessment system with new routines. The Duke-NUS Medical School has a separate unit for the educational research and their staff is responsible for the research part. The status of

pedagogical merits remained a bit unsecure but even in this regards it seems that KI have clearer formal requirements.

Differences in the assessment systems

As the assessments have been my focus the chapter “Important lessons” comprises partly the same information. The most important difference in the assessment systems is that Duke-NUS has a central organization for facilitation and quality control of assessments. For the written assessments Single Best Answer (SBA) questions are used. The items have to be sent to the Unit of Assessment and Progression about 6 months before the examination. Are items are reviewed centrally and when necessary, sent back to the Year Leads and their teams for review. The assessments are then put together centrally and students’ results are followed-up centrally.

What concerns the assessment of skills, the same principle is applied. All the OSCE stations are reviewed months before assessments, if necessary with repeated occasions, with the responsible teachers/Year leads. The descriptors for pass/pass with distinction/accepted/borderline/fail are reviewed in teams and the lead of the Assessment unit participates in all these meetings. External examiners are invited to final assessments, to overview the fairness and standards of the process.

Other differences

One observation that was surprising was to which extent the clinicians attended the meetings at the Medical School despite their clinical duties, e.g. during the lunch time. Another observation was that several meetings were scheduled to start quite late in the afternoon, due to same reason, i.e. enabling the clinicians to attend the meetings. The working hours for the staff seem to be long.

7. Recommendations

My first recommendation is: if you ever have the possibility for a teacher exchange, do it! It is an incredible possibility for professional development and interaction with teachers from different context. My advice is to start early, try to find out which institution/university matches your areas of interest and/or is leading in that area. That is going to make your stay more meaningful. Secondly, try to get detailed information about the situation with housing, transportation and other important issues to make your

everyday life to function. The costs of living are important to consider. Check home and health insurances for you and your family members. Check what kind of medications you possible need during your stay. Several countries have limitations of what is allowed to be brought there and Singapore e.g. have a more limited selection of over-the-counter medicines. Finally, when you move, do it with some time margin, depending on your stay perhaps 1-2 weeks earlier. To adjust and find in your new environment is going to take same time.

8. Action plan: Topics to address and, if possible, introduce in Sweden

The goal of STINT: s program is to develop individuals and institutions. The knowledge and skills of future doctors and patient safety aspects have to mirror the forthcoming undergraduate education more clearly than it does today. An important aspect of that work is development of assessments so that they reflect the competencies that are required based on the national learning outcomes. Here I have listed what I would like to do, to develop in my practice, departmental practice and the practice of our medical program:

- Develop an assessment blueprint covering the different types of learning outcomes for the course I'm responsible for
- Develop an assessment blueprint for the "scientific" part of the medical program our department is responsible for so that an assessment system for these learning outcomes will be established
- Develop further the rubric templates for assessment of scientific competencies so that the rubrics are aligned with each other
- Start to collect data on formative assessments of the scientific thread enabling to discover the problematic areas for students and teachers
- To be an "ambassador" for electronic portfolio at KI and nationwide; it's difficult to make learning visible if the students cannot see their own development, areas of strengths and weaknesses and if the teachers do not know which areas have to be strengthen in the curriculum to facilitate students to attain the learning outcomes
- I have presented my experiences for the teacher team at our department and hope there will be possibility to present my results at other meetings at KI/outside KI
- I'm planning to go back to Duke-NUS Medical School for continued collaboration regarding the follow-up of e-portfolios

Acknowledgements

I would like to express my sincere gratitude to STINT for giving me this possibility to professional development. I would also like to thank Prof Ian Curran, Prof Kathrine Boursicot, Ass prof Claire Canning and Ass prof Limin Wijaya and the whole staff at the Unit of Assessment and Progression. I'm very grateful for all your help, for developing discussions and advice. It has been a pleasure to work with you!