


orzone



Cesma meeting
stefan.hallin@orzone.com

VR to OR – first transfer of skills study

 Seymour and Others

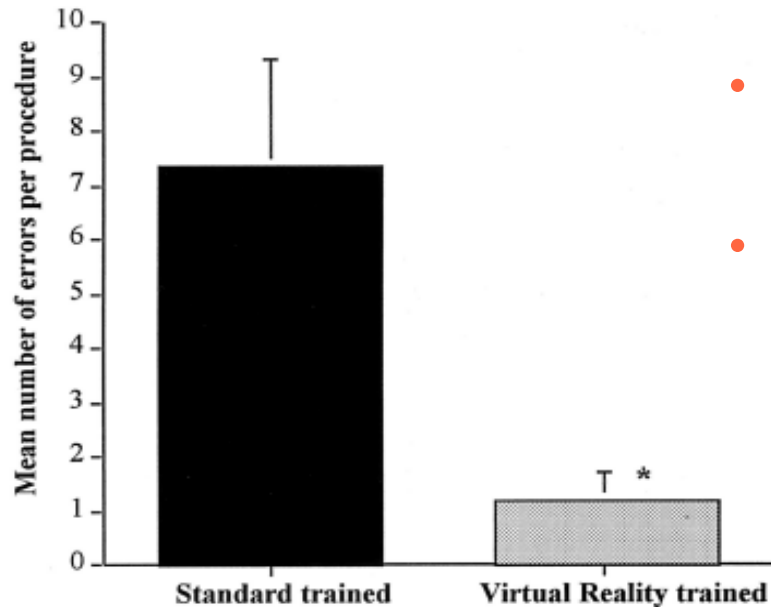


Figure 5. Total number of errors scored per procedure for VR and ST groups. The mean number of errors per procedure was significantly greater in the ST group than in the VR group ($P < .006$).

- Example: The study by Seymour et al from 2002.
- Simulator-trained residents operated 29% faster
- Control group 600% more errors.

What comes next?

- Sub-optimal performance in non-technical skills (teamwork, leadership, communication) is common¹ and can lead to errors² and poor outcomes.³
- Lack of team communication caused 43% of errors in surgery.⁴

1. Yule S, Flin R, Maran N, et al: Non-technical skills for surgeons in the operating room. A review of the literature. *Surgery*. 2006 Feb;139(2):140-9

2. Stevenson KS et al. Measurement of process as quality control in the management of acute surgical emergencies. *Br J Surg* 2007 Mar; 94((3):376-81.

3. Christian CK, Gustafson ML, Roth EM, et al: A prospective study of patient safety in the operating room. *Surgery*. 2006 Feb;139(2):159-73.

4. Gawande AA, Zinner MJ, Studdert DM, Brennan TA: Analysis of errors reported by surgeons at three teaching hospitals. *Surgery* 2003;133:614-21.

5. Wilson R et al: Quality in Australian health care study. *Med J Aust*. 1995 Nov 6;163(9): 458-71.

6. Makary MA et al: Operating room teamwork among physicians and nurses. *J Am Coll Surg*. 2006 May;202(5):746-52.

Trends We See Within Medical Training (impact on assesment methods)

Technical skills training becomes non-technical and technical skills training

- Strong support in literature
- Necessary step to improve patient safety
- Focus on medical doctors shifts to the whole team
 - Natural step when communication skills etc. are trained
- Training of a single process step turns into a comprehensive process approach
 - Virtual hospitals, training from admission to discharge



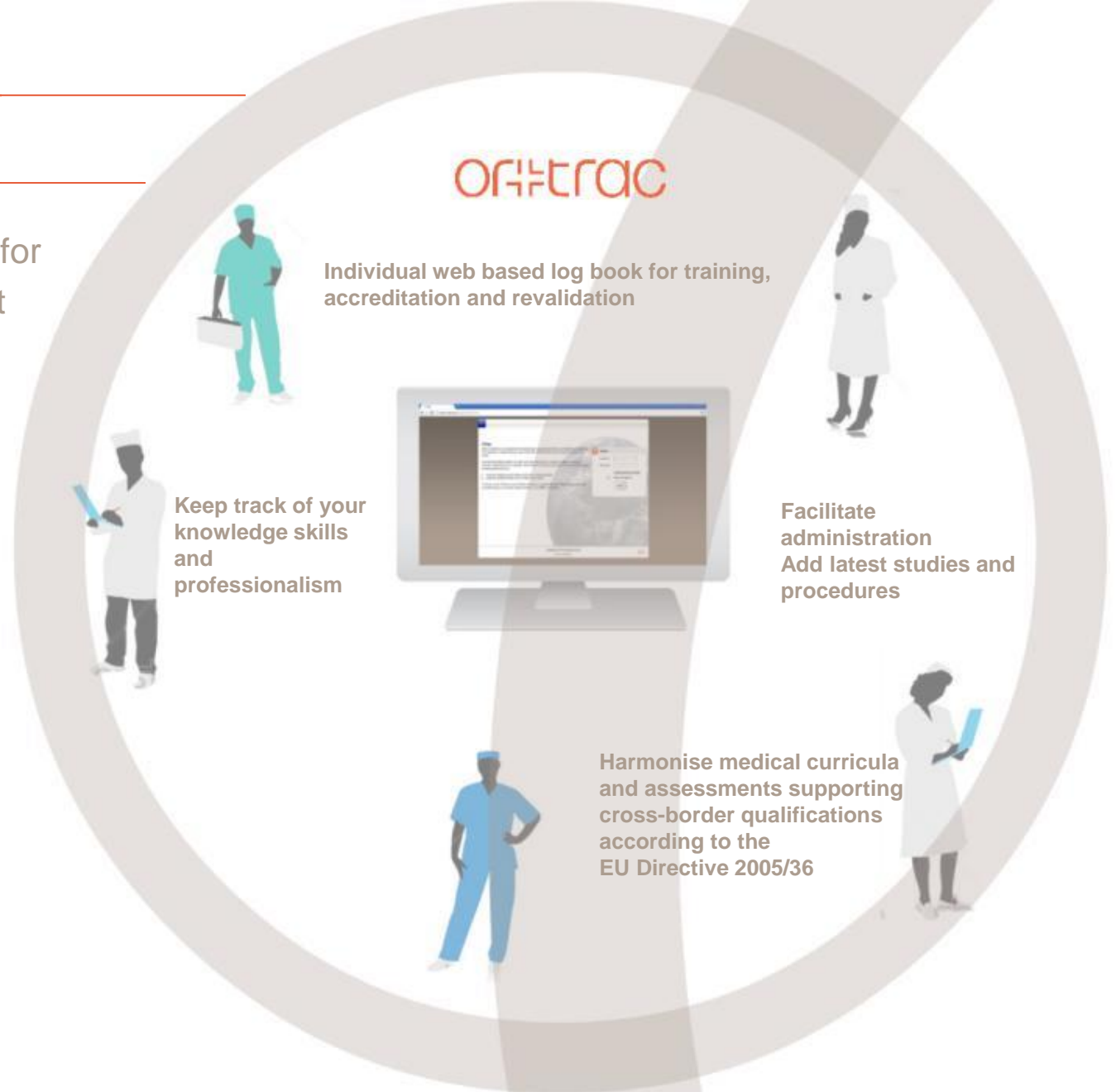
Example of high end multi disciplinary, team based training/assessment





Portfolio

A curriculum based tool for training and assessment



Validating the Methodology of Online Examination of Medical Specialists
A Technical Review of the ESA OLA Pilot Exam of 2011

Secure login



Ortrac

Ortrac (e-platform) is a web application for harmonisation of postgraduate training, accreditation and revalidation. The application is developed through a joint venture with UEMS (European Union of Medical Specialists) and Orzone.

One of the aims with the platform is to offer UEMS associated bodies, i.e National Societies and National Authorities, appropriate tools for integration of harmonised curricula into daily practice. Ortrac essentially supports the following core processes:

- keep track of trainee progress towards becoming a medical specialist.
- create and maintain formative and summative assessments.

To become a user of Ortrac you must be Doctor in training or a qualified Specialist. Please request a personal account through your local Society, National Authority or your UEMS representative.

Sign in

Email

Password

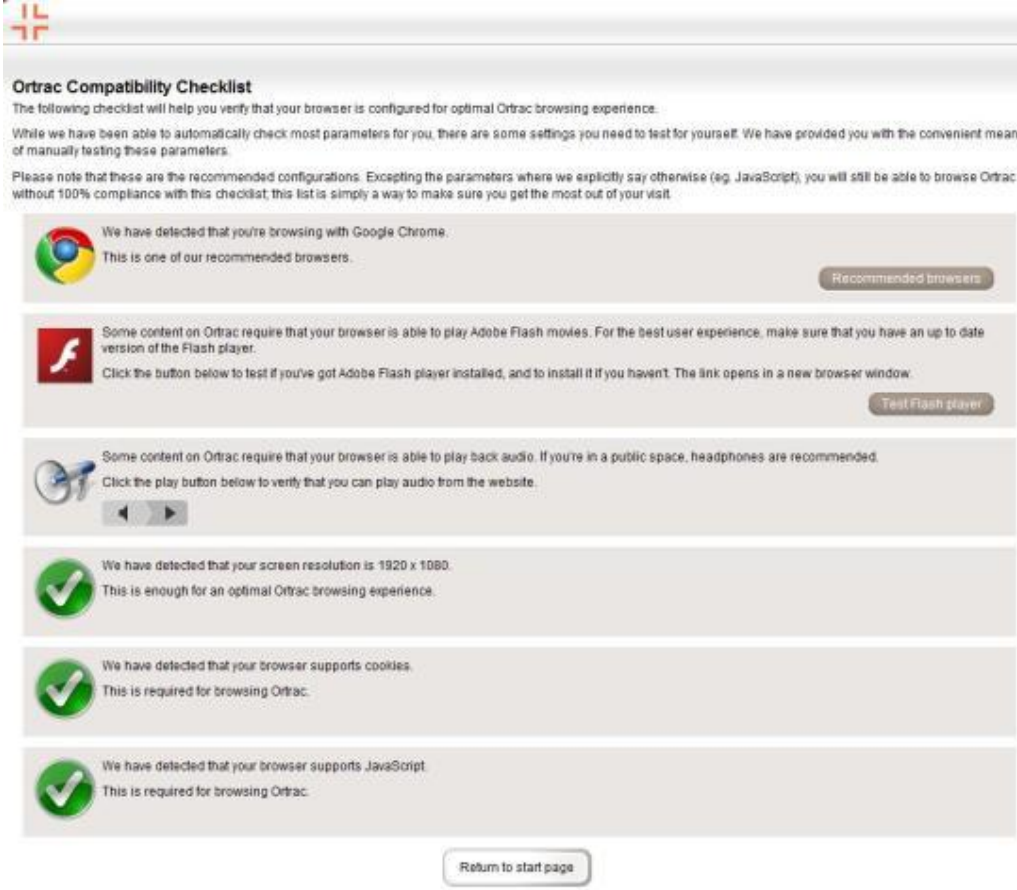
[I cannot access my account](#)

☐ Keep me logged in

Don't have an Ortrac account, but think you ought to?

Is your computer configured for optimal browsing experience? The Ortrac Compatibility Checklist will help you find out.

Checklist for Browser and Software compatibility




The screenshot shows a web browser window displaying the 'Ortrac Compatibility Checklist'. At the top left is a red logo consisting of a cross with rounded ends. The title 'Ortrac Compatibility Checklist' is in bold. Below it, a paragraph explains the purpose of the checklist. Another paragraph states that while automatic checks are provided, some manual testing is required. A third paragraph notes that the configurations are recommended, except where specified otherwise. The checklist items are presented in a series of light gray boxes, each with an icon on the left and text on the right. The first item shows the Google Chrome logo and states that the browser is recommended, with a 'Recommended browsers' button. The second item shows the Adobe Flash logo and provides instructions on how to test the Flash player, with a 'Test Flash player' button. The third item shows a speaker icon and provides instructions on how to test audio playback, with a play button icon. The fourth, fifth, and sixth items each show a green checkmark icon and state that the detected configuration (screen resolution, cookies, and JavaScript) is sufficient for an optimal experience. At the bottom of the checklist area is a 'Return to start page' button.


Ortrac Compatibility Checklist



The following checklist will help you verify that your browser is configured for optimal Ortrac browsing experience.


While we have been able to automatically check most parameters for you, there are some settings you need to test for yourself. We have provided you with the convenient means of manually testing these parameters.


Please note that these are the recommended configurations. Excepting the parameters where we explicitly say otherwise (eg. JavaScript), you will still be able to browse Ortrac without 100% compliance with this checklist, this list is simply a way to make sure you get the most out of your visit.


 We have detected that you're browsing with Google Chrome.
This is one of our recommended browsers. [Recommended browsers](#)

 Some content on Ortrac require that your browser is able to play Adobe Flash movies. For the best user experience, make sure that you have an up to date version of the Flash player.
Click the button below to test if you've got Adobe Flash player installed, and to install it if you haven't. The link opens in a new browser window. [Test Flash player](#)

 Some content on Ortrac require that your browser is able to play back audio. If you're in a public space, headphones are recommended.
Click the play button below to verify that you can play audio from the website. 

 We have detected that your screen resolution is 1920 x 1080.
This is enough for an optimal Ortrac browsing experience.

 We have detected that your browser supports cookies.
This is required for browsing Ortrac.










 We have detected that your browser supports JavaScript.
This is required for browsing Ortrac.

[Return to start page](#)

Writing questions

The administration tool in Ortrac provides a feature Rich and secure environment for creating questions

Question

B **I** **U** Paragraph          HTML

By comparison to an adult on a weight basis, a neonate has a higher

Alternatives



Start adding alternatives. Boxes for adding more alternatives will appear as you type, or by clicking 'Add alternative'.

True	False	Alternative
<input checked="" type="radio"/>	<input type="radio"/>	cardiac output
<input checked="" type="radio"/>	<input type="radio"/>	percentage of total body water loss every 24 hours
<input checked="" type="radio"/>	<input type="radio"/>	oxygen consumption
<input type="radio"/>	<input type="radio"/>	

☐ Randomize order of alternatives each time this question is shown Add alternative

Attachments

Click 'Browse' to start uploading images and video associated with the question.



Browse

Rewieving Questions

Ortrac provides a easy to use Framework for reviewers of questions and tests



Question

By comparison to an adult on a weight basis, a neonate has a higher

Alternatives

True	False	
<input checked="" type="radio"/>	<input type="radio"/>	cardiac output
<input checked="" type="radio"/>	<input type="radio"/>	percentage of total body water loss every 24 hours
<input checked="" type="radio"/>	<input type="radio"/>	oxygen consumption

Attachments



Question details

Question number	#1379	Randomize alternatives	No
Author	David Hedlund	Question type	2. True or false
Created	2011-09-06		

[View history](#) [Preview question](#)

Approve

Length

Difficulty

Approve

Reject

Please specify the reason for rejecting this question

Reject

Writing Tests

The authoring tool for test creation within Ortrac delivers a time saving and easy to use method

▼ Test details

Title
The name of the test, as shown in any clickable links.
Exam on Development and Behavior

Test type
Indicate whether this is a formative or summative test
Summative ▼

Info
This description will be shown on the test's introduction page

B **I** **U** | Format ▼ |

Author
The name of the person or organization creating this test.

Randomize questions
Indicate whether the order of questions should be randomized for each attendee.
☒ Randomize questions

Scope

05. DEVELOPMENT ✕

06. BEHAVIOR ✕

Topic
-- Please select -- ▼

Topic objective
-- Select topic first -- ▼

Sub objective
-- Select objective first -- ▼

Add Cancel

Continue

Adding Questions to Test

- Search of the question data bank
- Easy locate for the test already reserved questions
- Browser functionality

▶ Test details

▶ Writers

▼ Questions

SearchReservedAllSelected5

All Questions

<input checked="" type="checkbox"/>	Question	Number	Author	Type	Length	Difficulty	Topic/Objective
<input checked="" type="checkbox"/>	#7	1	NN	1	<div></div>	<div></div>	Entire curriculum
<input checked="" type="checkbox"/>	#8	2	NN	1	<div></div>	<div></div>	Entire curriculum
<input checked="" type="checkbox"/>	#14	3	NN	1	<div></div>	<div></div>	Entire curriculum
<input checked="" type="checkbox"/>	#15	4	NN	1	<div></div>	<div></div>	Entire curriculum
<input checked="" type="checkbox"/>	#16	5	NN	1	<div></div>	<div></div>	Entire curriculum

◀ First page

PAGE 1

Last page ▶

Summary

The selection of questions above renders a test with the following properties

Number of questions	Difficulty	Mean length
5	<div></div>	<div></div>

Continue

Reviewing Tests

Reviewers can approve or reject a test with comment functionality on required changes

Questions

#	Question	Date added	Author	Type	Difficulty	Topic/Objective
1	#47	2010-08-09	NN	1		Entire curriculum
2	#965	2010-09-23	NN	1		Entire curriculum
3	#966	2010-09-23	NN	1		Entire curriculum
4	#991	2010-09-30	NN	1		Entire curriculum
5	#993	2010-09-30	NN	1		Entire curriculum
6	#996	2010-09-30	NN	1		Entire curriculum
7	#998	2010-09-30	NN	1		Entire curriculum
8	#1005	2010-09-30	NN	1		Topic 3 (3.3)
9	#1019	2010-09-30	NN	1		Topic 3 (3.2)
10	#4	2010-08-09	NN	1		Entire curriculum

◀ First page PAGE 1 Last page ▶

Test points

Max points	1	Assessment level	70%
Each correct answer will be awarded 1 point.			
There are no penalties for incorrect answers.			

Test details

Test number	# 174	Randomize questions	No
Author		Number of questions	10
Created	2011-05-30	Test type	Summative

[View history](#)

Approve

Approving a summative test will make it available for administrators to schedule. It will not be made immediately public.

Approve

Reject

Please specify the reason for rejecting this test

Reject

Scheduling of Exams

Test can be made in different time zones

Details

Schedule

Start date

The test will be available for test takers from this date.

2011-09-07 10:00 2011-09-07 08:00 GMT

End date

Test answers will no longer be accepted after this date.

2011-09-07 12:00 2011-09-07 10:00 GMT

Time zone

Start and end times above are given in this time zone:

(UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna

Attendees

All users Selected 2

All users

<input type="checkbox"/>	Lastname	Firstname	Country
<input type="checkbox"/>	Gallagher	Tony	Sweden
<input type="checkbox"/>	Gogolin	Thomas	Sweden
<input checked="" type="checkbox"/>	Goldik	Zeev	Sweden
<input type="checkbox"/>	Hall	Jim	Sweden
<input type="checkbox"/>	Hedlund	David	Sweden
<input type="checkbox"/>	Hedlund	David	Sweden
<input checked="" type="checkbox"/>	Hill	Sue	Sweden
<input type="checkbox"/>	Kearney	Peter	Sweden
<input type="checkbox"/>	Kearney	Peter	Ireland
<input type="checkbox"/>	Kremer	Mathias	Sweden

First page

1 2 PAGE 3 4 5

Last page

Publish

Save draft

Add more sessions

Rewieiving Tests in Preview mode

Preview mode shows all questions
the exact way as they will appear

Question 1 / 100

Question

What can be said of the following letter sequence:
B, C, A

Answer

Indicate for each alternative whether it is true or false.

True	False	
<input type="radio"/>	<input type="radio"/>	It is a three letter sequence
<input type="radio"/>	<input type="radio"/>	It is in alphabetical order
<input type="radio"/>	<input type="radio"/>	It is in all uppercase letters

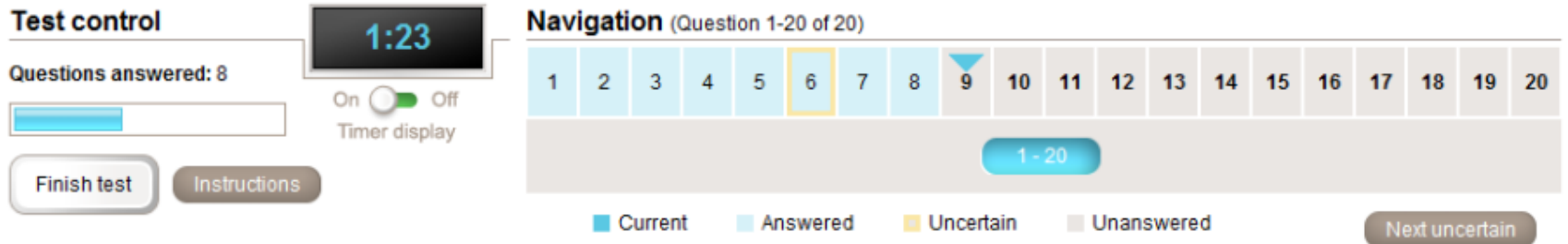
☐ Mark as uncertain

Save & Continue

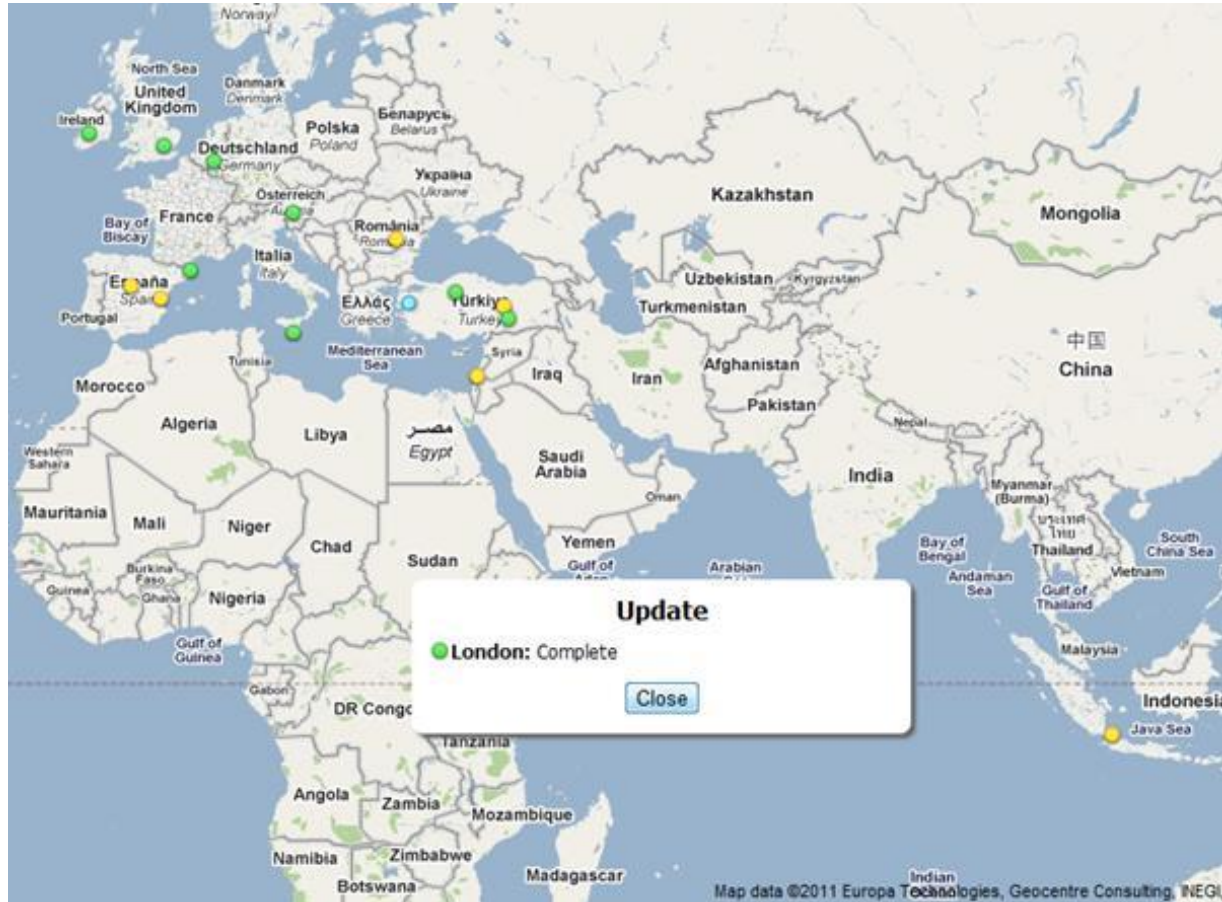
OK

Taking Tests

Throughout the test candidates have access to an intuitive overview of the entire test



10 countries, 15 cities

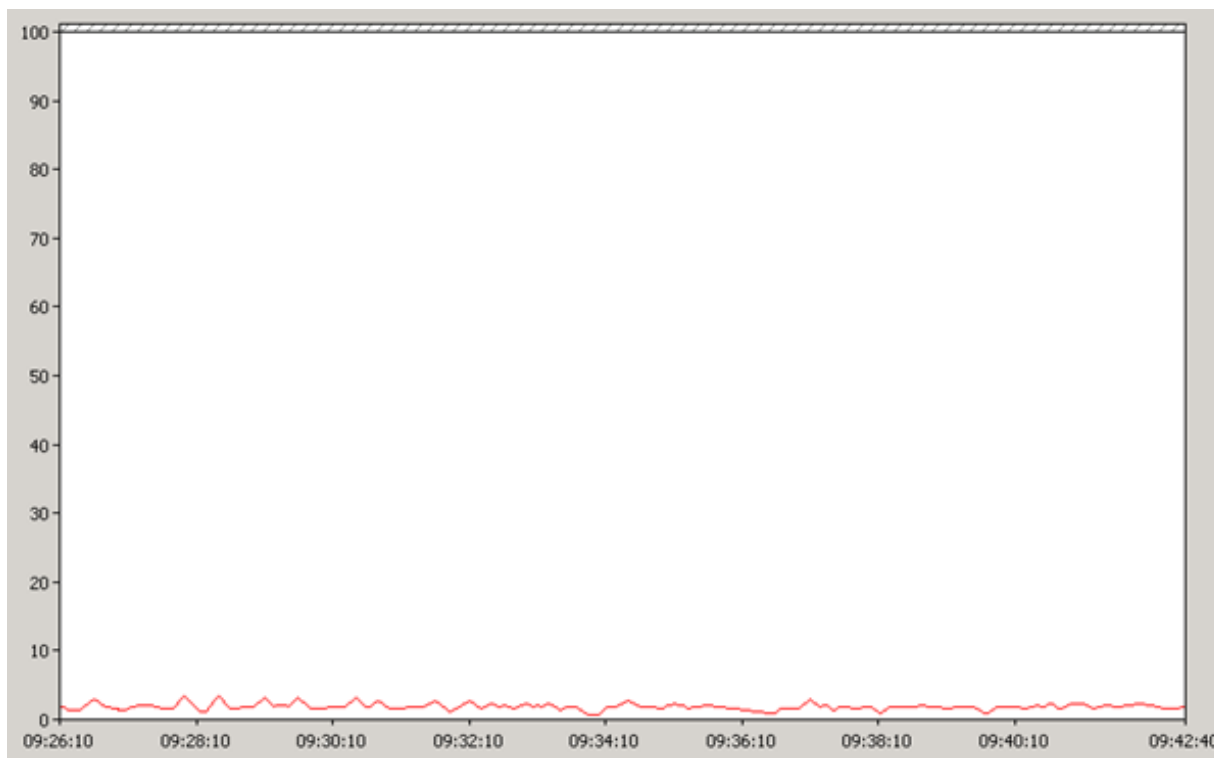


A mix of urban and rural areas – 131 participants

OLA Centre	Participants invited	Attending participants	Attendance
Ankara	7	7	100%
Bucharest	18	15	83%
Cork	6	6	100%
Girona	10	10	100%
Jakarta	25	24	96%
Jerusalem	10	60	60%
Liège	2	2	100%
Ljubljana	6	6	100%
London	2	2	100%
Madrid	8	7	86%
Malatya	25	18	72%
Malta	6	6	100%
Manisa	1	0	0%
Sanliurfa	4	4	100%
Valencia	19	18	95%
Total	149	131	88%

Table 1. Geographic distribution of participants.

Max capacity – 1 million examinations/year

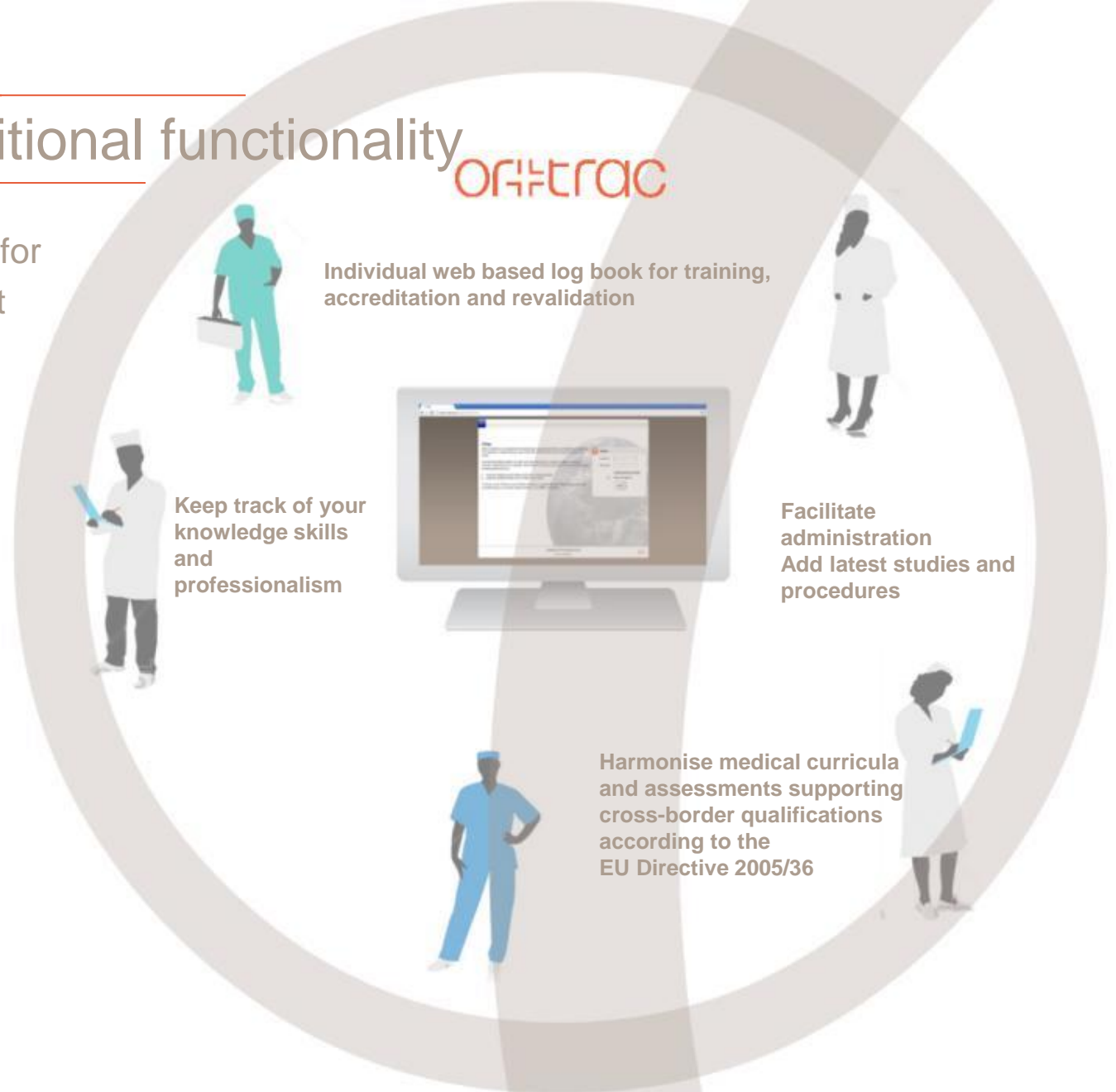


Result

- Current IT infrastructure, even in rural areas is sufficient – 99.994% uptime in pilot
- Redundancy works – 100.000% data integrity (no data loss)
- Works with different computers etc
- Capacity sufficient
- Logistic works (supervisors etc)

Portfolio – additional functionality

A curriculum based tool for training and assessment



Taking Tests

In formative tests, candidates are given immediate feedback once the test is finished.

Summary

Date	Topic / Objective	Time	% Correct	Recommended
2011-09-06	Topic 4 (4.1)	00:13	● -	-

Results

All Incorrect

Question 1

Which of the following is considered standard view of Left Coronary Artery (LCA)?

Answer

[Report](#)

<input type="radio"/>	LAO 40, caudal 30
<input checked="" type="radio"/>	RAO 10, caudal 40
<input type="radio"/>	LAO 50, caudal 10
<input type="radio"/>	RAO 10, cranial 10
<input type="radio"/>	AP, cranial 5

Export of results and statistics

Statistics

Alternative	Mean	Point Biserial Correlation Coefficient	Item Discrimination Statistics (33%)
1	0.25	0.32	0.00
2	0.25	0.30	0.00
3	0.75	0.18	1.00
4	0.00	0.00	0.00
5	0.25	0.67	0.50
◀ First page PAGE 1 Last page ▶			

Security benefits

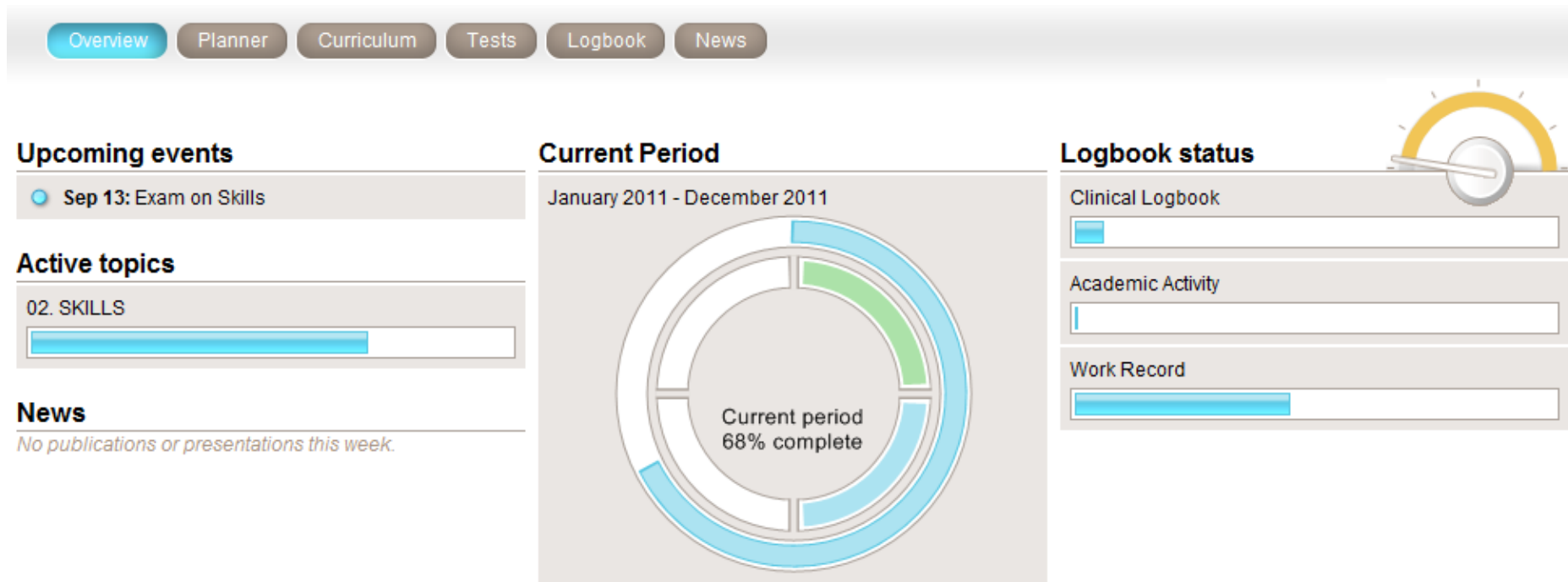
- If MCQ tests are reviewed and sent as attachments
 - Attachments are printed – can be seen by others
 - Public computers – others can read attachments
 - Attachments forwarded – read by non-authorized
- How does Orzone manage this
 - Documents can be labeled to be non-printable
 - Login and logout automatical. Doesn't matter if person have access to public computer (can still not access MCQs)
 - Reviews can only be forwarded to authorised persons

Cost/Financial benefits

- Online is not only safer, it is more flexible and cost-effective
 - A test room can be opened anywhere
 - For supervised tests, wherever there is a supervisor and student(s)
 - For non-supervised tests – wherever there is a student
 - No cost for room setup
 - No cost for paper test administration (scanning, reporting)
 - Can be hundreds of euros per test
 - Retain knowledge
 - Information is stored on difficulty of questions, time to responses etc
 - Faster to create new tests
 - Use knowledge automatically from previous tests (difficulty, time etc)
 - Less time to administer and create tests
 - Easy to create new learning/test opportunities
 - Opportunity for new revenue streams

Putting the pieces together

Assemble all aspects of learning and assesment



Ortrac

www.ortrac.com

Messages1

Dr John A. Smith

Log out

Medical Specialty

Overview

Planner

Curriculum

Tests

Logbook

News

Medical Curriculum

PREFACE

Since the last revision of the *APA/COMSEP General Pediatric Clerkship Curriculum* revision in 2002, medical student educators have had to respond to a variety of external and internal forces. The first was the ubiquitous implementation of the Accreditation Council Graduate Medical Education (ACGME) Outcomes Project. This document specified that graduate medical education should be grouped around six core competencies: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. A major effect of the Outcomes Project is that most curricula are now specifically organized around competencies. The second major external influence has been the updating and revision of the Liaison Committee on Medical Education (LCME) Standard number 2 (ED-2). This standard clearly states that each clerkship must identify the types and numbers of patients that must be seen during the clerkship, the level of student involvement in the care of those patients, and the setting in which the care occurs. Moreover, each clerkship must have in place a system to monitor whether students are able to see the required number and types of patients and be able to make corrections during the clerkship experience. This has had an enormous impact on clerkships, as clerkship directors can no longer assume that students will have a broad clinical experience. Finally, many have recognized for some time that the Core Curriculum is quite extensive. The curriculum was originally intended to guide the pediatric curriculum during the entire medical school experience. Nonetheless, clerkship directors have struggled with what competencies to address during their clerkships.

To address these issues a great number of COMSEP members have participated in the revision of the Curriculum. The COMSEP Curriculum and Evaluation Task Forces and the APA Medical Student Education Special Interest Group worked together for over two years to finish the current revision. The Clerkship Directors are deeply indebted to the enormous time and energy these individuals dedicated to the project. A listing of the participants can be found in the Appendix.

The 2005 Curriculum differs from the previous curriculum in several important ways. First, the curriculum has been organized explicitly as a competency based curriculum. While the original chapter heading have been retained, the content has been assigned to knowledge or skills-based competencies. Secondly, each competency in the curriculum has been designated as either a universal (U), core pediatric (CP), or mastery (M) level competency. Competencies designated as universal are not unique to Pediatrics but are generally important throughout the medical school curriculum. For example, many professionalism competencies are universal. Core pediatric competencies are those that are essential and or unique to the Pediatric Clerkship experience and should be emphasized during the pediatric clerkship. Students should be able to demonstrate

Active topics

02. SKILLS

04. GROWTH

05. DEVELOPMENT

All topics

01. PROFESSIONAL CONDUCT AND ATTITUDES

02. SKILLS

03. HEALTH SUPERVISION

04. GROWTH

05. DEVELOPMENT

06. BEHAVIOR

07. NUTRITION


08. PREVENTION


09. ISSUES UNIQUE TO ADOLESCENCE


10. ISSUES UNIQUE TO THE NEWBORN

11. MEDICAL GENETICS AND DYSMORPHOLOGY

12. COMMON ACUTE PEDIATRIC ILLNESSES




Messages  Dr John A. Smith Log out


Medical Specialty 

Overview **Planner** Curriculum Tests Logbook News

All topics Active topics

Timescale: Month  Year

Aug '11	Today: Aug 25	Oct '11	Nov '11	Dec '11	Jan '12
	02. SKILLS				
RVISH					
	04. GROWTH				
	05. DEVELOPMENT				
		06. BEHAVIOR			

Jump to... 

Edit mode iCal

Patient sex:



86



HR	SpO ₂	ABP	awRR
130	100	Sys. 120/60	30
50	75	(80)	8
			14

Notes

View

Procedure: WHO checklist Hospital: Date: Trainer:

Anaesthesia

Completed: 00:01:09

Completed: 02/07/09

Completed: 00:21:05

Completed: 02:01:01

Mixed 02/01/04

Time out 2.3

Anticipated critical events Mission team reviews. Has stability

Anticipated critical events. Anaesthesia team reviews: Are there

Medical Specialty

Overview Planner Curriculum Tests **Logbook** News

Logbook

Clinical Simulated Training Training CME Academic Activity Publications Work Record

Status	Name	Location/Event	Date	Your Role	Trainer	
Pending	Bone Marrow aspiration	Methodist Hospi...	2011-08-11	Unsupervised	David Hedlund	
Pending	Lumbar puncture	University of M...	2011-05-02	Observer	David Hedlund	
Pending	Obtaining vesicular and pastul...	Cleveland Clini...	2011-08-02	Supervised	David Hedlund	
Pending	Throat swab for Culture	Intensive Care,...	2011-08-22	Supervised	David Hedlund	
Pending	Defibrillation	Rikshospitalet ...	2011-07-13	Supervised	David Hedlund	
Pending	Performing an ECG	Ortho 2	2011-07-14	Unsupervised	David Hedlund	
◀ First page PAGE 1 Last page ▶						

Add logbook entry

Key challenges to implement a coherent e-portfolio

- Easy to use
- Curriculum driven
- Balance between central governance and local flexibility. Must be able to adapt at national and integrate at local hospital level. Become part of daily life.
- Integration with CME/CPD etc
- Must support broad range of training methods and assessment methods (much more than just MCQs)
- Finally – there are >900 clinical skills centers globally - little collaboration and coordination – Opportunity for future

orzone



Cesma meeting
stefan.hallin@orzone.com