



Quality of e-learning materials evaluation criteria and assessment

by
Jaroslav Majerník
Vladimír Medvec

12th of December 2017
Hochschule für Technik, Wirtschaft und Kultur Leipzig

Face-to-face

- fundamental approach for a long time
- **lectures** – the most effective to introduce new themes/facts
- pedagogical limitations
 - large classes
 - repeating lectures
 - increasing workload ...

classrooms and teachers

LEARNER
CENTERED



interests and unique
needs of students

CURRICULUM
CENTERED

teaching mainly the
curriculum



Traditional education

- textbooks and printed materials go out of date quickly
- revisions and reprints are time and cost demanding
- **multimedia** – effective tool
- a lot of information disseminated across the study programs
- problem to be solved – practical utilization in pedagogical process



Multimedia tools



trends – expansion in traditional forms

reasons – from **technological innovations** to **budgetary constraints**

- universities reexamine curriculums and explore cost-effective alternatives

eLearning
Blended Learning
Distance Learning
Online Learning
Distributed Learning
Web Based Learning
Virtual Education
Computer Based Training
Hybrid Learning

- usually referred to the delivery of video
- flexible alternative delivery mode, demonstrative, attractive

- implementation of modern technologies
- used only as addition to traditional teaching form 
- fully functional didactic tools 
- to use effectively

trends: visualization, electronic processing, archiving, providing

demonstration: supported by visual information, often clinically sensitive

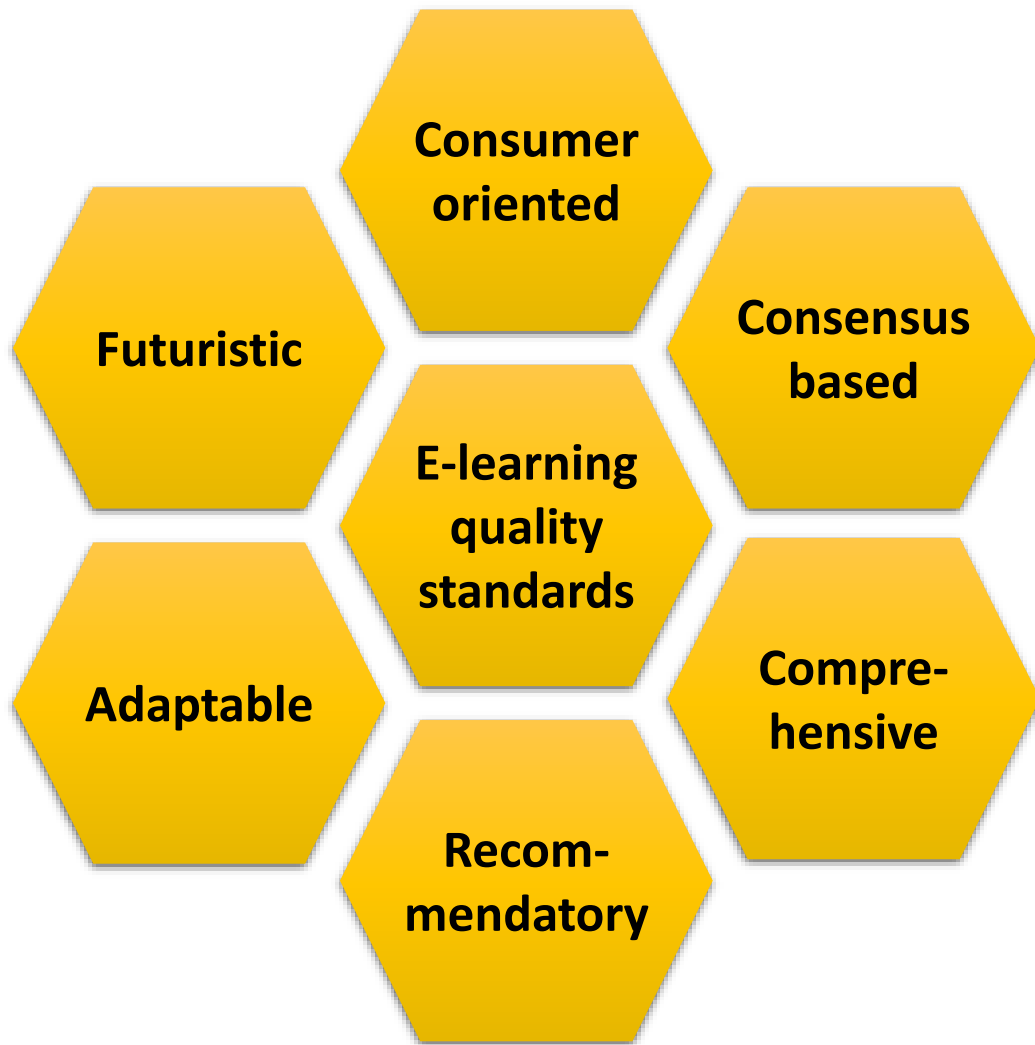
E-learning Quality Standards

- development is a challenging process
- a lot of activities all around the world

However, in general, the e-learning Quality standards:

- should be based on the needs of learners
- have to reflect best practices in student-centred learning
- could be easily implemented into the education process

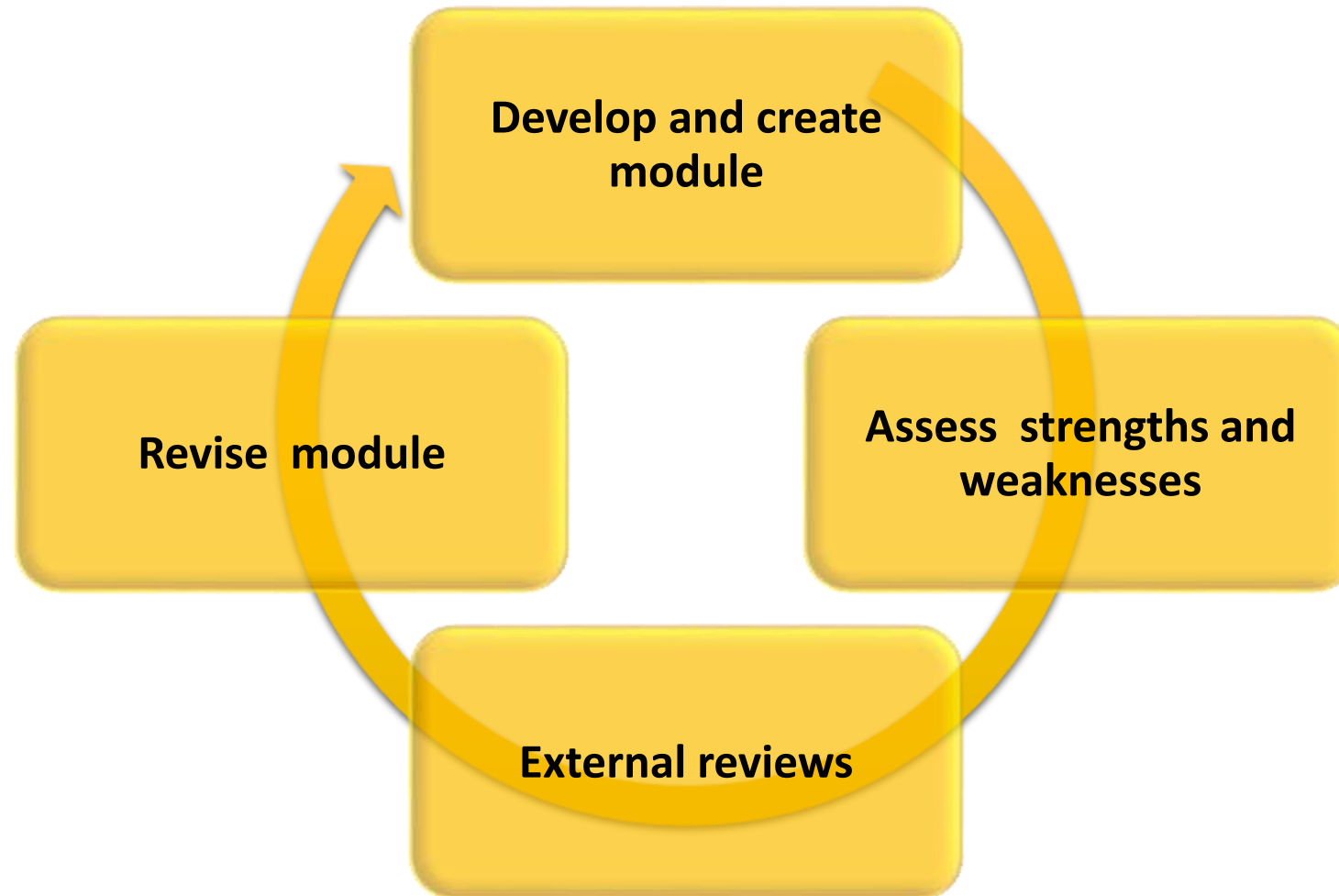
E-learning Quality Standards



- standards for all elements of the learning system (inputs and resources, processes and practices, and outputs and outcomes)
- quality standards for education that is delivered transnationally
- principles for good practice in undergraduate education and/or higher education
- requirements for promoting lifelong learning etc.

Quality Criteria

- essential features of high quality learning materials



Evaluation criteria

Main categories:

- user oriented
- digital resource
- education value

Evaluation criteria

Main categories:

- **user oriented**
- digital resource
- education value

The education material:

- should activate and motivate students
- have to be relevant to the subject being taught
- should be easy to use
- is as much self-explanatory as possible
- follows familiar topics for better orientation

Evaluation criteria

Main categories:

- user oriented
- **digital resource**
- education value

The education material:

- should combine various media formats including text, images, video, animation, simulations, etc.
- select and incorporate the media forms on an educational basis
- is able to be adapted to different contexts
- enable the use of individual components in different contexts
- facilitate a varied teaching and learning practice



Evaluation criteria

Main categories:

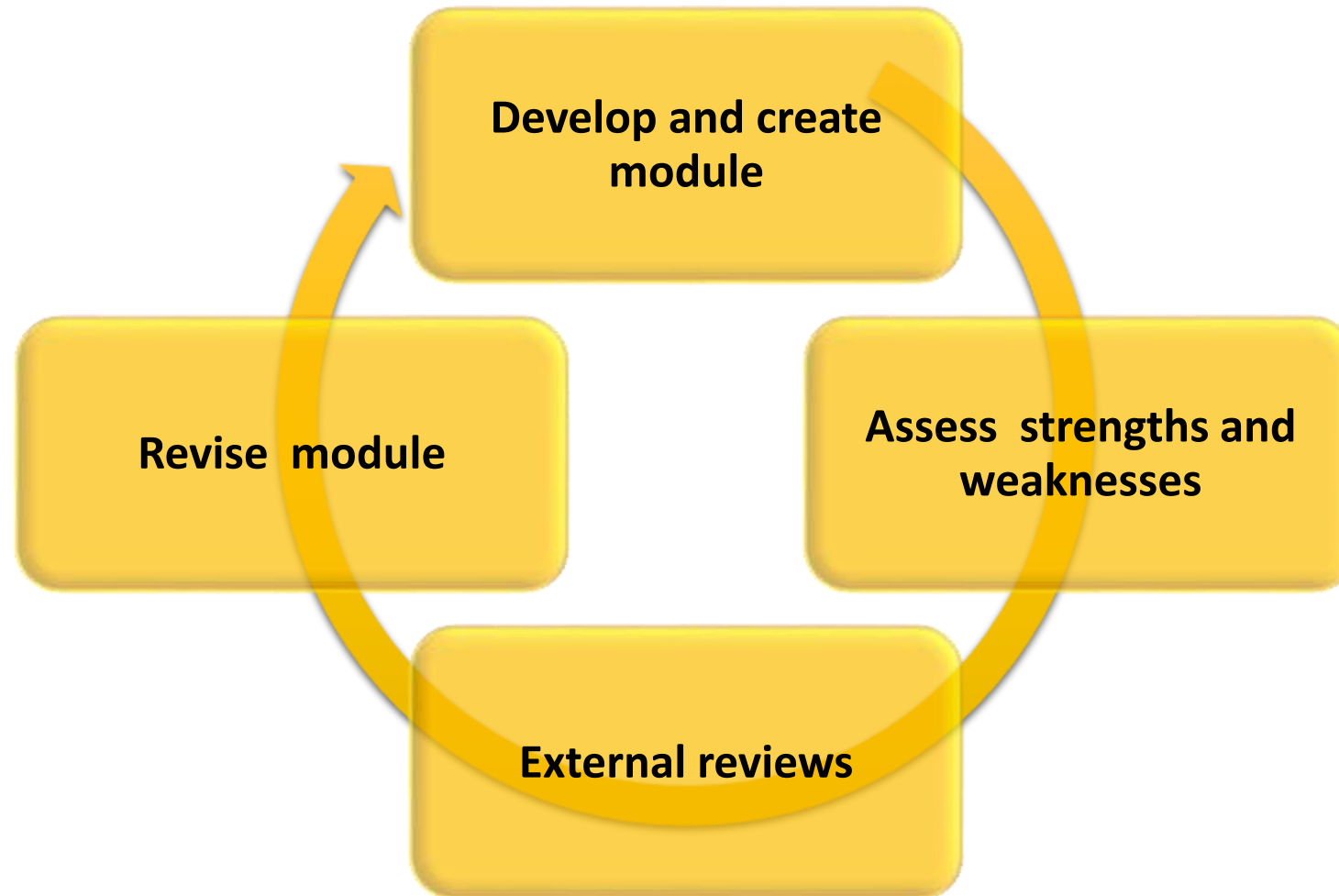
- user oriented
- digital resource
- **education value**

The education material:

- should be relevant to the current curriculum
- indicate how various goals in the curriculum are to be achieved
- have built-in possibilities for evaluation
- can be used or incorporated in formative and/or summative evaluation
- should be suited for individual work, teacher-led activity and group work
- should contain a teacher guide

Quality Criteria

- essential features of high quality learning materials



Technical aspects

- **Overall architecture and implementation**
(scalability of the system, modularity, extensibility, security, authentication, robustness, stability etc.)
- **Interoperability**
(LMS standards support, create and reuse units)
- **Cost of ownership**
- **Strength of the development community**
(installed base and longevity, documentation, user communities)
- **Licensing**
- **Internationalisation and localization**
(localisable user interface, text editing and storage, alternative language support)
- **Accessibility**
(text-only navigation support, scalable fonts and graphics)
- **Document transformation**

4D quality assessment

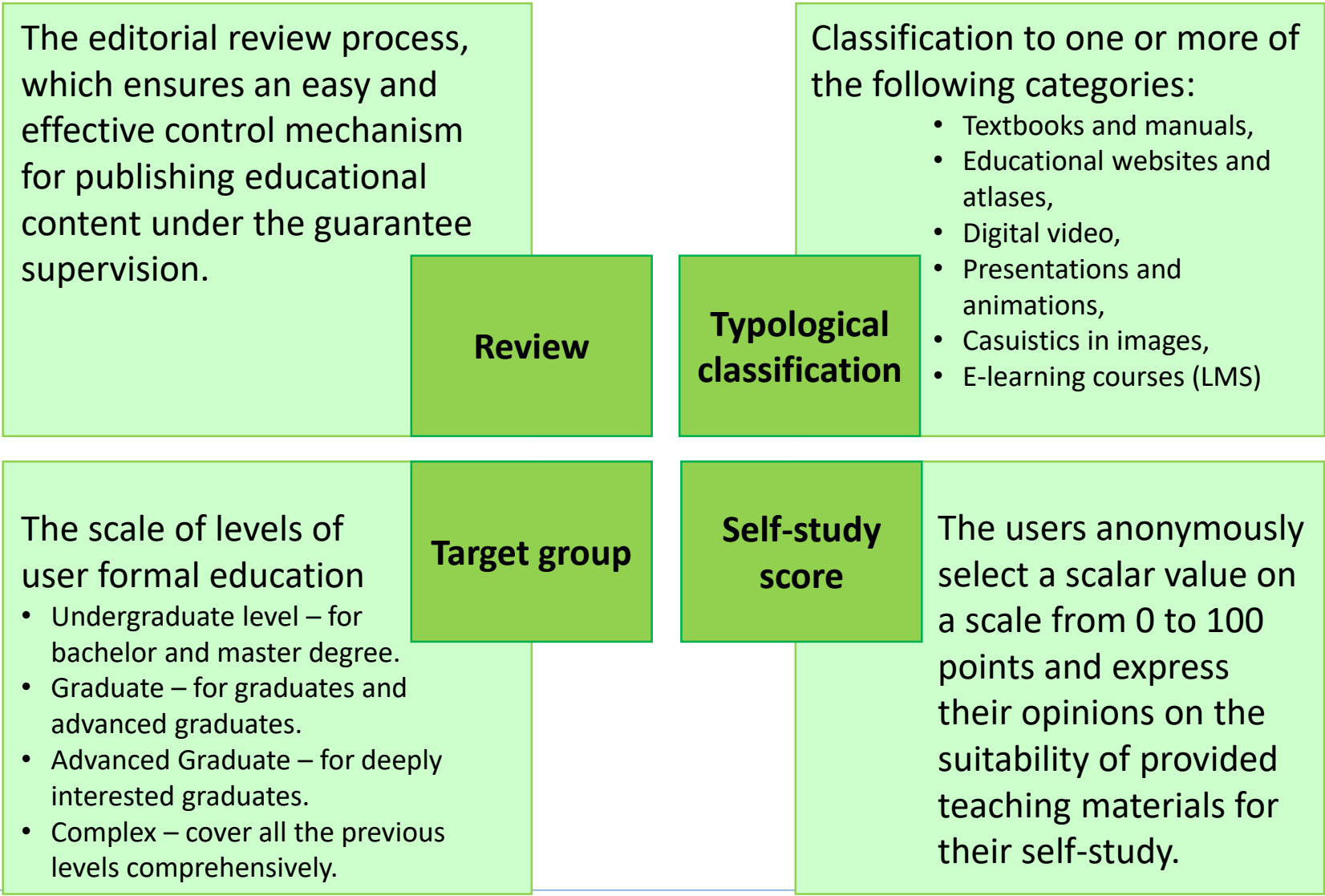


Multidimensional quality assessment of electronic education materials published across MEFANET network

MEFANET - 4D quality assessment

- Major emphasis is placed on **quality** instead of the quantity of learning content.
- Set of new effective classification and review mechanisms covers four **independent principles**, which enable complex quality assessment of published educational materials.
- The four dimensions consist of the following parts:
 - review
 - typological classification
 - level of the target group
 - user self-study score

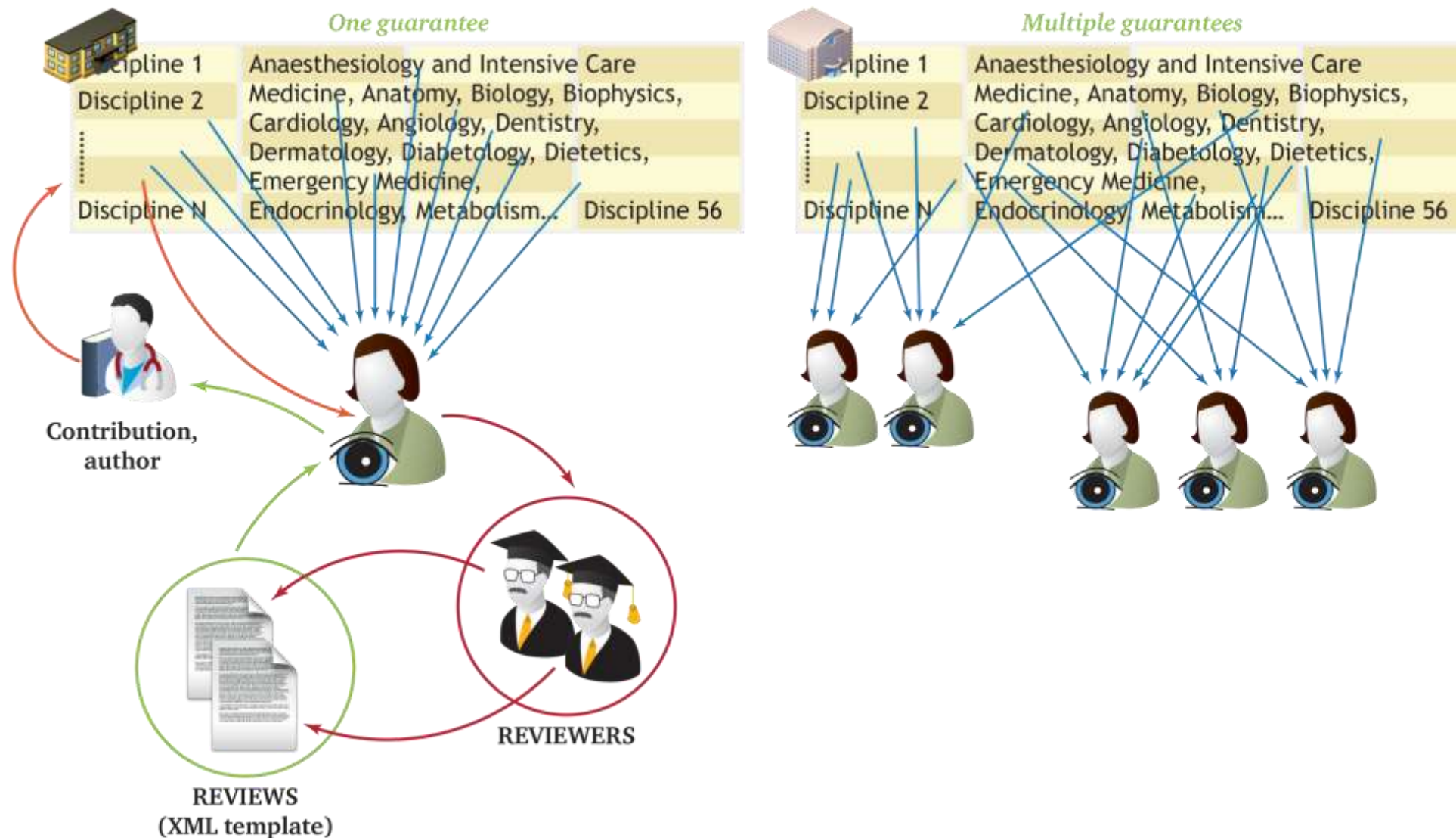
4 dimensions



4D quality assessment



4D quality assessment: guarantors, reviewers, authors

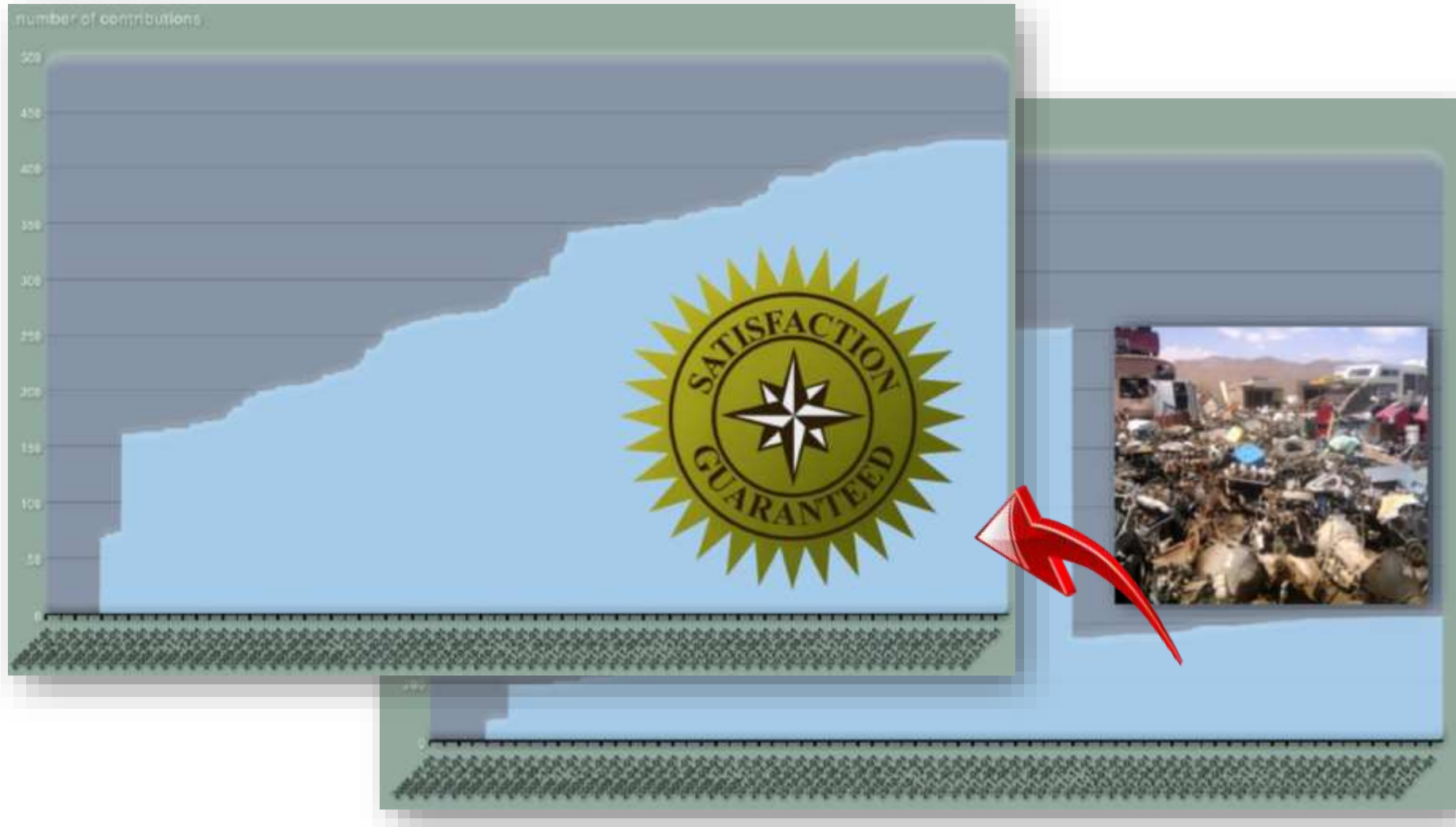


4D quality assessment: guarantors, reviewers, authors

The screenshot displays a web-based interface for a 4D quality assessment. It features several overlapping windows:

- Review process window:** Contains the name of the guarantor, "prof. Ine. Jurai Guzv. CSc.", and a "Rating" window.
- Rating window:** Contains the instruction: "Please select achieved education degree and then evaluate the teaching material particularly in light of material suitability for self-learning." Below this are three radio button options:
 - Student - student of bachelor or master degree
 - Graduate - graduate of bachelor or master degree
 - Ph.D. Graduate - Ph.D. student, Ph.D. graduate, researcher, ...A progress bar is visible below the options, and a "Send" button is at the bottom. Below the "Send" button, it says "Number of users, who have already evaluated.: 1".
- User evaluation summary window:** Shows a green flag icon with the text "Reviewed", a button labeled "information", a green circle with "90.0 %" and "user evaluation" below it, and a button labeled "evaluate". Red arrows point from the "information" and "evaluate" buttons to the "Rating" window.
- Discipline list window:** Lists various disciplines such as "Physiology and Intensive Care", "Anatomy, Biology, Biophysics", "Angiology, Dentistry", "Diabetology, Dietetics", and "Intensive Care Medicine".

Central Gateway and Sandbox



Quality acceptance?

**THE THINGS ARE BETTER REMEMBERED
WHEN SEEN THAN ONLY READ ABOUT.**



Co-funded by the
Erasmus+ Programme
of the European Union

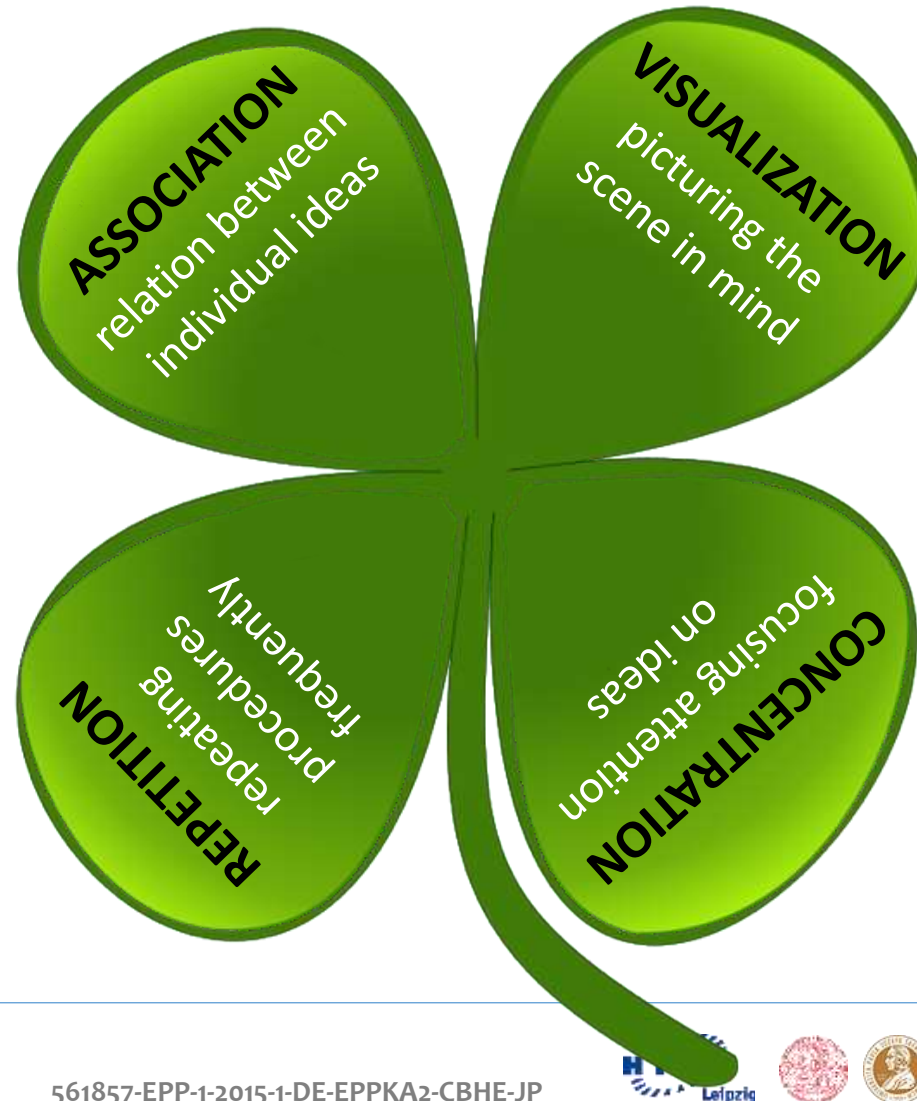


561857-EPP-1-2015-1-DE-EPPKA2-CBHE-JP



Remembering

- processes used to increase the ability to remember ideas



The way to reach quality is not easy and simple...

- learning science is a **complicated system** affected by too many input and output factors
- combination of traditional teaching methods with **new technological innovations** satisfies teachers as well as students and may offer optimal learning experience also for clinical medicine subjects
- everything has to be based on the **quality** which is necessary to be successful





 KOŠICE

 KOŠICE2013
EUROPEAN CAPITAL OF CULTURE

 Košice2016
EUROPEAN CITY OF SPORT

 1924
2017
KOŠICE
PEACE
MARATHON

Thanks for your attention