

INTERNATIONAL SOCIETY FOR PROSTHETICS AND ORTHOTICS

...moving beyond physical disability











25-27 June 2014 Kobe, Japan

Final Report





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INTRODUCTION, BACKGROUND & OBJECTIVES

MISSION







The ISPO Global Educators Meeting (GEM) 2014 aims at gathering P&O educators and administrators, NGOs involved in education, accrediting bodies and interested industry representatives from all over the world to discuss, coordinate, initiate and share P&O education-related activities. In particular, the GEM assumes as its main objective the improvement of communication and collaboration between P&O schools across the globe.

This year's programme was built for you, P&O Educators, to better understand the current status of P&O education around the world, to connect with each other and share experiences about the situation of P&O education in your own country.





The International Society for Prosthetics and Orthotics (ISPO) aims to improve the quality of life for persons who may benefit from prosthetic, orthotic, mobility and assistive devices by:

- Ensuring quality care and education of professionals for the benefit of patients around the world;
- Promoting research and evidence-based practice;
- Facilitating innovative and appropriate technology development;
- Promoting international collaboration and consensus building:
- Fostering exchange, high-quality knowledge and networking.

ISPO's Vision

ISPO contributes to a world where all persons have equal opportunity for full participation in society.

For over 40 years, ISPO has, primarily through its Member Societies, provided an effective platform for the exchange and communication on all aspects of the science, practice and education associated with the provision of O&P care, rehabilitation engineering and related areas. The Society gathers about 3,300 members in over 100 countries.

EXECUTIVE SUMMARY



Bryan Malas, Chairman of the GEM Working Group

In June 2014, 130 individuals representing 40 countries converged on the beautiful port city of Kobe, Japan for the first ever Global Educators Meeting (GEM) for the field of Prosthetics and Orthotics. These participants, directly or indirectly involved in the P&O profession, included P&O educators / administrators, and representatives from the World Health Organization (WHO), non-government organizations, accrediting bodies and industry partners. The intent of this meeting was to bring P&O educators together to discuss educational matters and create an environment to cultivate new relationships and build on existing ones.

The GEM included a wide range of material that began with an update from the WHO on the current state of P&O service delivery on the glob-

al stage and the impact on education. Subsequent material narrowed to focus on the WHO/ISPO Standards and Guidelines and concluded with a succession of talks related to direct P&O training. Speakers presented on topics ranging from the implementation of innovative educational methodologies to the challenges of delivering content across a broad range of economic, educational and contextual frameworks. Each day's program concluded with breakout sessions which provided a forum for more detailed group discussion and engagement on a range of key educational issues facing the global P&O community.

The breakout discussions and the preceding lecture content were narrowed each day to form several salient points or take-home messages. On the final day of the GEM, these points were reviewed, refined and became the basis for the final conference recommendations (see recommendations section of this report). These recommendations will serve as a road map for P&O training programs, revision of the current P&O education and training standards/guidelines, and future education meetings to ISPO.

Based on the conference recommendations and positive participant feedback, the first ever GEM appears to have been a success. In the final analysis, however, the success of the GEM will only be apparent by the extent to which these recommendations come to fruition. What is certain is that P&O educators from across the world came together in an historic meeting to discuss matters that are important to them, their students and the profession at large.

Finally, this report would not be complete without pausing to remember and reflect upon the life of Mitsu Uchida. His tragic and untimely passing leaves a void in our profession that can never truly be filled. Much of the success of the GEM can be attributed to Mitsu and his efforts to secure funding and hospitality preparation. It is for this and many other reasons that the Global Educators Meeting has been dedicated to the memory of Mitsu Uchida. His amazing contributions to the field can more fully be appreciated by taking a moment to review the tribute page that can be found later in this report. We as educators keep his memory alive not by slowing down or faltering, but by pressing forward in a spirit of collaboration, united under the banner of a single purpose and common goal and that is to train the P&O professionals of tomorrow.

Bryan Malas, Chairman of the GEM Working Group

STATEMENT FROM THE WHO

To the ISPO GEM Final Report Readers, To all P&O Professionals,

I am honoured to be here. Thank you for giving me this opportunity to meet the key leaders of the prosthetics and orthotics profession during the ISPO Global Educators Meeting (GEM) last June – I leave at this point a kind note for the warm welcome provided by the ISPO and local organizers in particular.

I accepted the ISPO GEM Working Group's invitation as I realized this could be a unique opportunity to address an exclusive audience of P&O professionals, allowing me to try and amalgamate discussions around the current status and future perspectives towards P&O Standards & Guidelines.

This past century has seen fast and important changes take place in the world setting we learned and now work on. Communicable diseases are weakening in everyone's agendas, compared to the concern non-communicable are raising. Ageing has turned into a challenge for our sector, wherein the current status of P&O service provision cannot sustain the demand that will result from this significant demographic shift. The global population aged 60 years and above is rising and is expected to reach more than 2 billion by 2050 - majority of this population will need prosthetics and orthotics services.

Together with other elements, the target group with which we have been dealing until recently, and based on which our practices have been established, is diversifying dramatically. Our future direction and the way we do our business needs to take this into consideration to remain relevant.

Today, only 5–15% (approximately 1 in 10 persons) of the population in need has access to prosthetic and orthotic devices. We need to do something drastically different to ensure that we can reach the remaining 90% of population. Where available products are often either of poor quality or very expensive.

In order to improve access to quality prosthetics and orthotics devices at an affordable cost, WHO is developing new evidence-based Prosthetics and Orthotics Guidelines, to establish, expand and improve the quality of P&O services.

The primary audience of the Prosthetics & Orthotics Guidelines will be the personnel responsible for rehabilitation services or tertiary care. Secondary audience will be the policy-makers and leaders of health and social care providers, including representatives from the relevant government ministries, administrators. It will take a broad whole-of-government approach, acknowledging and articulating the importance of and linkages with other Ministries such as Social Welfare that may provide prosthetics and orthotics services. The proposed Prosthetics and Orthotics Guidelines will also be relevant to non-government actors; including faith-based organisations, not-forprofit organizations and the private sectors that often play important roles in the provision of prosthetics and orthotics services.

Key objectives of the Guidelines are to:

- define what we are common terminologies
- determine optimal models of P&O services different levels/scenarios
- develop more appropriate human resources (prosthetists and/or orthotists)
- determine different levels and methodologies of P&O training
- improve access to prostheses and/or orthosis for people with disabilities, elderly and others in need
- provide evidence on the cost effectiveness

WHO cannot develop the Prosthetics and Orthotics Guidelines alone. WHO needs expert's opinion and contribution to develop the new guidelines. If you are available and willing to contribute, do contact us - we will be delighted to work with you.

These Guidelines will be a different from all previous efforts – they will have a "One-World Approach." One Prosthetics and Orthotics Guideline covering all aspects of prosthetics and orthotics provision and that too for the whole world. World Health Organization

Thank you for your attention

Chapal Khasnabis

khasnabisc@who.int who.int/phi/implementation/assistive_technology/en/

RECOMMENDATIONS

Overall Recommendations

The integration of theoretical and applied teaching methodologies is required to provide appropriate P&O training. Consequently, the incorporation and development of appropriate skills in the training of educators to provide 'best-practice' training methodologies and frameworks should be undertaken.

P&O educators should have an adequate level of education and experience in the specific teaching and learning context. Strategies such as Continuing Professional Development (CPD), the development and adherence to national training standards and the completion of formal educational training should be undertaken as appropriate.

A scoping of the requirement for ISPO educational resources and the establishment of an 'ISPO educator' certification program could be explored.

Student learning and assessment tasks should be appropriately targeted to address the key learning skills required for P&O practice.

The Global Educators Meeting proved to be a valuable endeavour and as the recommendations reveal provide an important road map for the future of International P&O Education. The recommendations are as follows.

GEM Recommendations

Collaboration

Increased collaboration is needed between P&O educators and should extend to include other healthcare disciplines, national membership organizations, and external organizations. Development of a regional cohort network of educators and e-Platform would allow for more robust knowledge and information exchange as well as a repository for educational material.

Standards/Guidelines

Revise and update the current training standards and guidelines for the P&O profession. Included in this revision is the need for a clear distinction between Category I, II, and III.

ISPO Category Recognition Process

In conjunction with the recommendation to revise the P&O training standards and guidelines is the recommendation to update the ISPO Category Recognition Process so there is consistency between the training standards and guidelines and the process used to evaluate P&O training programs. In addition, it is recommended that a formal process be developed for the Category III level of training.

Future Global Educators Meetings

The recommendation is to make the Global Educators Meeting a standing meeting that is held every four years. The purpose of the meeting is to act as a forum to facilitate communication and collaboration amongst schools with the intent of improving global P&O education.

P&O Education and Government/Ministries of Health

P&O education needs to develop strategies to bring awareness of P&O training and P&O services to government entities such as Ministries of Health and Ministries of Education.

RECOMMENDATIONS

(continuation)

P&O Education and ISPO Member Societies

P&O Education has a limited role with ISPO Member Society's, but the role that it does have is to encourage membership both at the student and professional level. Additionally there may be a role for P&O training programs to assist or be the host site for ISPO short courses.

Next Steps/Action Plan

Summary feedback from the Post-meeting Survey (page 16 of the present report) indicated that the Kobe GEM met the expectations of the participants and addressed current issues and concerns of their organisation.

Overwhelmingly, participants appreciated the initiative taken by ISPO and the Working Group to organize the GEM. Given the positive outcome the GEM Working Group is of the opinion that this initiative should be extended.

With regards to the workload required to organise this event it is suggested that GEMs should be organized in intervals of four years. Furthermore, it is recommended that the GEM should not be scheduled to coincide with ISPO World Congress.

Intermediate ISPO educational meetings dealing with specific topics and themes could be organized to address specific educational training and needs in a similar way to the ISPO instructional course program.

In the short-term, a number of options have been proposed to maintain the momentum from the GEM and to provide an ongoing forum to develop collaborative approaches to P&O education. These suggestions include the following:

- Meeting with evaluators during the ISPO World Congress in June 2015 in Lyon (France)
- Holding an intermediate 'mini' GEM in 2016, during the FATO Congress

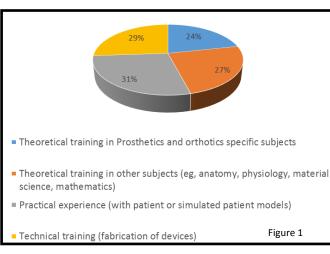


Member of the Kobe College Host Team, prepared to receive GEM participants for the second day of activities

PRE-MEETING SURVEY RESULTS

Prior to the GEM, participating schools were requested to complete a questionnaire. This questionnaire aimed to provide an overview of the structure and composition of the prosthetic and orthotic programmes participating in the meeting. Thirty-nine schools responded to the survey.

Five schools indicated that they offered a certificate programme in prosthetics and orthotics, 16 offered a Diploma-level programme, 24 offered Bachelor level programmes and 6 indicated that they offered Masters-level education. The majority of schools offered education in both prosthetics and orthotics however a small number offered education in a single discipline (prosthetics or orthotics).

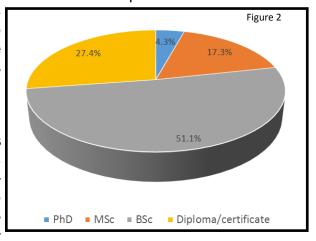


The average number of students accepted into undergraduate educational programmes each year was 26 (standard deviation, SD =23). An average intake of 9 (SD=13) students was indicated for masters level programmes. The gender distribution of male to female students was 50% male and 50% female when averages across all schools. The average length of study for a clinical prosthetist/orthotist was 3.3 years (SD=1.0) while the average number of weeks of study per year was 38 (SD=10).

The relative weighting of subjects within prosthetic and orthotic programmes is presented in figure 1. Practical experience and technical training tended to receive the greatest amount of attention. 68% of programmes indicated that students were required to complete a period of practical experience within a prosthetic and orthotic facility prior to graduation. 52% of respondents indicated that students were required to complete a period on internship under the supervision of an experienced clinician after

graduation. 40% indicated that students were required to sit a national certification exam before being able to practice independently. Seventy-one percent of programmes required that their students complete a research report or thesis as part of the curriculum.

The average number of full-time staff members with qualifications in prosthetics and orthotics was 7.5 (SD=5.2) while the average number of part-time staff with P&O qualifications was 3.8 (SD=3.5). A breakdown of staff qualifications is presented as figure 2. An average of sixty-five percent of staff members were male.



BREAKOUT SESSIONS: OUTCOMES

A number of breakout sessions were held throughout the meeting to provide a forum for individual interaction and discussion related to a range of key areas related to Prosthetic and Orthotic education. These key areas were identified by the working group as a basis for discussion and to establish a broad range of perspectives on current and future P&O education.

A summary of the key findings and recommendations from the breakout sessions are outlined below.

Breakout session 1

Curriculum approaches to achieve relevant competencies

A strong recognition of the importance of the integration of theoretical and applied teaching methodologies is required to provide appropriate P&O training. This integration is recommended at both the level of the learner (student) and the educator (teacher) and should encourage the engagement with real-world situations and clients where possible.

The incorporation and development of appropriate skills development in the training of educa-

tors to provide 'best-practice' training methodologies and frameworks should be undertaken. This aspect was highlighted through the discussion of the need for developed educational resources and methods to support student learning.

The recommendation that educators should have an adequate level of education and experience in the specific teaching and learning context. Strategies such as continuing professional development, national training standards and educational training should be undertaken as appropriate.



Participants during breakout sessions on second day of the GEM

A scoping of the requirement for ISPO educational methodologies and 'ISPO educator' certification program could be explored.

Breakout session 2 & 3

Student assessment, learning and instructional methods

Student learning and assessment tasks should be appropriately targeted to address the key learning skill required. Educators should be familiar with the process of identifying learning requirements and selecting the assessment task which addresses the skill. This will be manifested in the use and implementation of a range of different assessment techniques.

During this session several learning methods were described and highlighted for their relevance and application to P&O training. Included in these sessions was Problem-Based

BREAKOUT SESSIONS: OUTCOMES

(continuation)

Learning (PBL) and Service learning (SL). PBL and SL, reflect methods of learning that focus on application. While the former focuses on real case scenario discussions in the classroom the latter takes learning and application to the field where students interact with P&O professionals and see real patients.

PBL, a case method activity, is discussion-based and driven by case problems that are drawn from real life situations. The Case Model used at the Harvard Business School is a good example of learning that is based on PBL and real life cases. This type of learning model avoids cases with a list of informational facts and focuses more on contextual learning. Students are given a case narrative that includes a particular dilemma that must be solved. Paramount to this training is the concept of 'perspective' and who it is that we are trying to teach. Specific to P&O, we want our learners to 'think' like prosthetists and

Participants during the morning session of second day of the GEM



orthotists and therefore the cases must be developed and written from a perspective of a prosthetist/orthotist. This perspective pushes the effects of clinical decision-making in the proper context of P&O service provision. When properly sequenced in the curriculum, the PBL model can be a powerful learning tool and should be an integral part of P&O training.

The Service Learning model is a community-based activity that is under the direction of the P&O training school. This model, most notably practiced in China, occurs under the supervision

of the faculty and or P&O professionals, but outside the walls of the school. In this environment students have the opportunity to not only apply what they have learned in school, but participate in substantial community services that has the possibility of benefiting P&O services for years to come. The effort to coordinate these community activities by the faculty is fairly intensive, but appears to be worth the effort. If the SL is coordinated and structured correctly, the benefits of this model can be multi-faceted for the students. Opportunities to develop critical-thinking, communication and interpersonal skills, teamwork, leadership, cultural appreciation, bi-literacy, and social responsibilities are not unreasonable outcomes to expect in a well thought out and developed SL model. P&O training programs interested in this type of learning model would be well-served to solicit the input of P&O training programs that are seasoned with the utilization of this model.

Breakout session 4

Enhancing collaboration between P&O schools

Engagement and collaboration between schools at domestic and international levels was recognised as a constructive and positive process. It was stressed that cooperation between schools should not be limited to only ISPO recognized schools, but all P&O training programs. Further still, collaboration should be done on a broader basis and include other professions, society's and external organizations. Ongoing development of pathways and programs to encourage and communicate collaboration between schools was recommended.

Detailed documentation of the breakout sessions is available as an annex to this report.

The final session of the GEM was a culmination of thoughts, ideas and directive for the future of International P&O education. The session, and specifically the content, can best be described as a series of target discussions that ultimately lead to a spirit of agreement on the areas listed below. Discussion surrounded the following content areas:

- Collaboration
- Standards/Guidelines
- ISPO Category Recognition Process
- Future Global Educator Meetings
- P&O Education and Government/Ministries of Health
- P&O Education and ISPO National Membership Societies



Participants during break of first day of activities.

Collaboration

With little surprise, collaboration between P&O programs took center stage and offered some insight into what educators view as a crucial element to successful and sustainable P&O training. Participants voiced a greater need for collaboration not only among P&O educators, but educators from other disciplines, national membership societies and external organizations. Equally important is the collaboration with new schools and the new ideas or 'fresh eyes' that they bring to the table.

The most obvious type of collaboration, as discussed between the educators, was information and resource exchange. This included, but was not limited to curriculum, text-books, educational research and the sharing and comparison of different learning models. Participants collectively agreed that they were willing to share these resources, but found the delivery and receiving methods of these resources to be the bigger challenge. It was therefore recognized that traditional collaboration models are quite expensive and opportunities should be made to use new and less expensive technologies that can either improve or develop new collaboration methodologies.

An attractive solution that was supported by many participants was the development of a P&O educators' SharePoint or its equivalent. A preliminary framework for an educator's SharePoint could include the following:

- Database of all educators/stakeholders
- Hyperlinks to P&O training program websites
- Repository of educational materials
- School/educator profile describing the school or persons area of expertise
- Toolbox with educational resources
- Platform to post questions

Another solution that was suggested was the creation of a cohort of regional P&O educators (or network) that can meet periodically to share resources and discuss matters related to P&O education. The Alliance of Prosthetic and Orthotic Schools (APOS) is an example of this type of model and one that has been successful since its inception in 2003. Included in this model is an APOS website that is used as a platform for information ex-

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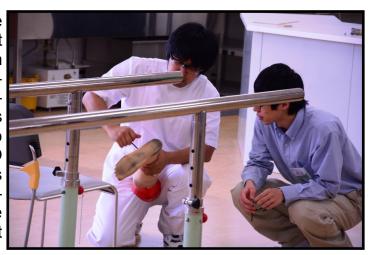
change and an example of a model that could be appropriate on a broader scale as it relates to the educators SharePoint. As a result of this particular discussion the Central and South American participants indicated a desire to move forward and create a similar consortium of P&O training programs in the Latin America regions.

It was agreed that collaboration among P&O educators is paramount to advancing the educational training programs, strengthening faculty, and creating a better student product.

Standards/Guidelines

A great deal of discussion had already occurred during the first two days of the GEM regarding the Standards/Guidelines and much of that discussion and the recommendations can be located in other portions of this report. The discussion that did arise in the final session related to the importance and significance of the standards and guidelines and the need to update the documents as soon as possible. The significance of international standards was highlighted by several participants outside of the O&P field, but heavily involved in academic medicine.

As part of their commentary regarding the GEM they reminded the participants that international standards for any profession is extraordinary and should not be overlooked. If the development and implementation of the Standards/Guidelines is done correctly for P&O there are likely to be many professions that will look to P&O as the model to replicate. Participates were reminded that this is a unique opportunity to strengthen and bring positive attention to the profession and should not be lost on any of the participants.



Students from the Kobe College of Medical Welfare.

ISPO Recognition Process

A number of topics were discussed as it relates to the ISPO Category Recognition Process. Initial comments included the need for more volunteers. ISPO, and in particular the ISPO Education Committee, requires more volunteers in order to successfully meet the needs of the schools and to foster continued P&O educational growth. Recommendations from the participants included:

- Increased guidance from the Education Committee as it relates to the Category Recognition Process
- Develop a profile for program evaluators and ISPO examiners
- Greater latitude for regional regulations as it relates to the recognition process
- Increasing or expanding the value of the site visit by opening options for site visitors to present or assist with curriculum development at the conclusion of the official site visit

Participants were informed that the Education Committee has a number of initiatives in place in order to streamline the overall recognition process.

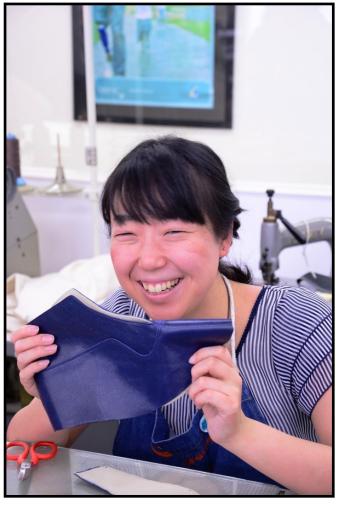
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Future Global Educators Meeting

There was collective agreement during the final session and later confirmed by the feedback received from the post GEM questionnaire that the meeting was worthwhile and should be ongoing.

Once participants agreed that a future GEM would be appropriate, attention turned to future content, participants, delivery method and format. In that framework there was discussion and agreement that the next meeting could either be focused on selected topics or include break-out sessions or workshops that could specifically address the needs of the different participants or create educational resources. This could include:

- Teaching/training seminar for junior faculty
- Securing resources: financial or otherwise (for program directors, senior faculty)
 - ⇒ Advocacy outreach
 - ⇒ Proposal writing
- ISPO evaluator/examiner training
- Standardize terminology by developing a glossary of terms
- Subgroup workshops (i.e. Category I, II, III)



Student from the Kobe College of Medical Welfare.

GEM participants also saw the benefit of making the GEM an interdisciplinary forum to get a fresh or different perspective on many of the issues facing P&O education today. Finally there was discussion and the recommendation to consider making the GEM a live streaming event for those educators unable to attend the meeting.

P&O Education and Government/Ministries of Health

Participants quickly acknowledged and agreed that governments and in many cases, Ministries of Health or Education are arguably the most influential entities when it comes to the sustainability of a training program and the formal recognition of P&O as a legitimate healthcare profession. The topic of sustainability focused primarily on the funding avenues for P&O training programs.

After funding, discussion centered on bringing a greater awareness to government institutions as it relates to P&O education and services. Some examples included using the GEM as a forum for government officials to attend and as an opportunity to educate these dignitaries. All agreed that greater discussion is needed on how best to move forward to secure funding and increase awareness.

(continuation)

P&O Education & ISPO Member Societies

An important discussion that gained much traction and was echoed by many GEM participants was the role of P&O Education with the ISPO Member Societies (MSs). There was a collective agreement that educators should take some role in MSs. At a fundamental level this included encouraging existing MS members to become more involved or non-members to join the local MS.

This thinking was consistent at the student level as well where participants recognized the benefits of getting students involved early in their professional career. Strategies on how best to move forward were limited, but did include the idea of student sponsorship to remove any financial burden that prevent students from joining ISPO. Another level of involvement with ISPO and MS' was with the ISPO short courses. Involvement included assistance with the course or functioning as a host site. One of the key points raised and one that has the possibility of impacting not only the sustainability of ISPO, but its growth is the regional presence of a P&O training program as a catalyst for the formation of a new MS.

Participants acknowledged that some successful examples exist, but that further discussion would be needed and that success in this context is very much regionally based.



POST-MEETING SURVEY RESULTS

Immediately following the GEM, participants were requested to complete a short evaluation questionnaire. This questionnaire aimed to gather participants' opinions regarding the meeting and to generate recommendations for future meetings.

A total of 59 participants answered the post meeting questionnaire. When asked if the GEM met their expectations, 96% indicated that it did. 93% of respondents felt that topics approached at the GEM related to present issues and concerns at their organisation. Many varied suggestions were given by participants as potential additions to the program. Specific curriculum content and more focus on teaching methods were the topics that were most frequently suggested.

The presentations were very well received with many positive comments directed in particular toward the key note speaker Dr. DaRosa. A number of participants indicated that they found it difficult to understand some of the speakers due to language barriers. Others felt that speakers from P&O educational programs tended to take too much time discussing their own institution and not focusing the topic that they were requested to address. Break-out sessions were considered to be useful, however participants felt that they would have benefited from having a chairperson allocated to each group in order to structure the discussion and ensure that everyone was able to express their opinions. 85% of respondents felt that the programme allowed enough time and opportunities to network.

Social activities and the venue of the conference were extremely well received by participants.

Respondents were requested to suggest topics for future educators meetings. Once again the suggested topics were very broad. Those topics suggested by multiple respondents included, educational models, possibilities for collaboration and further education for teachers within P&O programs.

Finally, participants were asked where they would like to see the next general educators meeting held. No single country stood out from the responses given, however Asian countries tended to receive most attention.



PROGRAMME

JUNE 25—NICHII GAKKAN KOBE PORT ISLAND CENTER

| 08.00—08.30 | Registrations | |
|--|--|------------------------------|
| 08.30 - 09.30 | Opening ceremony | Bryan Malas |
| | Goal and Objectives of the Meeting | Seishi Sawamura |
| | | Takaaki Chin |
| | | Daniel Blocka |
| | | Chapal Khasnabis |
| | | Nerrolyn Ramstrand |
| | | Manami Nomura |
| 09.30 - 09.45 | Educational Framework | Dr. DaRosa |
| 09.45 - 10.15 | Coffee Break | |
| 10.15 – 11.00 | How People Learn (Part I) | Dr. DaRosa |
| 11.00 – 11.45 | How People Learn (Part II) | Dr. DaRosa |
| 11.45 – 12.00 12.00 – 13.00 | Q&A on Presentations | |
| 12.00 – 13.00 13.00 – 14.45 | Lunch | Canbia Hill |
| 13.00 - 14.43 | Curriculum Approaches to Achieve Relevant Competencies | Sophie Hill Denver Graham |
| | | Rowan English |
| | | Daniel Abrahamson |
| | | Jason Goodnough |
| 14.45 – 15.00 | Q&A on Presentations | Jason Goodnough |
| | | |
| 15.00 – 15.30 | Curriculum Approaches to Achieve Relevant Competencies - Breakout Sessions | |
| 15.30 - 16.00 | Coffee Break | |
| 16.00 – 16.30 | Presentations from Breakout Sessions | |
| 16.30 – 17.00 | WHO Standards and Guidelines | Chapal Khasnabis |
| 17.00 – 17.45 | JASPEC Tour | |
| 18.00 | Welcome Reception | |

JUNE 26—KOBE COLLEGE OF MEDICAL WELFARE

| 09.00 – 10.15 Standards and Guidelines in P/O Carson Harte Helen Cochrane 10.15 – 10.45 Coffee Break Q&A on Standards and Guidelines in P&O 11.15 – 12.00 Tour of Sanda College—Japanese Cultural Event Sanda Students Lunch & Luncheon Seminars Jos America - Marty Carlson's Message to P/O Educators Japanese Education System Student Assessment: • Needs Assessment • Gordon Ruder Odom Teap Sasithon Sukthomya Ryan Mason Monica Castaneda Adama Amah Mamta Kumari 15.00–15.30 Coffee Break Student Assessment — Breakout Sessions 16.15 – 17.00 Presentations from Breakout Sessions Travel from Kobe College to Dai-ichi rou Restaurant | 07.30 - 09.00 | Travel to Kobe College | |
|--|---------------|---|--------------------|
| 10.15 – 10.45 10.45 – 11.15 Q&A on Standards and Guidelines in P&O 11.15 – 12.00 Tour of Sanda College—Japanese Cultural Event Sanda Students 12.00 – 13.00 Lunch & Luncheon Seminars Jos America - Marty Carlson's Message to P/O Educators 13.00 – 13.30 Japanese Education System Student Assessment: Needs Assessment Student Assessment Gordon Ruder Odom Teap Sasithon Sukthomya Ryan Mason Monica Castaneda Adama Amah Mamta Kumari 15.00 – 15.30 15.30 – 16.15 Student Assessment – Breakout Sessions Presentations from Breakout Sessions | 09.00 - 10.15 | Standards and Guidelines in P/O | Carson Harte |
| 10.45 – 11.15 Q&A on Standards and Guidelines in P&O Tour of Sanda College—Japanese Cultural Event 12.00 – 13.00 Lunch & Luncheon Seminars Jos America - Marty Carlson's Message to P/O Educators Kunihiko Ukifune Student Assessment: Needs Assessment Gordon Ruder Odom Teap Sasithon Sukthomya Ryan Mason Monica Castaneda Adama Amah Mamta Kumari 15.00–15.30 15.30 – 16.15 Student Assessment — Breakout Sessions Presentations from Breakout Sessions | | | Helen Cochrane |
| 11.15 – 12.00 Tour of Sanda College—Japanese Cultural Event 12.00 – 13.00 Lunch & Luncheon Seminars Jos America - Marty Carlson's Message to P/O Educators Kunihiko Ukifune Student Assessment: Needs Assessment Gordon Ruder Goals and Objectives Sasithon Sukthomya Ryan Mason Monica Castaneda Adama Amah Mamta Kumari 15.00 – 15.30 Tour of Sanda College—Japanese Cultural Event Sanda Students Jos America - Marty Carlson's Message to P/O Educators Kunihiko Ukifune Anthony Francis Gordon Ruder Odom Teap Sasithon Sukthomya Ryan Mason Monica Castaneda Adama Amah Mamta Kumari 15.00 – 15.30 Tour of Sanda College—Japanese Cultural Event Sanda Students Kunihiko Ukifune Anthony Francis Gordon Ruder Odom Teap Sasithon Sukthomya Ryan Mason Monica Castaneda Adama Amah Mamta Kumari 15.00 – 15.30 Tour of Sanda College—Japanese Cultural Event Marty Carlson's Message to P/O Educators Kunihiko Ukifune Anthony Francis Gordon Ruder Odom Teap Sasithon Sukthomya Ryan Mason Monica Castaneda Adama Amah Mamta Kumari | 10110 | | |
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| Sasithon Sukthomya Ryan Mason Monica Castaneda Adama Amah Mamta Kumari 15.00–15.30 Coffee Break Student Assessment – Breakout Sessions 16.15 – 17.00 Presentations from Breakout Sessions | | Needs Assessment | Gordon Ruder |
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| Mamta Kumari 15.00– 15.30 Coffee Break 15.30 – 16.15 Student Assessment – Breakout Sessions 16.15 – 17.00 Presentations from Breakout Sessions | | | Monica Castaneda |
| 15.00–15.30 Coffee Break 15.30 – 16.15 Student Assessment – Breakout Sessions 16.15 – 17.00 Presentations from Breakout Sessions | | | Adama Amah |
| 15.30 – 16.15 Student Assessment – Breakout Sessions 16.15 – 17.00 Presentations from Breakout Sessions | | | Mamta Kumari |
| 16.15 – 17.00 Presentations from Breakout Sessions | 15.00- 15.30 | Coffee Break | |
| 1 Todantaliana II an Brancat Cocciona | 15.30 – 16.15 | Student Assessment – Breakout Sessions | |
| 17.30 Travel from Kobe College to Dai-ichi rou Restaurant | 16.15 - 17.00 | Presentations from Breakout Sessions | |
| | 17.30 | Travel from Kobe College to Dai-ichi rou Restaurant | |
| 18.30 Meeting Dinner | 18.30 | Meeting Dinner | |

PROGRAMME

JUNE 27—NICHII GAKKAN KOBE PORT ISLAND CENTER

08.00 - 09.00Instructional Methods: Nerrolyn Ramstrand Man-Sang Wong Types of Instructional Methods William Neumann • Selecting/Creating the Right Instructional Material Daniel Abrahamson 09.00 - 10.00How to Give a Lecture that Sticks Dr. DaRosa 10.00 - 10.30Coffee Break 10.30 - 11.00 **Teaching Motor Skills** Sisary Kheng Sophie Hill 11.00 - 11.15 Q&A on Presentations 11.15 - 12.15 Instructional Methods—Breakout Sessions 12.15 - 13.15 Lunch Break 13.15 - 14.30 Presentations from Breakout Sessions 14.30 - 15.00 Cooperation between P/O Schools Longini Basil Mtalo Sirirat Seng-iad Mary Scott Coffee Break 15.00 - 15.3015.30 - 16.30 Breakout Sessions (Separate sessions in English & Spanish) • Discussions on Future Cooperation between Schools · Coordination of Regional Efforts 16.30 - 17.00 Presentations from Breakout Sessions 17.00 Closing Ceremony



Japanese soul music group performing during the welcome reception



Port Island Center

KEYNOTE SPEAKERS



Debra DaRosa

Bio

Dr. Debra DaRosa is an Emeritus Professor of Surgery at Northwestern University Feinberg School of Medicine where she served as the Vice Chair for Education in the Department of Surgery from 18 years. With a doctoral degree in education, she has been a surgical/medical education specialist for over 30 years. Dr. DaRosa earned the distinction of being the first nonclinician to be elected President of the Association for Surgical Education (ASE). She has received Outstanding Scientific Paper Awards from the Association of American Medical Colleges and the ASE. Her mission is to inspire health care professionals to be the best teachers possible and help them discover, and in some cases, rediscover the true joys of teaching. Dr. DaRosa has presented her research and faculty development programs at regional, national and international forums.

Presentations

Educational Framework, 25 June - 09.30 - 09.45

How People Learn, 25 June - 10.15 - 11.45

How to Give a Lecture that Sticks, 27 June - 09.00 - 10.00

Synopsis

<u>Planning and Delivering a Lecture that Sticks</u>: By the end of this presentation, attendees will be able to: 1) identify characteristics that differentiate between an excellent and poor lecture; 2) describe three critical factors that influence lecture effectiveness; 3) Identify techniques for maintaining attention and keeping learners engaged; 4) select methods for opening and closing a lecture; and list variables critical to effective communication whether speaking to one or one thousand.

<u>How People Learn</u>: The last several decades have uncovered more and more about the brain mechanisms that support or thwart learning and memory. By the end of this presentation, attendees will be able to: 1) describe the gap between what we know about the brain and how it relates to learning theory; 2) translate the implications of brain biology into instructional strategies, conditions, and environments that enhance learning; 3) create instruction that constructs knowledge; and 4) explain the role and importance of emotion to learning and memory.

Chapal Khasnabis

Bio

A prosthetist/orthotist by profession, Chapal spent most of his career in the field of community health, assistive technology and rehabilitation; Community-based rehabilitation (CBR) in particular

Presentations (access the full presentation)

Opening ceremony, 25 June - 08.30 - 09.30

WHO Standards and Guidelines, 25 June - 16.30 - 17.00

Synopsis

The WHO 'Guidelines for training personnel in developing countries for prosthetic and orthotic services' published in 2005 played an important role in establishing many new prosthetics and orthotics training institutes and to standardize the course curriculums but it is quite outdated and there is a real need for new, evidence -based guidelines to augment the prosthetics/orthotics sector. The existing guidelines focused only on training of personnel whereas new WHO Prosthetics and Orthotics Guidelines will cover all areas of the health system – policy, product, human resource, delivery system and financing. Previous guidelines focused mostly on developing countries whereas the proposed new guidelines will focus on one-world approach.



SPEAKERS

Amah Adama

Bio

2000 Orthopedic Technologist, 2006 Prosthetist and Orthotist, November 2006 Trainer at P&O School of ENAM in Lomé, Togo, 2012 WHO trainer in wheelchair service delivery, 2013 Member of FATO education committee, 2013 Member of FATO education association, 2014 Member of executive board of FATO

Presentations (access the full presentation)

Student Assessment, 26 June - 13.30 - 15.00

Synopsis

Assessments, not just grading, are a key component of all education systems and play an important role in a student's learning journey. Instructors, who assume that students are learning just because they were present during a lecture, are often disappointed when they grade exams, assignments, and papers and see evidence to the contrary.

There are different types of assessment depending on the teaching methods and the set objectives of the teaching. Something very important in an assessment is the feedback which is the mechanism that lets the learner/Instructor know whether they are on the right track.



io

Anthony Francis is lecturer in Prosthetics and Orthotics at the National Centre for Prosthetics and Orthotics, La Trobe University, Australia. Since graduating in 1996, he worked in a range of clinical contexts before returning to La Trobe in 2004 to teach orthotics. He has been involved in the design and development of orthotic curriculum including the implementation of a collaborative clinical school teaching model as part of La Trobe's transition from a Bachelors to Masters curriculum. He has completed a Graduate Certificate in Higher Education Curriculum, Teaching and Learning Design (La Trobe University) and a Masters in Landscape Architecture (University of Melbourne). Anthony has strong links with the P&O profession in Australia and has recently been involved in the Australian Orthotic and Prosthetic Association's review of professional competency standards. He loves discussing the importance of orthotic

alignment with students. His interests include the promotion and development of good teaching practice, the identification and development of learning activities which promote professional competencies in graduates, and the exploration of innovative design in P&O utilising 3-D technologies. He is currently working on research projects related to the management of the diabetic foot through the optimisation of Total Contact Casts and the identification of Threshold Concepts in Prosthetics and Orthotics education.

Presentations (access the full presentation)

Student Assessment, 26 June - 13.30 - 15.00

Synopsis

The National Centre for Prosthetics and Orthotics at La Trobe University, Australia, has recently upgraded the Prosthetics and Orthotic curriculum as part of the transition from Bachelors to Masters Level education. This presentation provides an example of curriculum design based on the identification of disciplinary threshold concepts and the implementation of constructive alignment as a framework for the selection, design and implementation of learning activities and assessments.



Anthony Francis

Bill Neumann

Bio

<u>Education</u>: Graduate; Northwestern University, Chicago, United States, Prosthetic/ Orthotic Education

<u>Professional Experience</u>: private Clinical O&P practice in New England USA for 24 years; past President; The American Academy of Orthotists & Prosthetists (AAOP) and The American Board for Certification (ABC) in P&O; past Chairman of Board of the Unified Professions of O&P, Washington DC; past Educator; Becker Orthopedic in USA, Western Europe, S. America, Asia; past Director of O&P education for Project Hope in Sarajevo, Bosnia and throughout the Balkans; current Educator- Consultant and President of Board of Directors of Human Study, e.V. Nuremberg, Germany; current Deputy Director of the Sirindhorn School of Prosthetics & Orthotics, Bangkok, Thailand.



Presentations (access the full presentation)

Instructional Methods, 27 June - 08.00 - 09.00

Synopsis

Bill Neumann's presentation will outline the severe shortage of adequately educated and skilled, clinical O&P practitioners worldwide and the impossibility of increasing the numbers using the current systems of educational processes.



Bryan Malas

Ric

An orthotist by profession Bryan received his professional training at Northwestern University where he later taught for twelve years and continues to maintain a faculty appointment. Prior to Northwestern he spent seven years as a technician.

For the last ten years he has been the director of the orthotics/prosthetics department at the Ann & Robert H. Lurie Children's Hospital of Chicago where he balances his time between administrative, clinical, and research activities.

Bryan is the current chair of the ISPO Education Committee, former chair of the U.S. program and residency accreditation body, NCOPE. During his tenure with NCOPE he was instrumental in the professions movement to entry-level masters for O&P training.

He is past-president of AAOP's Midwest Chapter and also the former director of the O&P clinical services research and education at the Rehabilitation Institute of Chicago.

He has been involved in the profession of O&P for over 30 years

Presentations (access the full presentation)

Opening Ceremony, 25 June - 08.30 - 09.30

Carson Harte

Bio

Carson Harte is a Prosthetist Orthotist, trained at the National Centre for Prosthetics and Orthotics, University of Strathclyde, Scotland. He is the Chief Executive of Exceed Worldwide (formerly The Cambodia Trust), he has been directly engaged in the implementation of ISPO standards in five Asian countries. Carson has also been an ISPO inspector, consultant and advisor, touching on several other P&O schools in other regions.



He began his career in PO Education at the Cambodia School for Prosthetics and Orthotics and eventually used the lessons learned in to help establish training schools in Sri Lanka (2004), Indonesia (2008) Philippines (2011) and Myanmar (2013). Working in partnership with schools in Thailand, Vietnam and Pakistan, and encouraging regional developments through the Alliance of P&O schools in Asia (APOS), Exceed Worldwide is coordinating the largest group of P&O training providers in the world.

Presentations (access the full presentation)

Standards and Guidelines in P&O, 26 June - 09.00 - 10.15

Synopsis

Over the past three years, ISPO has been reviewing the Standards and Guidelines it sets for education and training in Prosthetics and Orthotics.

ISPO has surveyed leaders of education institutes and individuals involved in prosthetic orthotic services around the world. The aim was to gather data to assess if the current ISPO guidelines address the professional competencies and educational needs in the various geographic regions in which ISPO works.

This session will provide an overview of the history and impact of the guidelines to date, provide a brief report on the development of the survey, it findings and convene a panel discussion with the audience to discuss the findings and future development of ISPO Standards and Guidelines for Prosthetics and Orthotics.



Daniel Abrahamson

Bio

Daniel Abrahamson PhC., C.P.O. has worked as an educator, researcher and clinician. After completing an undergraduate degree in psychology in 1994 Daniel worked in sub-acute rehabilitation, caring for individuals with traumatic brain injury. In 1998 Daniel graduated from the University of Washington with a bachelors degree in Prosthetics and Orthotics.

His subsequent clinical work has focused on providing prosthetic care for individuals with complex lower extremity limb loss. From 2003-14 Daniel has taught courses in lower extremity prosthetics and evidence based practice at the University of Washington. In 2008 Daniel entered the UW Rehabilitation Science PhD program and is currently completing his dissertation work.

In May of 2014 Daniel began a new position at the Puget Sound Veterans Affairs Hospital in Seattle, Washington, where he is the current Residency Director.

Presentations (access the full presentation)

Curriculum Approaches to Achieve Relevant Competencies, 25 June 13.00 - 14.45

Daniel Blocka

Bio

Dan Blocka is Professor and past Coordinator of the George Brown College Prosthetic and Orthotic Educational Programs in Toronto, Canada. He has acted as full-time faculty with the programs since 1986. Dan is Past President of ISPO, with a term as President from 2007 to 2010. He has carried many roles within ISPO both currently and in the past, in particular related to the Society's educational activities.

Dan Blocka is also Founder and President of Boundless Biomechanical Bracing (formerly Clinical Orthotic Consultants Inc.), a large clinical service provider in Orthotics in the Toronto area that has been in existence since 1988.

He has been appointed as Trustee of Exceed (formerly Cambodia Trust) in May 2011.

Overall, Dan has more than twenty-five years of experience as a teacher and clinical practitioner in prosthetics and orthotics.

Presentations (access the full presentation)

Opening ceremony, 25 June - 08.30 - 09.30



Denver Graham

Bio

Denver is currently working for the International Committee of the Red Cross (ICRC) in Afghanistan. He is involved in both training the current intake of P&O diploma students and helping to set up a distance learning programme aimed at upgrading ISPO Category II qualified students to bachelor degree level.

Since qualifying from the University of Strathclyde, UK in 1997, he has worked a total of six years with the ICRC in South Sudan and Afghanistan and ten years in various P&O centres in the UK, Ireland and Canada.

Presentations (access the full presentation)

Curriculum Approaches to Achieve Relevant Competencies, 25 June - 13:00-14:45

Synopsis

Afghan technicians have good P&O knowledge and skills. The difficulty is to provide a curriculum which addresses the gaps in their basic education such as math, English and computer skills, so that they can go on to learn what they really need to develop clinically, namely their clinical reasoning and an analytical approach to problem solving.

To address this need, the International Committee of the Red Cross (ICRC), Human Study and Sirindhorn School of Prosthetics and Orthotics have teamed up to develop an on-line blended learning bachelor's degree in P&O, aiming for greater sustainability and less reliance on international organisations.





Gordon Ruder

Bio

<u>Education</u>: Clinical Methods in Prosthetics/Orthotics. George Brown College, Toronto, Ontario, 1991; Masters of Science, Biomechanics, University of Waterloo, Ontario, 1989; Bachelor of Science, Honors Biology, University of Waterloo, Ontario, 1987.

<u>Professional Background</u>: 1991-present Orthotics Clinician. Boundless Biomechanical Bracing Inc, Mississuaga, Ontario; 1994-present Professor, Clinical and Technical Program George Brown College, Toronto, Ontario; 2000-present Lecturer at the Physiatry Dept., Toronto Rehabilitation Institute, University of Toronto, Canada.

<u>Professional Qualifications</u>: Certified Orthotist, Canadian Board for Certification of Prosthetists and Orthotists, 1993; Full time Instructor for the George Brown College Clinical and Technical Methods in Prosthetics and Orthotics, 1994; Chief Orthotic Ex-

aminer, Canadian Board for Certification of Prosthetists and Orthotist, 2001-2004; Fellow, Canadian Board for Certification of Prosthetist and Orthotists, 2012



Student Assessment, 26 June - 13.30 – 15.00

Synopsis

Google apps for education, was a platform which was initially used to connect program, faculty, and students, using the calendar for the schedule, google drive as a document, picture, video, webpage repository, and as a means of communicating (email, chats, google plus). This presentation will focus on the most recent use of the google platform for student assessment, goals and objectives. Cross linked spreadsheets, and survey forms will be demonstrated as a means of increasing the educational impact of patient based projects. Treatment justification, self-guided critique, observational gait analysis (OGA), evidence based practice, the use of validated outcome measures (OM), and more formal documentation/presentation skills, are recognized as important to employers and stakeholders. Financial/time constraints, meeting enrolment needs require educational programs to maximize the educational impact of every patient based project.



Helen Cochrane

Bio

Helen is a Canadian Board certified Prosthetist/Orthotist with a Masters Degree in Rehabilitation Sciences from the University of Strathclyde and both Technical and Clinical Diplomas from George Brown College in Toronto Canada.

Following her clinical work in a teaching hospital in Nova Scotia, Canada she joined Exceed (formerly The Cambodia Trust) as an educator and currently works as the Project Director for the Philippine School of Prosthetics and Orthotics. She is an active member of the ISPO Standards and Guidelines committee and has participated in national level graduate assessments in Vietnam, India and Bangladesh.

Presentations (access the full presentation)

Standards and Guidelines in P&O, 26 June - 09.00 - 10.15

Synopsis

Over the past three years, ISPO has been reviewing the Standards and Guidelines it sets for education and training in Prosthetics and Orthotics.

ISPO has surveyed leaders of education institutes and individuals involved in prosthetic orthotic services around the world. The aim was to gather data to assess if the current ISPO guidelines address the professional competencies and educational needs in the various geographic regions in which ISPO works.

This session will provide an overview of the history and impact of the guidelines to date, provide a brief report on the development of the survey, it findings and convene a panel discussion with the audience to discuss the findings and future development of ISPO Standards and Guidelines for Prosthetics and Orthotics.



Jason Goodnough

Bio

Jason is the Program Head of the British Columbia Institute of Technology (BCIT) Prosthetics and Orthotics program, and the Director of Synergy Prosthetics and Orthotics. He is a dual certified P&O practitioner with a Masters of Science Degree (Honours) in Orthopedic Engineering from The Health Sciences University of Jönköping, Sweden.

Over his career, Jason has worked clinically in both public and private practice and has been recognized for excellence in clinical practice, teaching and research.

Presentations (access the full presentation)

Curriculum Approaches to Achieve Relevant Competencies, 25 June - 13:00-14:45



Synopsis

Observational Gait Analysis (OGA) is difficult to teach and even more difficult to learn. This presentation will help attendees understand some of the issues surrounding learning and teaching OGA and present an innovative open-source multimedia platform that has been shown to improve novice OGA learning outcomes.



Kunihiko Ukifune

Bic

Education: 1964. Bachelor's Degree in Law, Kwansei Gakuin University; 1995. Honorary Doctor of International Education, University of West Florida; 2009. Honorary Doctor of Human Science Education, Columbia College of Chicago; 2013. Honorary Doctor of Education, Keimyun University.

<u>Professional Background</u>: 1976. Managing Director of The Shinshikai Corporation; 1982. Chairperson of the Board of The Osaka College of Medical Technology; 1983. Chairperson of the Board of The Jikei Gakuen School Corporation; 1984. Chairperson of The Shinshikai Corporation; 1987. Chairperson of the Board of The Osaka Jikei Gakuen School Corporation; 2005. Chairperson & CEO of The Jikei Group of Colleges.

Awards: 1990. Honorary Citizenship of the City of Pensacola, Florida; 2006. Achievement Award by Edogawa-ku, Tokyo. As the Chairperson of the Jikei Group of Colleges, supervising operation of sixty professional training colleges in Japan including the Kobe College of Medical Welfare, as well as managing related enterprises and branches overseas.

Presentations (access the full presentation)

Japanese Education System, 26 June - 13.00 - 13.30

Synopsis

Professional training colleges train the specialists needed by industry in a broad range of fields, such as paramedical professionals, at postsecondary educational institutions within the educational system in Japan. Professional training college graduates are awarded a diploma or advanced diploma rather than a university degree. The low employment rate for young people in Japan has been recognized as a problem recently. Young people who have been unable to find the job they want even after graduating from university as well as many young people who have found employment but want to follow the career path that they want have come knocking on the door of professional training colleges. Professional training colleges instill young people with a vision of work and career and provide them with an education to get the job they want. Society has great expectations of professional training colleges.

Mamta Kumari

Bio

<u>Professional Qualification</u>: Final year student of Master in Rehabilitation Studies from National Centre for Prosthetics & Orthotics, Glasgow recognized under University of Strathclyde. Expected to graduate by Nov. 2014; Bachelors in Prosthetics and Orthotics (1999-2003) from National Institute of Orthopedically Handicap (NIOH), recognized under University of Kolkata, India. <u>Professional Experience</u>: Working as Programme Manager- Training (Prosthetics & Orthotics) in Mobility India, since August 2003; Responsible for developing, planning and implementing the strategic and annual plans of organization; Involved in developing the curricu-



lum for Bachelor's programme in Prosthetics and Orthotics and reviewing the curriculum of ISPO CAT II single discipline course in Prosthetics and Orthotics; Visit other training institution as an external examiners for theory & Practical; Visit organization in rural areas and to provide technical support to local technicians.

Presentations (access the full presentation)

Student Assessment, 26 June - 13.30 - 15.00

Synopsis

The quality of an educational environment is an important factor in nurturing students' learning. Therefore, evaluation of the educational environment and graduates work are equally important components of programme appraisal. To identify areas for development and willingness to identify good and outstanding practices, a series of different questionnaires have been used for more than a decade in Mobility India (MI) both within the campus as well graduates' working place. So far, MI has received students with diversified cultural background representing 27 countries. To have broader vision of the educational environment, MI has recently introduced one of the most widely used tools in health care course 'Dundee Ready Educational Environment Measure (DREEM) questionnaire which was administered to 64 students studying different courses conducted by MI. Data was analysed using Microsoft Excel. The overall DREEM score was 135.5 out of 200, indicating more positive than negative environment. Nevertheless, the study also revealed specific areas of improvement. It is essential for Institutes to create appropriate educational environment in order to provide and maintain high quality learning environment for students.



Man-Sang Wong

Bic

Dr. M. S. Wong obtained his professional qualification from the School of Prosthetics and Orthotics, Hong Kong Government in 1988 and a Postgraduate Diploma in Biomechanics from the University of Strathclyde in 1990. He pursed research studies and was awarded with M.Phil. in 1994 and Ph.D. in 2000 at The Hong Kong Polytechnic University (PolyU). He is currently an Associate Professor of the Interdisciplinary Division of Biomedical Engineering, and chairs the Teaching and Learning Committee of the Division and coordinates the Jockey Club Rehabilitation Engineering Clinic at PolyU. He serves the Executive Board, Scientific Committee and E-learning Sub-committee of ISPO.

Presentations (access the full presentation)

Instructional Methods, 27 June - 08.00 - 09.00

Synopsis

In this service learning subject, students go through basic training in orthotic management of children with cerebral palsies. PolyU students have opportunity to work with overseas students in the process of service delivery in Mainland China. Apart from strengthening PolyU students' clinical knowledge and skills, it can help to broaden their network and learn various skills in the areas of global outlook, critical thinking, problem solving, communication and interpersonal skills, cultural appreciation, biliteracy and trilingualism, teamwork and leadership. Assessments are accomplished via clinical performance, case presentation, reflective journals and feedback from service-users and collaborating organizations.

Mary Scott

Bio

<u>Education</u>: National Diploma in Prosthetics and Orthotics, University of Strathclyde, Scotland; MSc Bioengineering, University of Strathclyde, Scotland; PhD Prosthetics and Orthotics, University of Strathclyde, Scotland.

<u>Professional Experience</u>: 1983-1988 Prosthetist-orthotist, Zimbabwe Ministry of Health and British Overseas Development Administration; 1990-1996 Prosthetist-orthotist, International Committee of the Red Cross based in Afghanistan, Ethiopia, Mozambique and Iraq; 1999-2001 Prosthetist-orthotist, International Committee of the Red Cross based in Iraq; 2001-2005 Director, Cambodian School of Prosthetics and Orthotics (The Cambodia Trust); 2005-2009 Country Director,



Cambodia (The Cambodia Trust); 2009 – present Project Director, Sri Lanka School of Prosthetics and Orthotics; SLSPO (Exceed – formerly The Cambodia Trust).

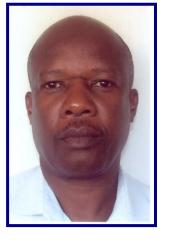
Presentations (access the full presentation)

Cooperation between P&O Schools, 27 June - 14.30 - 15.00

Synopsis

P/O (including ISPO) relies on voluntary activity for its development. There are challenges to International Cooperation: the field is small - limited number of persons to be involved; most work is done on a volunteer basis; working across time zones; few face to face meetings; group size is important; leadership is required to drive the work forward; potential for imbalance in the responsibilities taken by group members; lack of understanding that most tasks take place outside meetings; cultural differences can lead to challenges.

But working in Collaborative Teams provides opportunities: to develop professional experience or contacts; for personal growth and self-esteem.



Mtalo Longini Basil

Bio

Advanced Level secondary Education 1985

Diploma in Orthopaedic Technology (University of Dar Es Salaam 1990)

Orthopaedic Meister (Bundesfachschule für Orthopädietechnik (BUFA), Dortmund, Germany 1994)

Postgraduate Diploma in Lower Limb Biomechanics (Strathclyde University 2000)

Involved in Teaching Biomechanics since 2000 to date

Involved in Teaching P/O clinical since 2000 to date

Head of Academic Department at TATCOT since 1995 to date

Presentations (access the full presentation)

Cooperation between P&O Schools, 27 June - 14.30 - 15.00

Synopsis

Training in Prosthetics and Orthotics is one of the most important aspects to improve care of individuals requiring rehabilitative services. For the past decade we have continued to appreciate an increase trend of P/O schools developing world wide to address the dare need of professionals required to provide services. The GEM is an attempt to establish networking of these schools and we hope that at the end of the meeting this objective will be realized.

Monica Castaneda

Bio

Diploma in Pedagogical Training, Don Bosco University in El Salvador, 2012; Bachelor of Sciences in O&P, Don Bosco University, 2007; O&P Technician, Don Bosco University, 2001.

Over 10 years' experience participating and conducting distance learning programs in O&P areas for practical technician from different countries in Latin America and others countries around the world.

Presentations (access the full presentation)

Student Assessment, 26 June - 13.30 - 15.00

Synopsis

Traditionally student assessment was considered only as a mandatory activity in the educational process without seeing evaluation as a tool that can allow specific action to be taken in relation to the progress of a student, or taking action specifically for use in improving training programs.

In O & P schools student assessment has great impact, because in a short period of time educators should ensure that the student has acquired the skills necessary to perform the tasks required of their profession. Graduates should be able to provide services properly and ethically. This presentation will share Assessment of Student Learning from the perspective of the Don Bosco University.



Nerrolyn Ramstrand

Bio

Nerrolyn received both her undergraduate degree in prosthetics and orthotics from LaTrobe University in 1996 and completed her doctoral degree at the same institution in 2000. After completing her doctoral studies she moved to Canada and worked within the prosthetics and orthotics educational program at the British Columbia Institute of Technology before moving to Sweden in 2003. Nerrolyn is currently an associate professor at Jönköping University in

Sweden and divides her time equally between research and education. Over the past ten years Nerrolyn has completed a series of university courses related to teaching and learning in higher education, including courses related to case based teaching which is one of her special interests. Nerrolyn has been responsible for implementation of cased based teaching within the department of Rehabilitation at Jönköping University and continues to serve as a key contact person for staff who require assistance in integrating the case method into their teaching.

Presentations (access the full presentation)

Opening ceremony, 25 June - 08.30 - 09.15

Instructional Methods, 27 June - 08.00 - 09.00

Synopsis

Case based learning is a student-centered pedagogic model in which cases based on real life situations are used as a stimulus for classroom and group discussion. The model promotes student-centered exploration of problems and an interactive classroom environment. This presentation will introduce the Harvard model for case based teaching which is employed with the P&O program at Jönköping University, Sweden. A case example will be provided and the presenter will discuss the formal process that was initiated to facilitate implementation of CBM into the Swedish program.



Rowan English

Bio

Currently on leave from La Trobe University, Australia, Rowan is employed by the International Red Cross working with Bangladesh Health Professions Institute to establish the first P&O school in Bangladesh. He has been involved in P&O for over 30 years. After initially qualifying in 1983 (P&O) he completed a research Master Degree in Human Movement in 1998 and a Master of Business Administration in 2005. His roles include development and provision of clinical P&O services within Australia and internationally, clinical research, teaching and, health and education management. He is a past president of ISPO, Australia and current member of the International Education committee.



Presentations (access the full presentation)

Curriculum Approaches to Achieve Relevant Competencies, 25 June - 13.00 - 14.45

Synopsis

Bangladesh is a very densely populated country in Southern Asia and also one of the world's poorest with a desperate need for an improvement in services to people with disabilities. The Bangladesh Health Professions Institute (BHPI) has established the first School of P&O in the country with an intake of 10 students in 2014. Developing curriculum within organizational limitations, national requirements, international guidelines and the imperative to graduate quality, category 2 clinicians has thrown up numerous challenges. The International Committee of the Red Cross is providing assistance to BHPI to meet the challenges with a practical approach, combining previous experience of educational practices within the well-established educational organization.



Ryan Mason

Bio

Graduated from University of Strathclyde (Scotland) in 2002, Ryan has worked as a dual practising clinician for Otto Bock Dublin (Ireland) until 2010, and as Senior Orthotist for Blatchford in Northamptonshire (UK) until 2012.

He is currently the 'Head of Teaching' at the Jakarta School of Prosthetics and Orthotics in Indonesia.

Presentations (access the full presentation)

Student Assessment, 26 June - 13.30 - 15.00

Synopsis

Higher education in Indonesia is provided across the country by Universities, Academies, Institutions and Polytechnics. The government has put in place a system that enables vocational health science professions to be taught in the Polytechnics under the supervision of the Ministry of Education. The purpose of this presentation is to highlight how Prosthetic and Orthotic students are assessed in order to meet the requirements of both ISPO and the Ministry of Education in Indonesia. The process for the assessment of a student at the Jakarta School of Prosthetics and Orthotics (JSPO) has evolved and is continuing to be developed.

Sasithon Sukthomya

Bio

<u>Education</u>: 2006 Bsc in Prosthetics and Orthotics, Mahidol University, Thailand; 2011 M.Ed in Psychology , Srinakharinwirot University, Bangkok, Thailand; 2013 Certified Pedorthist, USA.

<u>Professional experience</u>: 2007-2009 Prosthetist-Orthotist / Assistant lecturer, Sirindhorn School of Prosthetics and Orthotics, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand; 2009-2013 Head of Education team / Assistant lecturer, Sirindhorn School of Prosthetics and Orthotics, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand; 2013–present Head of

Academic team / Lecturer, Sirindhorn School of Prosthetics and Orthotics, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand.

Presentations (access the full presentation)

Student Assessment, 26 June - 13.30 - 15.00

Synopsis

The SSPO curriculum allows students to earn a degree at an internationally recognized level. The SSPO trains students to become proficient, compassionate and professional P&O clinicians, able to provide excellent service to people with physical impairments. Students are also prepared to conduct research in clinical practice and to contribute significantly to the P&O profession.

Student assessment is one of the key issues in education. There are multiple types of assessments available such as diagnostic, formative, summative, criterion-referenced, and observational. Ideally the assessment process informs the teacher and the student about learner progress and, at the same time, contributes to the learning process.

SSPO divides learning outcomes into 6 aspects following the Faculty of Medicine Siriraj Hospital, Mahidol University; Ethics and Morals, Knowledge, Cognitive Skills, Interpersonal Relationships and Responsibility, Communication and Information Technology, and Psychomotor Skills.



Sirirat Bam

Bio

<u>Education</u>: 2007 Bsc in Prosthetics and Orthotics, Mahidol University, Thailand; 2010 MA in Developmental Psychology, Chulalongkorn University, Thailand;

<u>Professional experience</u>: 2007-2013: Assistant lecturer, Sirindhorn School of Prosthetics and Orthotics, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand; 2013 – present: Lecturer, at the same school

Presentations (access the full presentation)

Cooperation between P&O Schools, 27 June - 14.30 - 15.00

Synopsis

Alliance of Prosthetic and Orthotic Schools, (APOS), was formed in 2003 to initiate collaboration among P&O schools in Asia with funding provided by The Nippon Foundation and during the years 2009-2010, new management started its functioning by local staff.

APOS comprises of schools and training institutions in Asia. These schools are linked with each other through a series of activities, for instance; annual meeting, staff exchange, mentoring projects, information sharing and support of professional association. These activities aimed to enhance mutual cooperation, support and interaction to uphold the profession of prosthetics and orthotics in the region and beyond.

Sisary Kheng

Bio

Education: 1996-1999 ISPO Category II at Cambodian School of Prosthetics and Orthotics (CSPO); Oct 2000-Dec 2001 Diploma in Health Personnel Educator at University of Health Science of Cambodia and New South Wales University of Australia; 2000-2003 Internal Auditor and Lead Auditor for ISO 9001 (Quality Management Standard); 2002-2009 Master of Rehabilitation Studies at the University of Strathclyde (correspondence course); 2006-2007 ISPO Category I upgrading at La Trobe University, Australia.

<u>Professional experience</u>: 2000 Clinical PO at Cambodia Trust; 2001-2003 Assistant Lecturer at CSPO; 2003-2004 Counterpart to Senior Lecturer at CSPO; 2004 Senior Lecturer at CSPO; 2005 CSPO Manager; 2007-2008 PO Lecturer in Sri Lanka; 2008-2009 PO Clini-

cal Mentor for Cambodia Trust; 2009-2010 PO Lecturer at CSPO; 20010-now CSPO Director and Country Director for Exceed (formerly The Cambodia Trust)



Teaching Motor Skills, 27 June 10:30-11:00

Synopsis

This presentation aims to address the model of learning and teaching adult learners with emphasis on the use of Bloom's Taxonomy where the instructors design the curricula activity for students to facilitate their advancement through the psychomotor domains. Even the process of acquiring motor skills is comparable for individuals but the functions and expertise of each learner is unequal, thus it requires the educator to have specialization in teaching motor skills. Furthermore, the prominences in common tools used in motor skills teaching and performance assessment will be discussed with a focus on five key messages to be utilised by instructors teaching motor skills.



Sophie Hill

Bio

Sophie graduated from the University of Strathclyde, UK in 1993. After working in clinical practice for a number of years, she moved into education in 1998, teaching on the prosthetics and orthotics course at the University of Salford, UK. Her PhD (2012, Lancaster University, UK) explored the difficulties in studying prosthetics and orthotics from the perspectives of both students and staff and identified some potential threshold concepts in prosthetics. She was a member of the British Association of Prosthetists and Orthotists Executive Committee for seven years, culminating with the position of Chair. Sophie has worked at Oslo and Akershus Unversity College, Norway since 2010.

Presentations (access the full presentation)

Curriculum Approaches to Achieve Relevant Competencies, 25 June - 13.00 - 14.45

Teaching Motor Skills, 27 June 10:30-11:00

Synopsis

<u>Teaching Motor Skills</u>: the literature on learning in higher education says very little on motor learning. However, motor learning theory is explored in both the sports and patient education literature. There is also consideration within the nursing literature in particular on the development from beginner to expert. This presentation will explore what we can learn from these areas.

<u>Curriculum Approaches to Achieve Relevant Competencies</u>: the ideas of troublesome knowledge and threshold concepts provide an alternative way of viewing the curriculum, focusing on both what enables and hinders learning. Troublesome knowledge is knowledge that is difficult for some reason. Threshold concepts can be described as an opening to a different way of viewing a concept. Five areas of difficulty were identified of which three are suggested as threshold concepts. Three potential causes of these difficulties were also identified. These difficulties will be discussed and areas for consideration when designing a curriculum will be presented.

Teap Odom

Bic

<u>Education</u>: In 2000 graduated from Cambodia School of Prosthetics and Orthotics; in 2004 study tour in prosthetics and orthotics in Japan for nine months; in 2007 graduated from La Trobe University with bachelor degree of P&O science; in 2013, certified as lead auditor in Quality Management System 9001.

Since 1996 until now have been <u>working</u> in different roles, from bench worker, prosthetist and orthotist, clinic manager, P&O lecturer, P&O mentor, Physical Rehabilitation Manager. Working abroad experience: one year and half working as P&O assistance/lecturer at SLSPO, Sri Lanka; one year working as P&O at Sophies Minde Orthopedics, Norway



Presentations (access the full presentation)

Student Assessment, 26 June - 13.30 - 15.00

Synopsis

This article focuses on assessment methods utilised for prosthetic and orthotic students at the Cambodian School of Prosthetics and Orthotics (CSPO). It is assumes that varying modes of assessment impact on student learning and performance.

CSPO utilises different types of assessment to audit students' understanding of the curriculum. To ascertain perception of assessment methods, a survey was undertaken. A cross-sectional survey, including participants from all intakes, was used.

Results indicated that students rated classroom assessment and case presentation as the preferred assessment methods. They also highlighted constructive feedback as a crucial component for their learning.

The survey highlighted that Students preferred a limited number of specific assessments throughout the academic year as opposed to continuous assessment methods.

Student self-assessment and research projects were considered the least beneficial/least preferred methods of assessment.

LIST of PARTICIPANTS

| Title | Name | Organization | Country |
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| Mr. Mr. | Yukio Agarie Zeshan Zahid | Rawalpindi Medical College | Pakistan |

WORKING GROUP

Below you will find the list of the individuals that constituted the ISPO Global Educators Meeting (GEM) Working Group, who made the event possible.

| NAME | ORGANIZATION |
|---------------------|--|
| Achille Otou-Essono | African Federation of Orthopaedic Technicians (FATO) |
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| Birgit Krausse | ISPO International Head Office |
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| Carson Harte | Exceed (former Cambodia Trust) |
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| Nuno Loureiro | ISPO International Head Office |
| Rosie Jované C. | Becker Orthopedic |
| Rowan English | International Committee of the Red Cross (ICRC) |
| Shin Sasaki | Kobe College of Medical Welfare |

TRIBUTE TO MITSUHIKO UCHIDA

ISPO was deeply sorry when the news arrived that Mr. Mitsuhiko Uchida had suddenly passed away on 11 February 2014, aged 48 years old and leaving behind his wife and three little boys.

All members of the Japanese Prosthetic and Orthotic organizations and from the P&O community all over the world mourned his sudden passing. In the opinion of many, the most important young leader in the Japanese Prosthetics and Orthotics fields was lost that day.

Mr. Mitsuhiko Uchida graduated from the National Rehabilitation Centre's P&O course in 1985. Amongst other great accomplishments, he started the P&O course at the Kobe College of Medical Welfare (KCMW) in 1997, which has since 2012 been recognized by ISPO as a Category I training programme. Soon after that, he began the first ever Orthopaedic Shoe Technician's Programme in Japan.



Mr. Uchida excelled as Secretary General of ISPO Japan, and greatly promoted the Asian Prosthetic and Orthotics Association. We would like to express our deepest and sincerest appreciation for all of his excellent work and efforts throughout his years with us, and would like to continue to honour his spirit by fulfilling his dreams and goals at the Kobe College of Medical Welfare.

If there is something that Mr. Uchida taught us is that nothing can be accomplished solely through individual work, but rather through team work. To honour this lesson, the ISPO 2014 GEM Working Group has solidly decided to dedicate the event to the memory of Mr. Mitsuhiko Uchida, who dreamt of a world where P&O educators would further cooperate and work together for the good of people with disabilities.

THANK YOU & ACKNOWLEDGMENTS

Mr. Ukifune

On the second day of the GEM program, participants had the privilege of hearing from the current Chairperson and CEO of the Jikei Group of Colleges, Mr. Kunihiko Ukifune. Mr. Ukifune graciously gave of his time by traveling from Tokyo to present on the state of the Japanese educational system - a presentation well received by the audience.

Mr. Ukifune's remarks conveyed a message of endorsement and support for the Global Educators Moeting and the impact it would

Educators Meeting and the impact it would have for the local Japanese stakeholders. Our sincerest thanks to Mr. Ukifune.





Dr. Sawamura

A heartfelt thanks goes to Dr. Seishi Sawamura for his support and generosity during the Global Educators Meeting. Dr. Sawamura, Past President of ISPO International, has been an enthusiastic champion of ISPO for many years and brought that same enthusiasm to the GEM.

His comments during the opening and closing ceremonies were well-received and helped set a positive tone for this GEM and futures GEM's to come. We would be remiss if we did not extend a specific thank you for the sponsored dinner for all of the participants. This gesture allowed participants to enjoy each other's company in a less formal setting and created an opportunity to cultivate lasting professional relationships.

Local Organizers

The ISPO Education Committee and GEM Working Group would like to express their utmost gratitude to the local organizing team for their remarkable efforts and commitment to make the Global Educators Meeting a great success.

From actual participation during the meeting sessions, poster exhibition set-up, to networking and social events the local organizers exceeded all expectations. The hospital-



ity shown and cultural experience created a great backdrop for the meeting itself.

THANK YOU & ACKNOWLEDGMENTS

Manami Nomura

During the opening ceremonies the participants were honoured with a special appearance from Manami Nomura. Ms. Nomura, an accomplished violinist, performed two beautiful musical selections. Normally it would be enough to simply recognize the musical talents of such an accomplished musician, but in the case of Ms. Nomura, she is able to do this as a unilateral upper limb amputee.

Her accomplishments are not limited to the stage, but extended into the healthcare arena where she is a registered nurse. Ms. Nomura's ability to overcome her disability is truly inspirational and reaffirms why we are in the field of orthotics and prosthetics. Thank you for your willingness to share your talent and creation of beautiful music. Your performance will forever be etched in our minds.





Choir

The first social event of the GEM was a dinner that included local cuisine and gave the participants an opportunity to meet one another in a relaxed environment. The dinner kicked off with the wonderful talents of a young gospel choir. The same lovely and powerful voices that sang these beautiful gospel songs also brought forth a passion and zeal that few could match. A heartfelt thanks from the GEM working group and programme participants.

Kobe Students

A list of acknowledgments would be incomplete without proper recognition of the students from Kobe College of Medical Welfare. It was evident from the moment the GEM participants arrived that a great deal of time and effort had been made to ensure that the experience was a memorable one.

This experience began with a gracious welcome the moment participants stepped off the bus and culminated with a narrated tour of the school. Of note, the narration was not done in the student's native language, but in Eng-



lish. Prior to the guided tour, the participants were treated to a marvellous cultural experience while enjoying the local lunch cuisine. This experience included historical dress, and a masterful demonstration of Origami and Kendama. The collectively time and effort put forth by the students left an indelible mark, and will be forever remembered by the GEM participants.

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Dr. Sawamura

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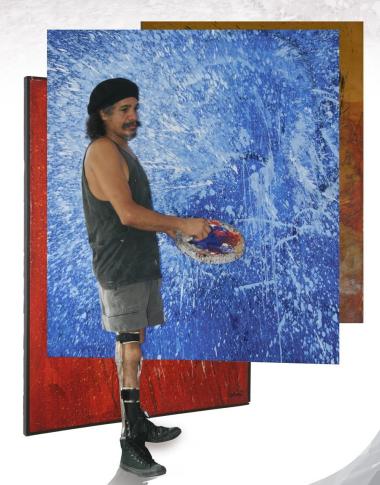
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Juan Mayi, Dominican Republic Artist

Some of his awards:

- Gran Premio. XXIV Bienal Nacional de Artes Visuales, Santo Domingo. R.D.
- Paleta de Oro. Festival Internacional de la Pintura. Cagnes-Sur-Mer, Francia.
 http://www.juanmayi.com/





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Dan Blocka and Gordon Ruder were proud and privileged to attend the recent ISPO Global Educators Meeting in Kobe, Japan. We were very proud to have our clinical practice be a Diamond Sponsor for this historic event.

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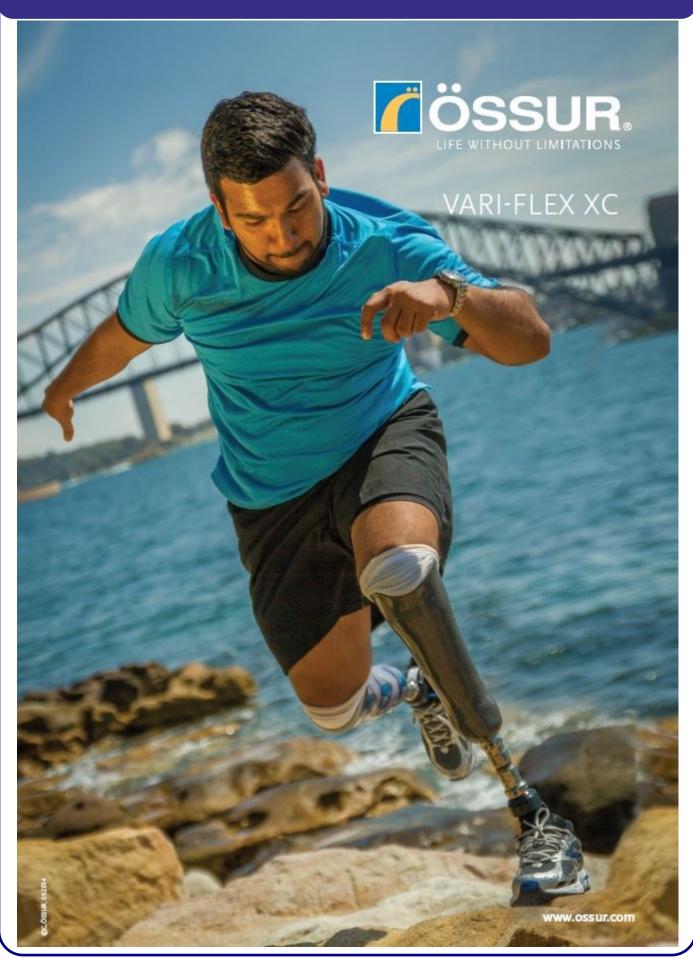


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ottobock.

Stay up to date with current fitting solutions

Continuous education for quality of life

Every user has his/her own individual requirements in regard to prosthetic fittings. In order to meet these demands at the best, it takes a very detailed knowledge not only of the technology, but also the products' characteristics. Thanks to continuous education the know-how is kept up to date to further improve the user's mobility and overall quality of life. State of the art fitting solutions in the field of socket technologies are as unique as their users: Customised solutions consisting of liner and suspension modes allow for a maximum of mobility and independence – a truly winning combination.





Shuttle Lock

- ... requires a liner with the following characteristics:
- Less flexibility to reduce piston movement during swing phase
- Tackiness and compression to increase adhesion on the residual limb
- Specific weight bearing socket to increase rotation control

Winning Combinations



Silicon Liner + Shuttle Lock

- Audible locking noise increases feeling of safety for user
- For users often donning and doffing the prosthesis during the day
- For users sitting a lot



Valve

- ... requires a liner with the following characteristics:
- The suction created by the valve reduces piston movement. Therefore the liner may be more comfortable (more flexible)
 - Suction increases adhesion at the residual limb. The liner does not need this function
 - Can be used for specific weight bearing and total surface weight bearing socket

Copolymer + Valve

- Highly flexible liner for nearly every residual limb shape
- Skin care ingredient for users with dry skin
- For users with MOBIS 3 activity



Harmony System

- ... requires a liner with the following characteristics:
- The elevated vacuum created by the Harmony System provides an excellent suspension on the residual limb. The liner does not need this function
- Elevated vacuum provides excellent rotations control. Total surface weight bearing socket is required
- Viscoelasticity is needed to support the total surface weight bearing socket



Polyurethan + Harmony

- For MOBIS 3 + 4 users
- Optimal pressure distribution in the prosthetic socket
- Increased blood circulation for effective residual limb health

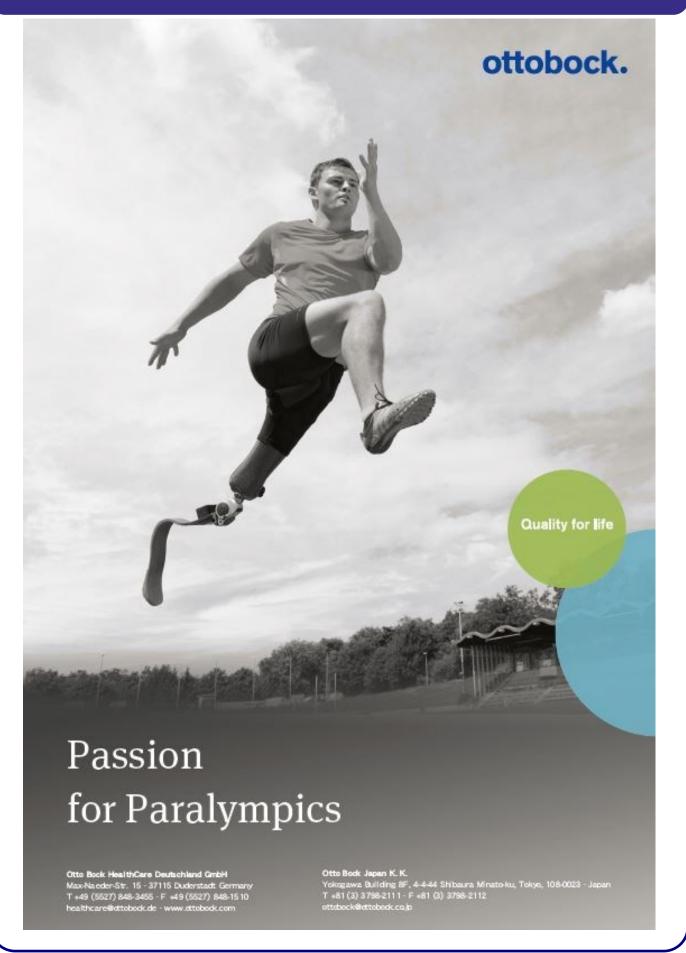


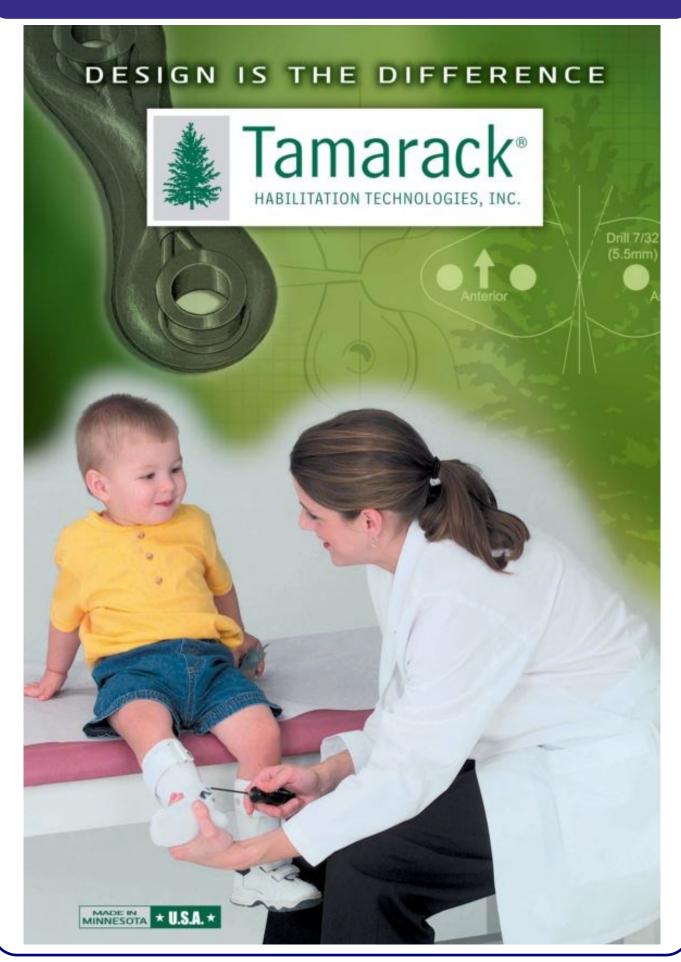
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Breakout Sessions Findings

<u>Session 1 - Curriculum Approaches to</u> <u>Achieve Relevant Competencies</u>

Learning objectives

- Discuss difficulties associated with the application of theoretical components in practical teaching
- 2. Compare and contrast pedagogical approaches and how they may/may not encourage application of theory into practice
- 3. Critically analyze the pedagogical approach used at your own institution and identify improvements that could be made to better assist students' application of theory into practice

Participant instructions

The majority of prosthetic and orthotic educational programs incorporate both practical and theoretical education. Combining practical and theoretical elements and encouraging student to apply theory in practice is a major challenge that many educators face:

- 1. Discuss how your educational program currently addresses this issue;
- 2. Identify curriculum approaches/models/activities that could be helpful in encouraging students to apply theory into practice;
- 3. What action needs to be taken to better assist students in applying their theoretical knowledge in clinical practice? Reflect upon changes that could be made to your current approach to teaching.

Summary of discussion points

- Real cases from clinical practice
- Training facility linked to production facility
- Teachers who demonstrate that they apply theory into practice
- Supervision
 - ⇒ Student: teacher ratio
- Supervision during internships
- Include theory testing when assessing for practical teaching
- Clear rubrics peer assessment
- Allow students time to discuss application of theory/why
- Consider hours dedicated to theoretical/practical teaching (are practical hours being compromised)
- Do not sacrifice basic concepts
- Curriculum review what is the need
- Quality control check if practical elements are of appropriate quality
- Partnership/collaboration with clinical departments
- Learning outcomes match with individual subjects
- Controlled/mentored internship post-graduation

Breakout Sessions Findings

- Peer teaching and peer assessment (assess the assessor)
- Learning contracts
- Balance practical work on students and "real" patients
- Educate the educators
- Involve teachers of theoretical subjects/external lecturers into practical teaching
- Feedback to students to help them apply theory into practice
- Intermediate exams/continuous assessment students work with a patient and present the case (this should mimic the final exam)
- Increase access to patients with limited/no access to high tech components (developing world)

Session 2 - Student Assessment

Learning objectives

- Compare and contrast different modes of assessment
- Analyze how different modes of assessment can be more or less appropriate to meet a variety of learning objectives

Participant instructions

Each group has received a different set of learning objectives extracted from the ISPO Category I professional-prosthetist/orthotist information package. For the set of objectives that your group has been assigned:

- Identify different modes of assessment that could be used to assess each of the learning objectives
- Critically evaluate each mode of assessment. What are the advantages and disadvantages of each mode

Group 1 (subject: prosthetics and orthotics)

Assess the medical condition of a patient related to their orthotic or prosthetic management using appropriate investigative techniques which include patient history taking and clinical testing:

- Similar strategies for different outcomes
- Formative is better than summative
- Case presentations generate prescription
- Check lists of tasks (eg. ROM, MMT)
- Oral questioning of students

Breakout Sessions Findings

- Demonstration by student and patient models
- Observation of student by instructor
- Self assessment
- Peer evaluation
- Writing a log book, clinical documentation
- With novice students = check lists are better
- With advanced students less prescriptive strategies that probe global understanding
 - Reliably measure and capture a positive cast or image of clients" appendage while correctly positioning the body part and if appropriate apply the necessary corrective force system
 - 2. Construct the device using appropriate fabrication techniques in preparation for the initial fitting

Group 2 (subject: anatomy)

- 1—Describe parts and organs of the body by systems (eg. skeletal system, endocrine system)
- Test oral exam + palpation
 - ⇒ Oral exams are time consuming
- Written exam
 - ⇒ More economical and time effective
 - ⇒ Not affected by nerves and language barriers
- 2—Synthesize and apply the principles of anatomy and physiology to describe the human locomotor system
- Case scenario which muscle is not working/contracture
- Computer model e.g. use computer model of the body and systematically modify which muscles are active and inactive
- Evaluation report present results of case scenarios
- Interviews and oral exams
- 3—Demonstrate competence that is required in a clinical setting when identifying and differentiating between surface anatomical structures of the lower limb, upper limb spine and trunk:
- Demonstration of palpation skills

Breakout Sessions Findings

- Practical assessment
 - ⇒ Assess the most appropriate body orientation
- Assessment using cadaver/dummy model demonstrations

Group 3 (subject: biomechanics)

- 1. Discuss mechanical principles governing human motion
- 2. Utilize temporospatial, kinematic and kinetic information to distinguish between normal and abnormal function of the upper limbs, lower limbs and spine
- 3. Analyze the forces at a skeletal joint for various static and dynamic activities
- Multiple choice questions
- Multiple choice questions based on scenarios
- Patient assessment (observational gait analysis)
- Sketches and explanations
- Short answer questions
- Extended response questions (with force analysis in particular)
- Questions related to ground reaction force and muscle activity
- Theoretical exam
- Scenarios
- Assignments
- Mid-term and final exams (must be theoretical and applied)
- Case questions
- Peer assessment
- Self assessment
- Practical activities
- Think aloud strategies
- Questioning students during clinical work
- Video analysis
- Calculations

Group 4 (subject: statistics)

- 1. Analyze, describe, interpret and present information contained in various data sets
- 2. Examine the concepts of estimation and hypothesis testing with applications to population proportions, means, variances
- 3. Perform effective descriptive statistical analysis as well as statistical inference for a variety of mainstream applications
- Guided questions and data sheets
- Analysis assignment to demonstrate analytical skills
 - ⇒ Potential for fair grading
 - ⇒ Limited liberty (as it is guided)
- Oral exam to determine comprehension

Breakout Sessions Findings

- Written test more objective
- Essay incorporating program like SPSS
- Design research study and statistical methodology to discuss analysis

Group 5 (subject: pathology)

- 1—Describe the basic pathological processes that underlie disease (e.g.: cell injury and necrosis, inflammation and healing, ischemia, infarction and neoplasia),
- Written quiz/exam
- Oral presentation individual or group
- Assignment mind mapping
- 2—Apply knowledge of basic pathological processes to explain the etiology, pathogenesis, structural and functional manifestations of diseases commonly encountered in clinical practice, including relevant conditions affecting locomotion and body systems (circulatory system, respiratory systems, musculoskeletal system and nervous system
- Written objective(?)
- Oral
- Case/patient 2 different angles to a case
- Discussion
- 3—Discuss the pathophysiology of abnormalities present at birth (congenital deficiencies).
- Oral written
- Clinical observation OSCE
- Peer group work

Group 6 (subject: mechanics)

- 1—Apply the concepts of stress and strain in the analysis of basic structural elements.
- 2—Explain mechanisms underlying failure of structures under deformation.
- 1&2 context specific (who is teaching and how is it made relevant)
- Multiple choice
- Exam
- Collect samples of mechanical device failure to analyse (more qualitative)
- Diagrams labelling stresses
- Peer assessment e.g. trim line design

Breakout Sessions Findings

- Testing components- AFO's change materials, etc.
- Group projects

3—Apply the mechanical principles of statics and dynamics to quantify and explain linear and angular motion of the human body.

- Dynamic movement in biomechanics
- Movement analysis
- Example—gait—ask student to discuss
- Pendular motion of transfemoral shank

Session 3 - Instructional Methods

Learning objectives

- 1. Compare and contrast different instructional methods and their benefits and disadvantages when applied in prosthetic and orthotic curriculum
- 2. Critically analyze the instructional methods used at your own institution and identify improvements that could be made to better assist students' learning

Participant instructions

Each group has been provided with course content that has been extracted from the ISPO syllabus guidelines for Category I level education. Consider the course content that your group has been assigned.

- 1. What types of instructional methods/learning activities would best facilitate student learning of the course content you have been assigned
- 2. What are the benefits and disadvantages of the instructional methods/learning activities you have identified
- 3. Reflect upon the methods used at your own institution. What changes could you make to facilitate student learning

Group 1 (subject: anatomy)

1—Definition of anatomical terms; regions of the body; body cavities and their contents; functional arrangement of organs into systems – related to the properties of life.

- Classroom based: oral teaching with practical demonstration in a dissection lab
- Dissection lab: identify landmarks on cadavers. Helps for teaching muscle origin and insertion and helping understanding of muscle function, nerves (superficial and

Breakout Sessions Findings

deep): helps to build a visual understanding of how the body functions which can be related back to prosthetic and orthotic design

Models: Eg. Skeletal models, muscular system models

<u>Disadvantage:</u> students have limited access to the lab to access the models 3D design software: for skeletal, muscular system e.g., Visible Body: Human Anatomy Atlas

<u>Advantages:</u> Student can refer to 3D modeling at any time (e.g. at home after school hours), has a very practical approach, flexible

- Observation in Orthopaedic Wards and Operating Theatre: helps with communication between disciplines especially if you can communicate in the same language and terminology as the surgeons
- 2—Ranges of movement (lower/upper limbs and spine), normal gait (introduction to kinematics, kinetics and EMG studies), introduction to amputee and pathological gait. Kinematic analysis of limbs
- Practical demonstration with hands on practical skills. First on volunteers without pathologies then repeated with patients
- Goniometres: ROM, lecture and demonstration, practice sessions, clinical experience
- Multimedia: videos for gait analysis, 3D modeling
- 3D: gait assessment

•

<u>Disadvantages:</u> Expensive Kinetics: gait analysis lab, PPT

Group 2 (subject: lower limb prosthetics)

Note: discussion points not submitted

Group 3 (subject: lower limb orthotics)

1—Foot biomechanics – analysis of joint forces (normal, pathological, effects of footwear)

- Basic knowledge about anatomy and mechanics
- Computer model
- Live model
- Compare sound leg with affected leg

Breakout Sessions Findings

- Board drawing free body diagram
- Video normal and pathologic
- Wearing orthosis and footwear (set in different angle) and walk
- 2—Ankle-foot orthotics casting, rectification, manufacture and fitting/alignment
- Revision of surface anatomy
- Peer assessment
- Film with common mistakes taken during sessions
- Using dual action joint and set in different angle
- Fabrication of AFO with different angle
- Learning landmark, casting on other students (later on real patients)

Group 4 (subject: materials technology)

Note: discussion points not submitted

Group 5 (subject: biomechanics)

- 1—Mechanical principles governing human motion.
 - i) Students demonstrate to each other, and then bring in patient models: walking, stair climbing, other skills.

Advantages: fast learning compared to lectures

Disadvantage: organizational effort required

ii) Video based (kinematic processing) up to gait lab

Advantages: quantity based

Disadvantage: difficulty getting patients into gait lab

iii) Theoretical presentations

Advantages: quantity based

Disadvantage: boring, not visual enough

iv) Wooden models, stick figure models

Advantages: visual

Breakout Sessions Findings

Disadvantage: subjective

v) Series of lectures (ROM, Moments, EMG/muscle group – plot based)

Advantages: real, gold standard

Disadvantage: boring, not visual enough, information overload

vi) OGA

Advantages: real

Disadvantage: subjective

vii) Theoretical, OGA and instrumented gait analysis

Advantages: real and very accurate, applied.

Disadvantage: time consuming, \$\$\$, information overload

Areas of Improvements: the wording should be cleared up. For example:

- Understanding gait
- Human motion taught at the level of temporal parameters (time, distance based quantities), video/observational kinematic (ROM, joint angles), kinetic (moments, powers, EMG), energetics
- 2—Biomechanical principles to generate optimal solutions to clinical problems in prosthetics and orthotics
- Our group could not answer this section, as we were confused on what was being asked by the term "biotech principles" or "optimal solutions to clinical problems".

However, we feel that many of the instructional methods from 1, could be applied here as well.

Group 6 (subject: pathology)

The student will have an introduction to the following areas:

- 1—Paralysis resulting from nerve lesions, stroke and other causes:
- Case-based discussions (depends on the level of the student)
- Study visit to a hospital
- Patients come to facility and participate in the education (important to monitor student progress)
- Multimedia clips

Breakout Sessions Findings

2—Amputations and amputation levels:

- Amputees participate in the education (becoming difficult to recruit patients)
- Lectures from visiting medical doctors (important that we recruit the right person)
- Multimedia clips

3—Spinal and thoracic deformities:

- As above
- Limb deformities.
- As above

Note: We felt that it is important that the right person is involved in teaching. Important to use patients/cases and multimedia as much as possible.

Session 4—Enhancing Collaboration Between Schools

- Develop a data base of educational resources
- Develop a data base of educators (name, email and skill bands)
- Using available technologies i.e. guest lecturers online
- Having guest examiners
- Sharing resources on teaching/assessment/professional support
- Potential of exchanging the students/teachers-financial resource constraint for the time being
- Keeping contacts with the people we know in education
- Identify the expertise of each school through ISPO support in this survey for future support
- Data gathering and support in research for better evidence based practice
- Forum for PO schools to discuss ideas/experiences/exposures/quality/techniques...
 etc.
- Be available to support younger schools/less resourced schools
- Having people with fresh eyes to input to a programme
- ISPO can identify who can be that volunteer from each country to promote ISPO include National Member Society
- Establish more workgroups for intended purpose, but need to be well organized, procedure, structure, flow of communication
- Support through training, sharing resource, knowledge, experience
- Faculty development programme by ISPO, for example: training of trainer
- Working group from different countries to improve guidelines that can apply for all
- Enhance faculties from school to school

Breakout Sessions Findings

- From individual institute, share the expertise for short courses or seminars
- From individual institute, share responsibilities, helping organizing seminar, short course in individual country
- Improve ISPO web platform for more interactive, resources sharing
- Close checked of ISPO on activities of regional societies
- Online learning
- Upgrade programs
- Support for institutions in other countries
- Sources of funding
- Lots of pressure
- Potential assistance from people with fund raising skills
- Collaborations to enable future development of programs
- Creative opportunities
- HR or financial expertise from groups outside of P&O to advise on how P&O can solve these issues
- Schools with different skill sets could develop modules that could then be available to other schools
- Students enrolled in 1 any university that takes part
- Evaluated as part of the existing programme
- Collaborate with mainland China programmes
- Lots of potential to assist
- MOOC (Massive Online Open Course)
- Open for all free online tuition
- Pay to sit assessment for degree
- Ongoing GEM activities
- Online
- F2F meetings
- Possible staff exchanges
- Think beyond the immediate cost
- Staff visits internationally
- China has funding and interest
- Improve communication
- Notice board for staff movement
- Exchange
- Short term employment
- Funding for staff travel/exchange
- P&O educators to meet during/after ISPO Lyon 2015
- E-platform to share information from GEM 2014. Develop a toolbox that can be used by educators
- Share and compare results from research. Helpful in funding applications

Breakout Sessions Findings

- Initiative must come from individual universities (about the post above)
- System of providing literature to schools that can't afford or get them
- To have a dictionary with our terminology. Published by ISPO? Connected to the ISO
 -terminology
- Include new technology in the Guidelines, e. g. CAD/CAM, 3D-printing, osseo integration, invasive techniques (electrodes)
- Don't be afraid to ask for help, e.g. need for books, references etc.
- Contact list of all educators globally on the ISPO web page. Not only the recognized schools
- Maybe arrange into subgroups sometime during the next GEM meeting. Cat I & II to discuss between themselves. Have both generic groups and divided groups
- Guidelines to good references/textbooks (P&O related)

Format of future GEM's

- Allocate half a day meeting at ISPO World Congress on plenary session in education
- Include interdisciplinary team (educators) in educational discussions
- For next GEM meeting's break-out sessions, request that each school present a "Teaching Projects" as mentioned (Who wants to be a millionaire; The Rockets scale; etc.)
- The GEM break-out sessions were mainly addressed to Educators not other professionals involve with O&P school ... consider it for the next GEM
- For next GEM meeting consider the utilization of Live Streaming for those that can not attend
- Promote the ISPO Evaluators participation
- Importance of the continuity (follow up) communication within GEM participants and others not yet involved

Others suggestions

- Possibility of establishing a Quality Management System to:
- Strengthen the ISPO image worldwide & increase membership
- Facilitate the evaluation process (focus on institutional, not directly to graduates)
- Guidance (with possible solutions) on recommendations given to the educational institution considering available resources
- Develop a profile for the ISPO Evaluators (considering the local and/or regional reality)
- More consideration to the importance of the translation of documentation



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