



Promoting best assessment practice in medical education in Europe

Annual report 2019



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Introduction by the President

Welcome to the annual report of the European Board of Medical Assessors.

You will see that we have had a very good year. A very busy year. The report details our successful training events, a magnificent conference in Łódź, the Practicum script project, the Erasmus plus project and our assessment tools. I would particularly like to thank Annemarie Camp and her team for all the hard work they put in to keep this show running.

Of course we are in strange times and we have to cancel the physical conference planned for Glasgow this year. We are , however, working hard on a virtual alternative.

Watch this space! Stay safe.



Prof. Adrian Freeman

President EBMA

EBMA Governance

EBMA Executive committee

President

Prof. Adrian Freeman
University of Exeter Medical School

Treasurer

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University of Minho

Managing Director

Prof. Cees van de Vleuten
Maastricht University

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Annemarie Camp, MSc
Maastricht University

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Board member – Prof. Michal Nowakowski
Board member – Dr. Thomas Gale

The Council Audit and Governance

Chair

Prof. Pauline McAvoy
Independent consultant

Member

Prof. Debbie Jaarsma
University Medical Centre Groningen

The Council of Participants

1. Belgium: Ghent University
2. Finland: University of Helsinki
3. Georgia: David Tvildiani Medical University
4. Netherlands: University Medical Center Groningen
5. Netherlands: Maastricht University
6. Poland: Jagiellonian University
7. Poland: Medical University of Lodz
8. Portugal: University of Minho
9. Portugal: University of Algarve
10. Spain: Institutio Fundación Practicum
11. UK: University of Exeter
12. UK: Plymouth University
13. Zwitserland – University of Freiburg

Message from the Council of Audit & Governance

The Council of Audit and Governance is responsible for the supervision of the Board's management and of the general day to day running of the Foundation. It advises the Board on matters concerning governance and control and ensures that decisions taken, and resolutions made by the Board meet proper standards of probity and openness.

During the year 2019 and following work undertaken on the strategic direction of EBMA, the Council recommended changes to the Foundation's Rules and Regulations to enable the Board membership to be expanded. This included increasing the maximum general membership to six members from the previous two and widening the routes to membership to allow individual members to be eligible for Board positions.

The Council also worked with the Secretariat to develop a robust recruitment and selection process for Board membership which sought to address the EBMA Foundation's commitment to the principles of diversity and inclusion in the appointments to all of its bodies and committees.

Professor Pauline McAvoy

Chair of the Council of Audit and Governance



EBMA Membership

Institutional membership

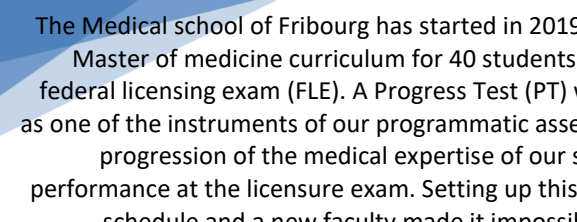
Our institutional members represent the Council of Participants of our EBMA foundation. In January 2019 we welcomed the University of Freiburg as an institutional member. Every year, during the annual EBMA conference the Council of Participant meets to review the current activities of our organisation and discuss with them their needs in assessment in medical education. This community including members from all over Europe provides a network with experts in assessment. This network helps each other to solve challenges in assessment, initiate new projects and research activities.

Individual membership

At the end 2019 EBMA had 13 individual members. All individual members were invited for the participants meeting, which took place during the annual EBMA conference in Łódź, Poland. A group of individual members started the Special Interest Group on Programmatic Assessment. All members have been invited to join this group.

Membership experience

Collaboration between the University of Fribourg with EBMA



The Medical school of Fribourg has started in 2019 to implement a new 3-year Master of medicine curriculum for 40 students granting access to the swiss federal licensing exam (FLE). A Progress Test (PT) was planned and introduced as one of the instruments of our programmatic assessment design to assess the progression of the medical expertise of our students and to predict their performance at the licensure exam. Setting up this new curriculum with a tight schedule and a new faculty made it impossible for the medical school to develop its own progress test. The collaboration with EBMA helped us start with an existing and proven PT giving us the leeway to focus more on the initial implementation of our new curriculum. The first online PT went not without technical and logistical difficulties, which eventually were resolved. For summer 2020 we will have our three first PT sessions delivered. We want to dedicate our efforts to fine-tuning the PT to fit our curriculum needs. We are confident to address this challenge over the coming years with the help and professional support of the EBMA team.

By Raphaël Bonvin, University of Fribourg

EBMA Participants meeting 2019

All EBMA members were invited to join the EBMA participants meeting during the EBMA Annual Conference in Łódź, on November 7th, 2019. The president of EBMA presented all ongoing projects and the results of the strategy meeting with the Board (see 9) to strengthen the organization and provide strategic directions for the future. Minutes of this meeting are available upon request.

More information on EBMA membership is provided on our website:

<https://www.ebma.eu/institutionalmembership/>

<https://www.ebma.eu/individualmembership/>

Review of activities and achievements in 2018-2019

EBMA Board Strategy Meeting

EBMA has been stabilized in recent years after its foundation has been legally chartered in 2017. An organization has been set up with a clear structure and transparent rules and regulations.

In June 2019, the Board has met face-to-face at Schiphol airport in the Netherlands to reflect strategically about EBMA's future and current activities. As a result of this meeting a strategy report has been developed to propose a strategic orientation for EBMA. The document starts with a vision where EBMA wishes to be in 2025, followed by a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis. Finally, a set of strategic recommendations are being made to take forward in the upcoming years.

During all EBMA board meetings special attention is given to the strategy outcomes, recommendations to proceed with, and discussing the priorities of these to implement the strategic directions for the future.

Special Interest Group Programmatic Assessment

Mission

The SIG EBMA Programmatic Assessment (SIG PA) aims to provide a platform for sharing ideas and best practices in programmatic assessment. Furthermore, by building a community we aim to promote international collaboration between researchers, policymakers and others involved in programmatic assessment.

Members

The SIG has around 30 SIG members from all over the world, and still counting! The coordinators of the SIG are Harold Bok, Luke Dawson, Lubberta de Jong, Lambert Schuwirth, Cees van der Vleuten and Tim Wilkinson.

Planned activities

Currently there is an online platform where members can discuss and share their knowledge. Also, the SIG PA organized a pre-conference workshop at the EBMA conference in Łódź in 2019.

In 2020 some exciting activities will be planned, e.g. webinar, offline meeting at the next EBMA conference, regular updates of the online discussions.

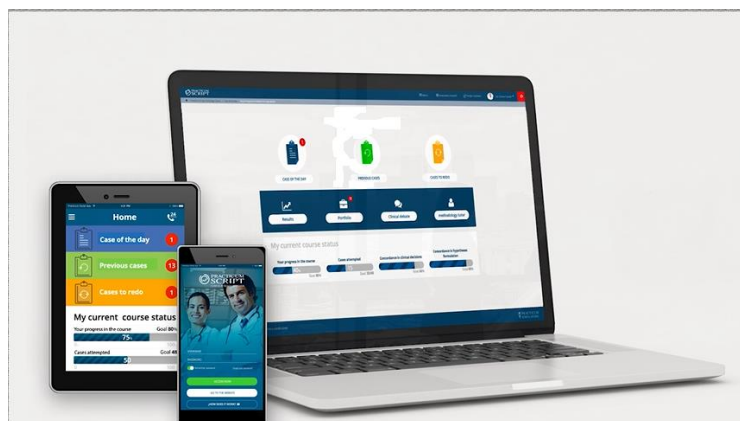
If you are interested in joining the SIG, first become a member and second please contact Lubberta de Jong (l.h.dejong@uu.nl) or EBMA@info.eu.

Project Practicum Script Clinical Reasoning

The Practicum Script Clinical Reasoning Simulator project for medical students started in 2018. The experiment, coordinated by the European Board of Medical Assessors, is a multicentre pilot study which aims to investigate the effectiveness of Practicum Script as a standardized educational resource integrated into the medical school curriculum to enhance clinical reasoning and problem-solving skills among senior medical students. In short, Practicum Script (<http://www.practicumscript.education>) is an online simulation-based program aimed at introducing the concept of uncertainty in decision making. The platform will be tested in more than 15 European medical schools (including ICL, Oxford, Sapienza [Rome], and Charité [Berlin]). Top medical schools in other countries, including Harvard (USA) and the University of São Paulo (Brazil), will also implement the tool.

With the editorial stage already finalized by a board at ICL, a panel of referees comprised by internists will review the cases, and the next move will be the compilation of their answers as part of the feedback for the participants. Practicum Script presents challenges in dilemmatic contexts. For each clinical scenario, final year medical students will be asked to generate hypotheses and justify them by identifying pertinent positive and negative findings in the case. Subsequently, they will be required to report, in five different clinical scenarios, how new data may affect their original hypotheses. The students will be able to observe the agreement between their responses and those of the experts, along with literature-based clinical evidence. This tool allows users to self-assess clinical reasoning in real-life situations, boosting confidence in decision making.

The project is ongoing, and the plan is to obtain psychometric results by the end of 2020. There is a strong need for effective approaches tailored to the development of clinical reasoning skills, and Practicum Script could contribute meaningfully to this goal. Practicum Script has been applied as a CPD/CME tool and in residency training for more than 10 years. Also, a recent research published in Medical Education concluded that “even when their beliefs remain unchanged, by knowing about controversies, the examinees may calibrate their certainty and apply more diverse thinking going forward”. The investigation, conducted by a group of researchers from the Practicum Foundation and the University of Illinois at Chicago, revealed the usefulness of this pedagogic model in medical education. In future medical education conference, the outcomes of this project will be presented.



EBMA Annual Conference 2019

'An inspiring and eco-friendly conference'



On November 7-9, 2019, the annual EBMA conference took place at the University's Didactic Center in Łódź, Poland, in collaboration with the Association of Medical Schools in Europe. The conference was attended by 140 rectors, deans and medical educators from 28 countries around the world, including as far away as Brazil, Iran, Thailand and Kazakhstan. The conference was prepared with particular emphasis on minimizing the conference's negative impact on the natural environment.

During the conference there were 38 sessions dedicated to diverse subjects on assessment, i.e. the creation of modern curricula, programmatic assessment and interprofessional education. Professor Stephanie Marshall presented a keynote speech in leadership in education, and Professor Martin Fischer talked about the assessment of clinical reasoning. The conference ended with a lecture by Dr Janusz Janczukowicz "Where did we come from? Who we are? Where are we going?," summarizing the current situation of medical education in the world and presenting the directions of its further development associated with global challenges. This could best be summarized in the concept of 'One Health' – 'human, animal and ecosystem health'. The lecture was prepared and presented in accordance with current trends in using visual art to teach self-reflection. During both days attendees presented their current work and developments in assessment in medical education about diverse topics, which was very inspiring and gave all of them new insights.

A special role in the conference was played by a group of Polish and English-speaking students of the university and students invited from other centers who formed the Student Task Force (STF). Thanks to their hard work and commitment it helped EBMA in the organization of this event.

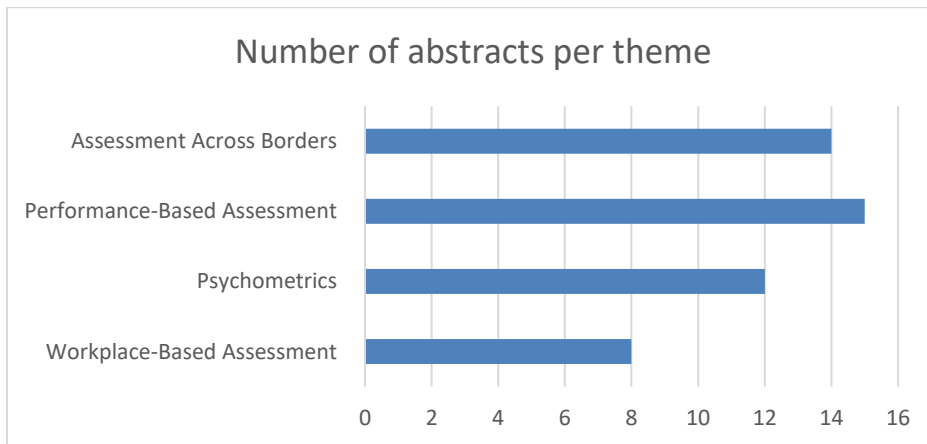


The conference was prepared with particular emphasis on minimizing the conference's negative impact on the natural environment. Ecological reusable cups for drinks were provided and prints for programme books were limited and replaced by electronic documents, and conference participants were more than satisfied with 100% vegan catering, which at the same time ensured all the dietary needs of the participants. The meeting was honored by the performance of the Choir of the Medical University of Łódź, and the meeting ended with planting of three trees to reduce the carbon footprint of the conference. EBMA wishes to continue with this sustainable approach in the near future.

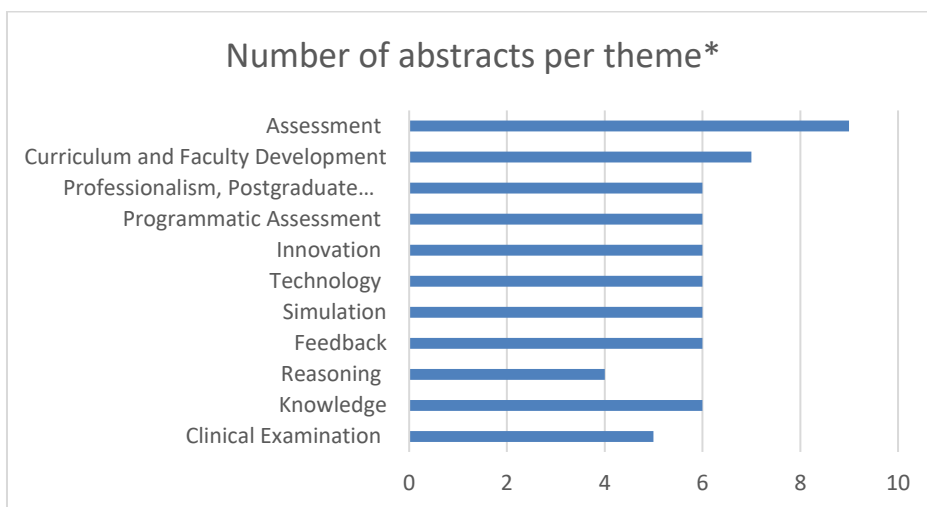
Some numbers 2018 & 2019

	2018	2019
Participants	144	140
Exhibitors	8	7
Pre-conference workshops	4	3
Conference workshops	10	8
Posters	18	16
Oral presentations	31	51
Plenary sessions (including symposia)	4	4

2018: Braga, Portugal



2019: Łódź, Poland

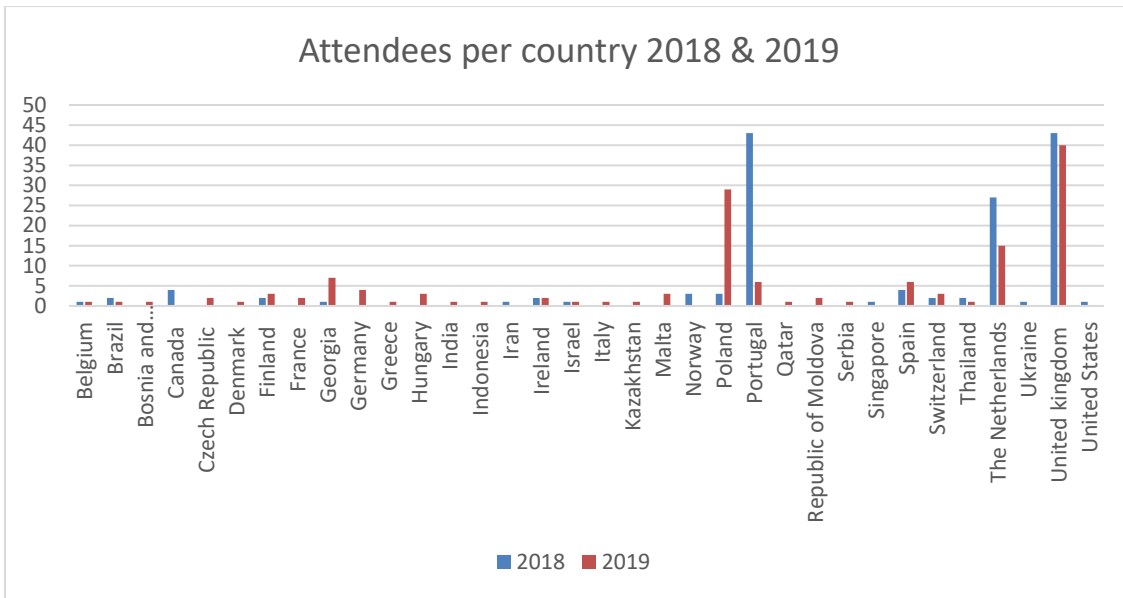


*Only poster and oral presentations, no workshops included.

Attendees 2018 & 2019

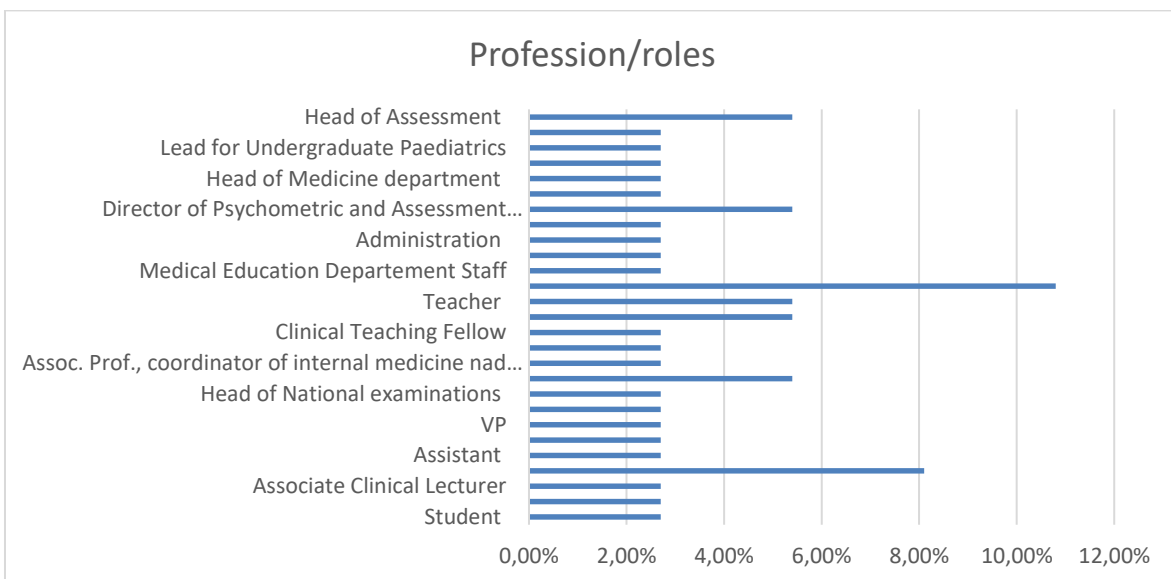
In 2018, 144 participants attended the conference. They came from all over the world, but the leading countries were Portugal, The Netherlands & The United Kingdom

In 2019, 140 participants attended the conference. The leading countries in 2019 were Poland, The Netherlands & The United Kingdom.



Professions or roles: 2019

Participants have different, and sometimes multiple, roles. The following indicates the roles identified by EBMA 2019. Please note that not all the professions/roles of the attendees are included, because not every participant completed the evaluation survey afterwards.



Expressions from participants

These are the key messages from the participants in **2019** as a result of the evaluation survey.

“Appreciation for the “go green” strategy; reducing environmental footprint”

“Small-scaled, oriented conference with much networking opportunities!”

“Excellent keynote speakers”

Poster prize winner 2019

Mrs. Zoe Makin

United Kingdom

Title: *Standard setting the PLAB 1 exam: using historical or diet specific Angoff scores*

Future EBMA Annual Conferences

2020 and 2021

The EBMA Annual Conference 2020 will be held in Glasgow, UK on September 5 - 6, prior to the AMEE conference in the same venue. This year’s theme will be ‘Past, Present and Future of Assessment in Medical Education. <https://www.ebma.eu/conference2020/>



We are discussing the possibility of hosting the EBMA Annual Conference 2021 in Madrid, Spain during autumn time in 2021.

EBMA Training Psychometrics applied to healthcare professions education

March 11- 15, 2019, Maastricht, NL

The second edition of the psychometrics course organized by EBMA took place in Maastricht, the Netherlands. Approximately twenty participants from nine countries participated in several lectures and practical workshop sessions involving themes such as evidence-based assessment principles, validity and reliability, classical test theory, generalizability theory, item response theory, factor analysis, network analysis, structural equation modeling and computerized adaptive testing.

On the last day of the course, several participants presented interesting applications of the recently learned methods to the specific needs found in their own settings. Remarkable examples of high-quality work of the participants were the optimization of the cost-effectiveness of OSCEs; validity and reliability studies of questionnaires and knowledge tests; and last but not least, the use of natural language processing techniques for the analysis of narrative feedback and self-reflections in portfolios. The participants gave the course a very positive evaluation.

This training will be repeated every year and dates are published on the EBMA website.



EBMA Assessment Products

EBMA European Knowledge Test

During the 2018-2019 academic year, the EKT was administered to two institutions: the University of Ghent and the University of Helsinki, reaching a total of 331 final-year medical students. The collaborative effort of EBMA members and collaborators from a myriad of European medical schools in terms of writing and reviewing items for the EKT continued to reflect positively on the psychometric results.

The reliability of the EKT full test scores was 0,888, as estimated by the Cronbach's alpha coefficient. Standard errors of measurement were below 0,16 logits according to the Rasch model analysis. Fit measures suggest a high level of validity based on the internal structure of the test, with mean infit and outfit mean squared measures of 0,87 and 0,86, respectively. None of the items had either infit or outfit measures above 1,2. Compliance to the assumptions of the Rasch model seems to have been sufficiently met once again in this academic year. The results of the principal component analysis of the Rasch model residuals (PCAR) also suggest that the EKT remained an essentially unidimensional test during its existence, as none of the residual components could explain more than 5% of the variance and the disattenuated correlation coefficients resulting of the components found on the PCAR were in almost all cases above 0,7. Regularized analysis of such residual correlations also suggests that a low level of local dependence was maintained during the history of the EKT.

Despite a long history of successful applications and excellent psychometric results, the adherence of European medical schools to the EKT has been much lower than expected. This situation in which the number of participating schools declined to only two, and whose applications were very asynchronous (one in July and the other in December), caused an inconvenient delay for both schools, which, in their turn, needed to generate benchmarking reports more swiftly.

In the meantime, the IPT has gained track worldwide, with the addition of new schools every year. At the same time, there is pressure from IPT local partners to increase the number of items available to the IPT. Given that fact, during the EBMA Strategic Meeting of June 2019, a diagnosis was established that the EKT was not able to provide a representative tool for benchmarking, neither had sufficient alignment with the EBMA philosophy of assessment for learning. In the same meeting, the merger of IPT and EKT item banks became a possible operational decision, in which current EKT users could offer an application of the IPT for their final year students. That possibility, which could allow a more representative database for benchmarking and formative assessment purposes, as well as increase the quality of the IPT, was scheduled to be discussed and eventually ratified by the Board in the meeting that took place in the Annual Conference at Łódź, Poland, in November 2019.

EBMA International Progress Testing

The EBMA International Progress Test continues to draw the attention of more and more medical schools worldwide. In the period covered by this report (2018/2019), EBMA had the honor and the privilege of adding the University of Algarve (Portugal) and the University of Friburg (Switzerland) to the group of medical schools that have the opportunity to offer a computerized adaptive progress test to their medical students, which includes Monterrey Tec (Mexico), the University of Helsinki (Finland) and David Tvildianu Medical University (Georgia).

EBMA board members also continue to provide oversight to the computerized adaptive version developed by Maastricht University (the Netherlands), which is applied to the students of their international medical track and to the medical students of the Al Rajhi College of Medicine (Saudi Arabia).

Overall reliability levels based on total score variances across all academic years has been kept above 0,8 for all students in all academic years from all the aforementioned schools so far. Standard errors of measurement have been consistently lower than 0,2 logits in all computerized adaptive progress tests. However, during the last years, the total score variances have exhibited a tendency of reduction. Some item difficulty parameters drifted downwards but some parameters drifted upwards, meaning that oscillations in item difficulties occurred but apparently in a random, not systemic manner, as one could suspect to be due to overexposure if all items drifted towards lower difficulty parameters. Surveillance on some of the item difficulty parameters could not be performed due to underexposure and/or lack of variance.

As mentioned above, during the EBMA Strategic Meeting 2019, a plea was done to increase the number of items of the IPT item bank. The merger of the IPT item bank with the one from the EKT was agreed by the Board. Concurrent calibration of IPT and EKT items using anchor persons shall be completed during the first semester of academic year 2020-2021.

Erasmus + project Online International Adaptive Progress Testing (OIAPT)



Eight institutional members of EBMA are participating in the Erasmus + project OIAPT. The project aims to develop an online adaptive international progress test. This consortium consists of the University of Maastricht, University Medical Centre Groningen (the Netherlands), Universidade de Minho (Braga, Portugal), University of Exeter, University of Plymouth, Medical University Łódź (Poland), Jagiellonian University (Krakow, Poland) and University of Helsinki.

In September 2019, the second year of this project started. The focus in the first year was on establishing an item bank with all international test items. Guidelines on item writing and reviewing has been developed and all teachers were extensively trained at each institution to create and review high-quality items. The project group implemented software to support item creation and reviewing, and for the administration of the online test with students. Developing and reviewing items is currently still on going. The first pilot has yet been administrated in all partner institutions. Three additional pilots will follow during the project duration. After each pilot the partner institutions will evaluate with their students the value of this test and if the results are what they expected and whether they are meaningful for their learning process.

The interim report submitted to the European Union has been accepted, therefore the progress so far is sufficient, and the project has an impact already in all partner institutions. With the support of this project, the teachers are more aware of the benefits of this testing method and the usage in an international context. Moreover, their skills in item writing and reviewing has been improved. Although, item writing was highly demanding for each partner institution it was impossible to develop such a high amount of items (currently around 1300) without this grant. During upcoming conferences, we hope to present our lessons learned.

Until the end of the project, the team will dedicate time to the sustainability aspect of this project. By developing proper guidelines for new partners and a business- and sustainability plan, we hope that more institutions will have an interest to become part of the consortium. During a one-day multiplier event in 2021 the project team will present all results and plans for the future.



September 2019: 2nd transnational project meeting in Braga, Portugal.



**Promoting best assessment practice
in medical education in Europe**

EBMA

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