

Joint Action Health Workforce
Planning and Forecasting



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The dimensions of e-learning in the health care education

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Main topics:

- Advantages of e-learning in the medical education
- Possible forms and areas of application
- Electronic exams
- Points of conflict in the implementation of e-learning
- Prospects for development

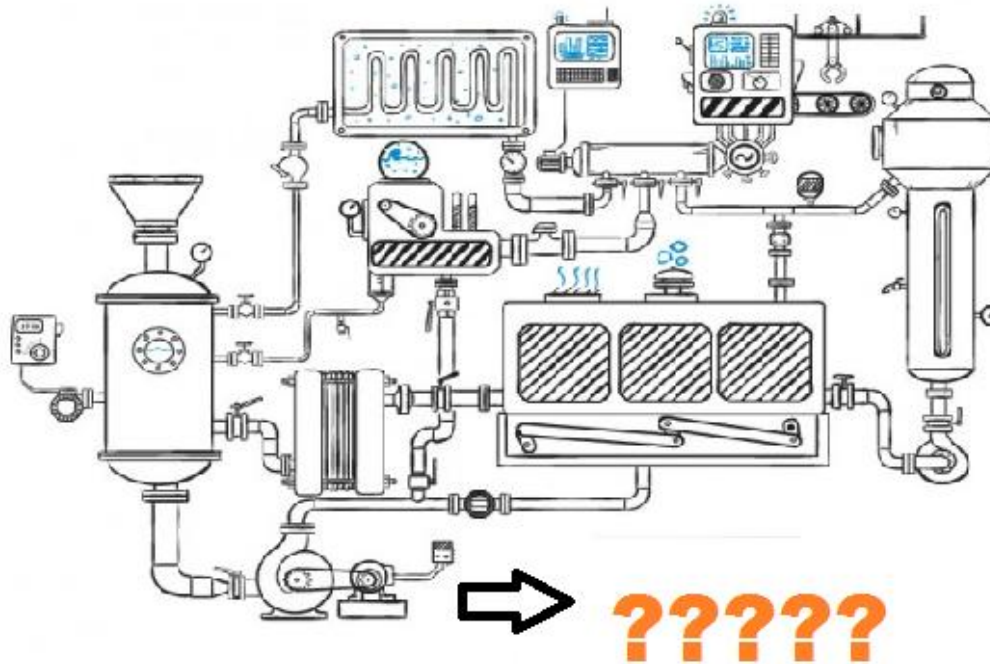


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the Health Programme
of the European Union

Advantages of e-learning in the medical education



Should we use such a complicated machine ...



Advantages of e-learning in the medical education

...to produce a simple egg...



Advantages of e-learning in the medical education

...when we have enough hens that lay these eggs naturally?



Advantages of e-learning in the medical education

This is the main question that should be asked in the introduction of various forms of e-learning:

Does it make sense to invest so much effort, money and intellectual resources in something that we will use as a form of traditional learning?

Advantages of e-learning in the medical education

- Self-study or with a tutor
- Unlimited online access of students to the system; learning regardless of time and place
- Distance learning
- Access to learning materials in users' mobile phones
- Individual control of the educational process
- Using interactive exercises and tasks
- Simulation of operations and manipulations without risk to patients
- Simulation integration in the curriculum
- Objective control of learners' knowledge and skills
- Ability to upload teachers' video lectures
- Introduction of interactive components in the lectures
- Using modern forms of communication and collaboration - discussions, journals, blogs, virtual classrooms, etc.



Possible areas and forms of application

Application in the following areas (the chosen platform is irrelevant):

1. Learning content
2. Communication
3. Tests and exams



Possible areas and forms of application

1. Learning content

Installation
of learning
content.



/We currently
manage about
1200 courses/

Build Content	Assessments	Tools
<i>Create</i>		<i>New Page</i>
Item		Content Folder
File		Module Page

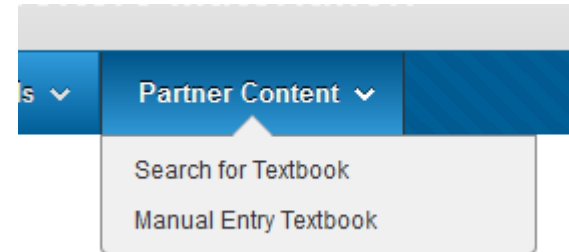
Audio		Blank Page
Image		<i>Mashups</i>
Video		Flickr Photo
Web Link		SlideShare Presentation

Learning Module		YouTube Video
Lesson Plan		xpLor Content
Syllabus		
Course Link		
Content Package (SCORM)		

Possible areas and forms of application

1. Learning content

Installation
of textbooks
and e-books:



McGraw-Hill Connect

McGraw-Hill Connect is a web-based assignment a
Learn about McGraw-Hill Connect

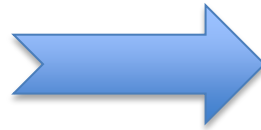


McGraw-Hill SimNet

McGraw-Hill SimNet offers you a complete solution -
Learn about McGraw-Hill SimNet

Possible areas and forms of application

1. Learning content
Installing links,
atlases, dictionaries
and reference books:



DUDEN SH

Körperatlas: Einblicke ins Innenleben
aktualisiert am 14.10.2015

Körpersysteme

- Atmung
- Bewegungsapparat
- Endokrines System
- Herz, Kreislauf
- Immunsystem
- Sinnesorgane, Nerven
- Urogenitalsystem
- Verdauung

Organe von A-Z

- Auge
- Bauchspeicheldrüse
- Brustkorb
- Darm
- Fuß
- Fußskelett
- Gallenblase
- Gehirn
- Geschlechtsorgane

Mann

© Wort & Bild Verlag Konradshöhe GmbH & Co. KG

Suchstichwort eingeben: Suchen

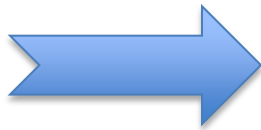
Das Roche Lexikon Medizin gibt es auch als Buch, CD-ROM, Kombiausgabe und mit Rechtschreibprüfung

Roche Lexikon Medizin 5. Auflage

Possible areas and forms of application

1. Learning content

Video and
audio lectures,
presentations:

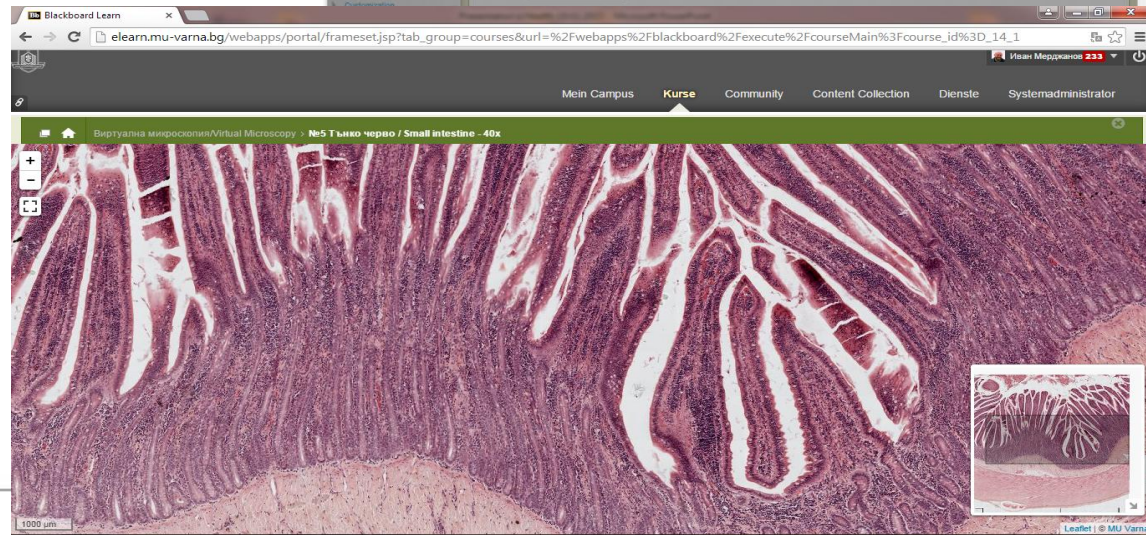
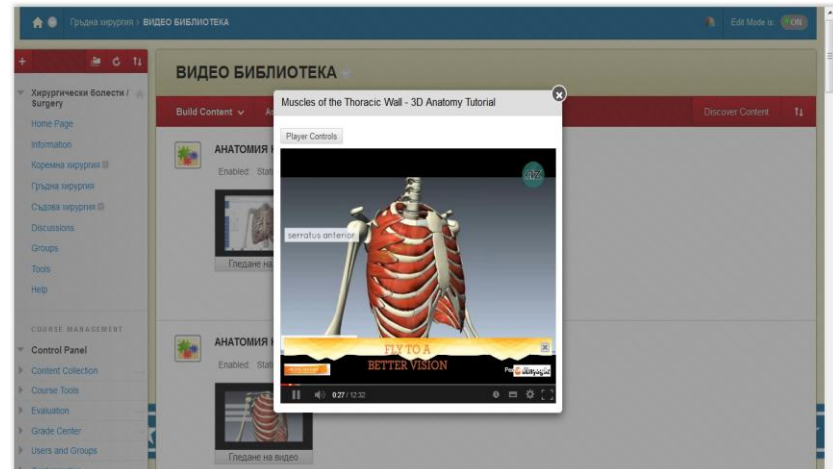
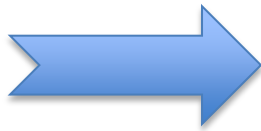


The collage displays three educational resources:

- Video cast of the lecture:** A video player showing a slide titled "General anatomy of skeletal muscles". The slide lists: "Origin (- head) → muscle end closer to midline", "Insertion → muscle end away from the midline", and "Belly - a thicker middle region". It includes a diagram of a muscle with labels for "Origin", "Belly", and "Insertion".
- Download video file:** A link to "Myology.mp4".
- Пигментни камъни (Pigment stones):** A video lecture showing two images of gallstones. The left image shows several greenish-yellow stones in a dark liquid. The right image shows a single, larger, irregularly shaped stone with dark spots.

Possible areas and forms of application

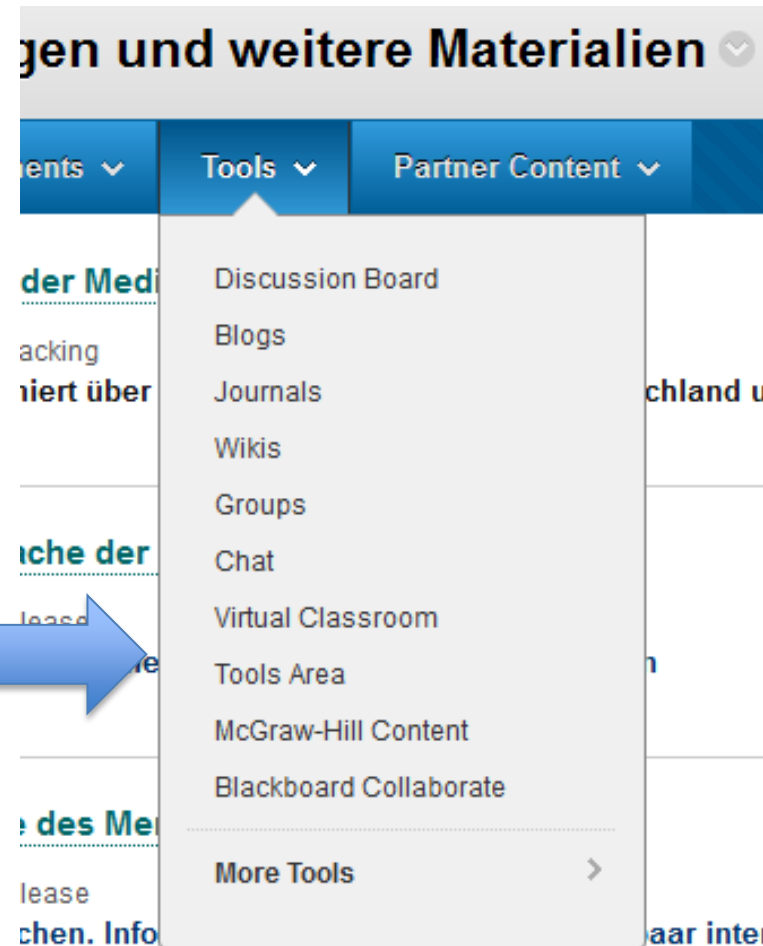
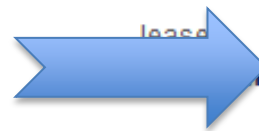
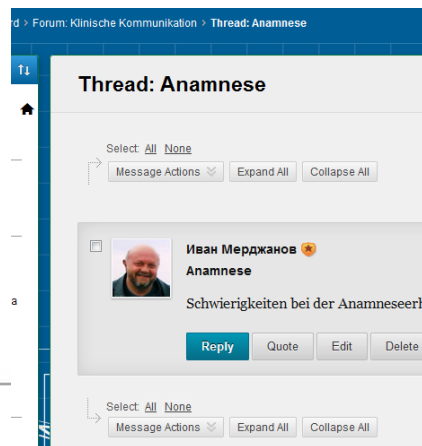
1. Learning content
Videos and
virtual
microscopy:



Possible areas and forms of application

2. Communication

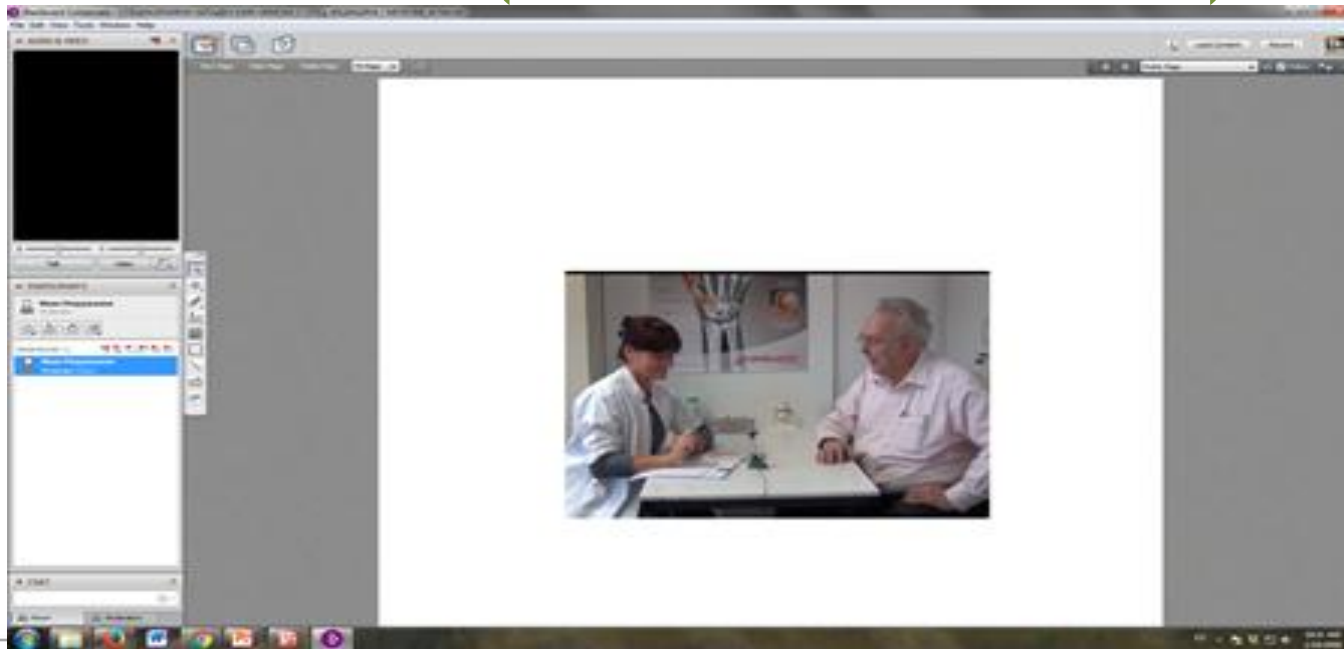
Synchronous and asynchronous communication



Possible areas and forms of application

2. Communication

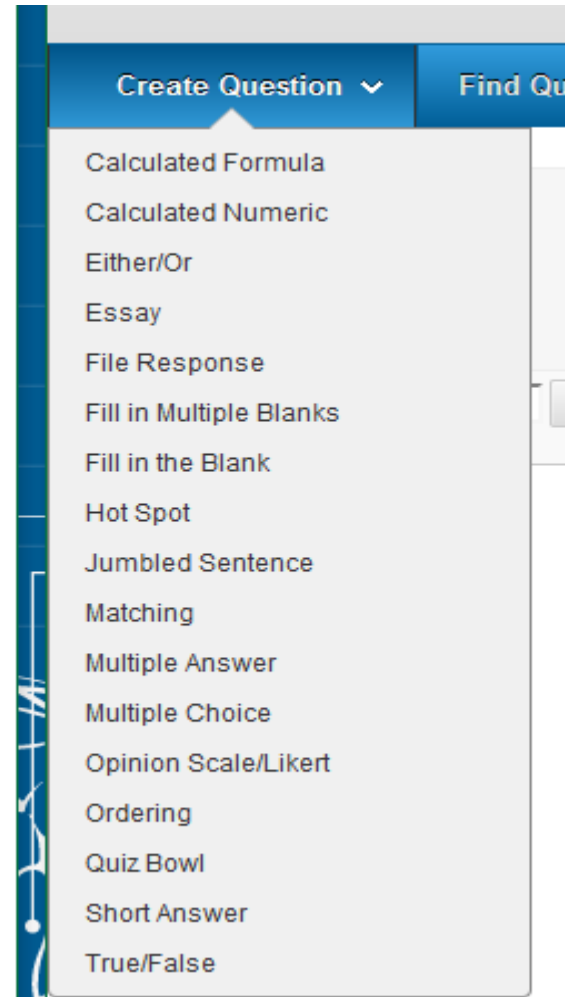
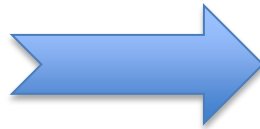
Virtual Classroom (Blackboard Collaborate)



Possible areas and forms of application

3. Tests and exams

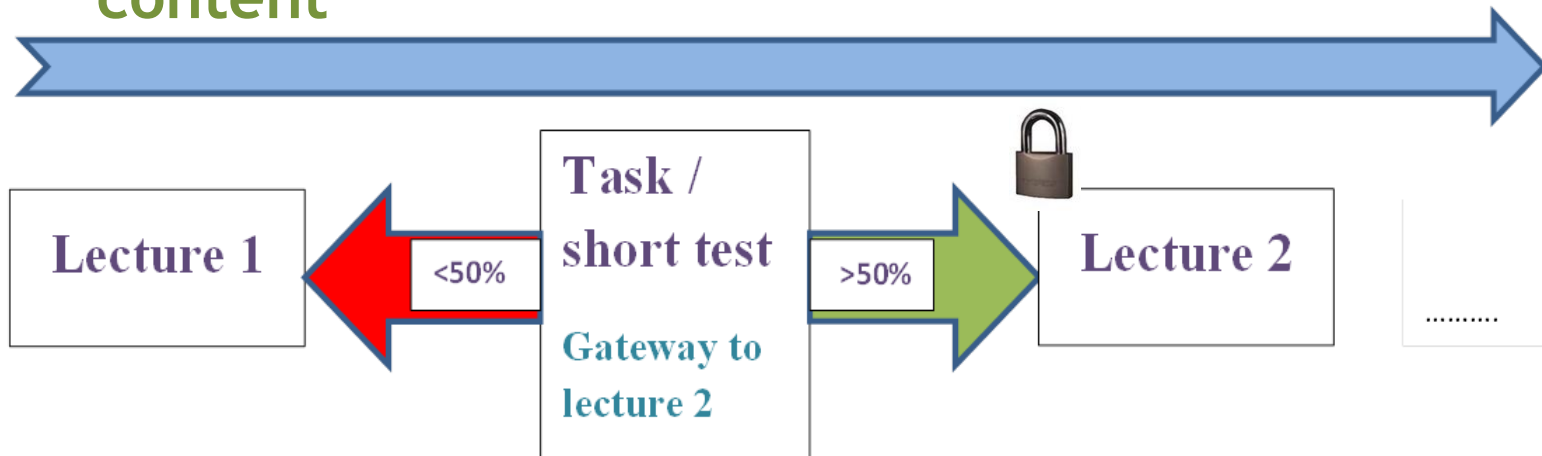
Different types of tasks and tests



Electronic exams

Tests during the semester / Progress Tests

Students have to continuously work with the learning content



Electronic exams

Development of pools of questions which generate tests with randomly selected items .

Pools

Pools are sets of questions that can be used in multiple tests or surveys. Pools can be imported from out

Build Pool

Import Pool

Name ▲	Number of Questions
Hörverstehen prüfung	7
Leseverstehen 1	1
Leseverstehen 1.1	22
Leseverstehen 2	7
Probe Pool	0
Proben 1	12

QUESTION 1

Lesen Sie den Text und ergänzen Sie die Sätze, indem Sie die Lösungen *a*, *b* oder *c* ankreuzen.

[Lesetext_Neu Lesetext zur Probeprüfung.pdf](#)

Nun die erste Frage:

Die Information des Statistischen Bundesamts, dass 52% der Deutschen übergewichtig sind, ...

- a. wurden ausschließlich mit Hilfe des Body-Mass-Index (BMI) erstellt.
- b. beruht auf die Prognosen der Statistiker.
- c. zeigen die Unsicherheit der Berechnung mit Hilfe des Body-Mass-Index (BMI)

QUESTION 2

Jens Mecklenburger gilt laut der Statistik als übergewichtig, ...

- a. da sein BMI über einem Wert von 25 liegt.
- b. da er nur fünf bis sieben Stunden Sport in der Woche treibt
- c. weil sein Körperfettanteil bei 17 % liegt.

QUESTION 3

Jens Mecklenburger muss eine höhere private Krankenversicherung zahlen, ...

- a. weil die Versicherer seine sportlichen Aktivitäten nicht berücksichtigt haben
- b. obwohl er normale Werte für einen 40-Jährigen hat
- c. da er für seine Altersgruppe übliche medizinische Werte zeigte

Electronic exams

For more than a year some progress and final tests were designed and administered in the following disciplines:

- **Anatomy,**
- **Biochemistry,**
- **General pathology,**
- **Medical genetics,**
- **Bulgarian language,**
- **Latin,**
- **German etc.**

Electronic exams



Electronic exams

Benefits:

- Immediate evaluation and assessment.
- Students instantly can see their results
- Objectivity is guaranteed
- The exam is cheat-proof
- The system automatically calculates the final score

Grade Center : Full Grade Center

When screen reader mode is on the table is static, and grades may be entered on the Grade Details page, accessed by selecting the table cell for the grade. When screen reader mode is off, grades can be typed directly into the table. To enter a grade: click the cell, type the grade value, and press the Enter key to submit. Use the arrow keys or the tab key to navigate through the Grade Center. [More Help](#)

Create Column Create Calculated Column Manage Reports

Move To Top Email Sort Column

Grade Information Bar

Last Name	First Name	Username	Student ID	ИЗПИТ 1 част - I	ИЗПИТ 2 част - I	оценка от писм	писменна чз	обща колона (1	устен изпит	крайна оцен
Аврамова	Радислав	ys11014049	11014049	10.00	56.00	66.00	19.00	85.00	6.00	6.00
Боршкова	Радислав	yeh11014012	11014012	18.00	40.00	58.00	15.00	73.00	5.00	5.00
Боршкова	Мариана	yeh11014100	11014100	18.00	60.00	78.00	19.00	97.00	6.00	6.00
Боршкова	Мариана	yeh11014093	11014093	16.00	50.00	66.00	15.00	81.00	6.00	6.00
Боршкова	Владислав	yeh11014018	11014018	14.00	56.00	70.00	20.00	90.00	6.00	6.00
Боршкова	Мариана	yeh11014005	11014005	16.00	42.00	58.00	17.00	75.00	6.00	5.00

Points of conflict in the implementation of e-learning

- **Resistance and mistrust of the teaching staff (attendance of lectures and seminars)**
- **Misunderstanding of the functions of e-learning / training - methodological incompetence**
- **The need to regulate the coordination of all units of the electronic management of the university**
- **Copyright issues remain unclear**

Prospects for development

- **Development and provision of methodological standards for the organization of electronic resources for additional e-learning.**
- **Development of electronic courses for postgraduate students in all specialties for passing the theoretical modules in distance learning**
- **Preparing curricula and electronic courses for distance learning masters programs outside the regulated professions.**
- **Accreditation of the platform for electronic and distance learning**

Prospects for development

- Provision of electronic modules in various fields for continuous professional development of doctors in the sense of lifelong learning
- Develop packages with e-learning modules aimed at external partners - institutions, schools and health institutions, associations etc.
- Setting up a "digital pedagogy" training center that prepares lecturers to work with electronic forms of teaching, assessment and communication.
- Setting up an examination center and delivery of specialized software for tests to ensure maximum security of the exams.

Conclusive Thoughts

Mobility and E-learning is....

A. Challenging because ...

- E-learning allows life-long trainings from any part of the world, i.e. no need for a doctor to go to Germany to be trained when she/he can do it from Bulgaria. (Virtual mobility)
- ICT enables virtual conferences, virtual internships and scientific consulting, and live video operations (including simulations), irrespective of distance and location.

Conclusive Thoughts

B. Stimulating because ...

- E-Learning allows self - learning practices, obtaining online certificates and gaining qualifications in one's preparation to work abroad.
- Stimulates cooperation and enables communication with foreign teams; facilitates the selection of new professionals.
- Contributes to development of global learning skills and knowledge in all medical fields and facilitates international mobility of health professionals.



THANKS

FOR YOUR ATTENTION