



ETRAP

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EFFECTIVENESS OF THE POST-PANDEMIC HYBRID EDUCATION IN RADIATION PROTECTION: FIRST RESULTS

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PANDEMIC CHALLENGES AND OPPORTUNITIES IN EDUCATION AND TRAINING IN RADIATION PROTECTION IN GEORGIA

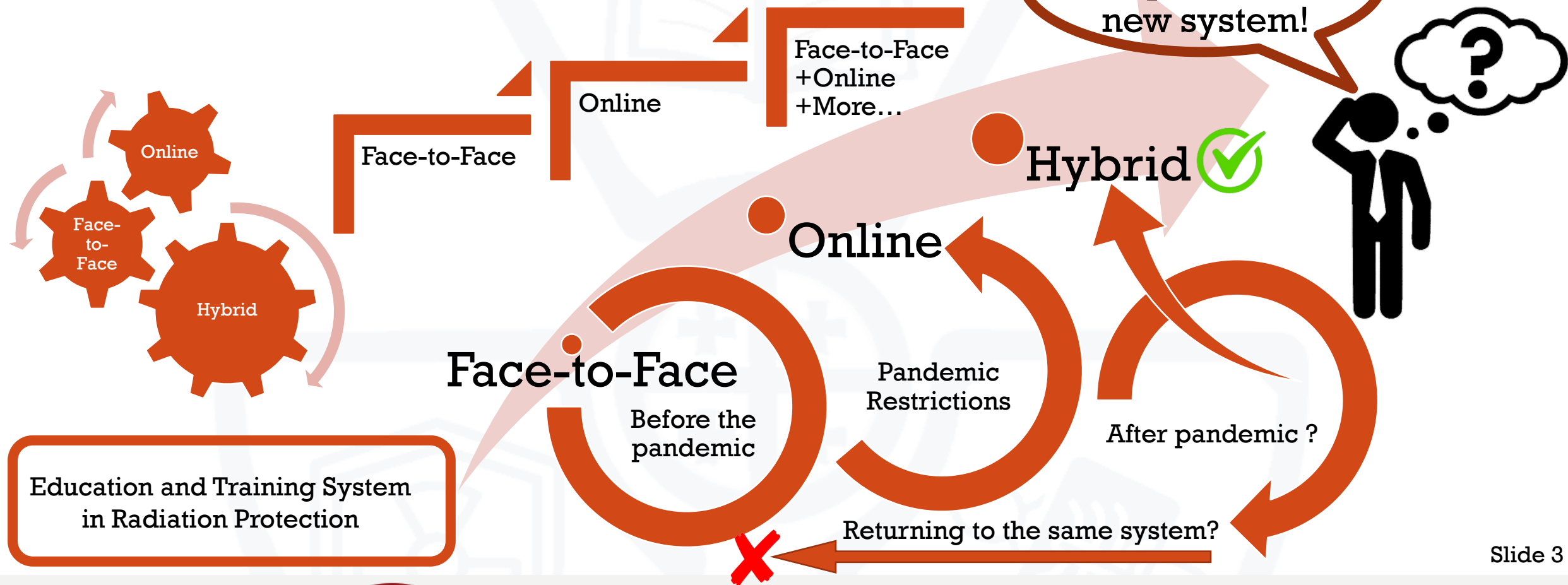
CHALLENGES

- No possibilities to conduct face-to-face trainings.
- Learn how to teach practical, operational issues of radiation protection online
- Adapt to the use of online platforms, simulators, etc.
- Extremely increased workload for healthcare professionals
- Lack of time for training
- For many experienced professionals, fully online training is completely new
- Periodic training on radiation safety in accordance with national legislation should be carried out

- New online training program was developed and approved by the national regulatory body
- The listeners had the opportunity to join not only from home but also from work, during breaks and rest, which was important in conditions of extreme congestion in medical institutions.
- New system of fully online assessment was developed
- *We decided to think about creating a new post-pandemic learning format, and about what forms of learning we will use.*

OPPORTUNITIES

AFTER PANDEMIC... WHAT TO DO ?



Slide 3

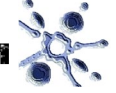
Education in a Post-COVID Era



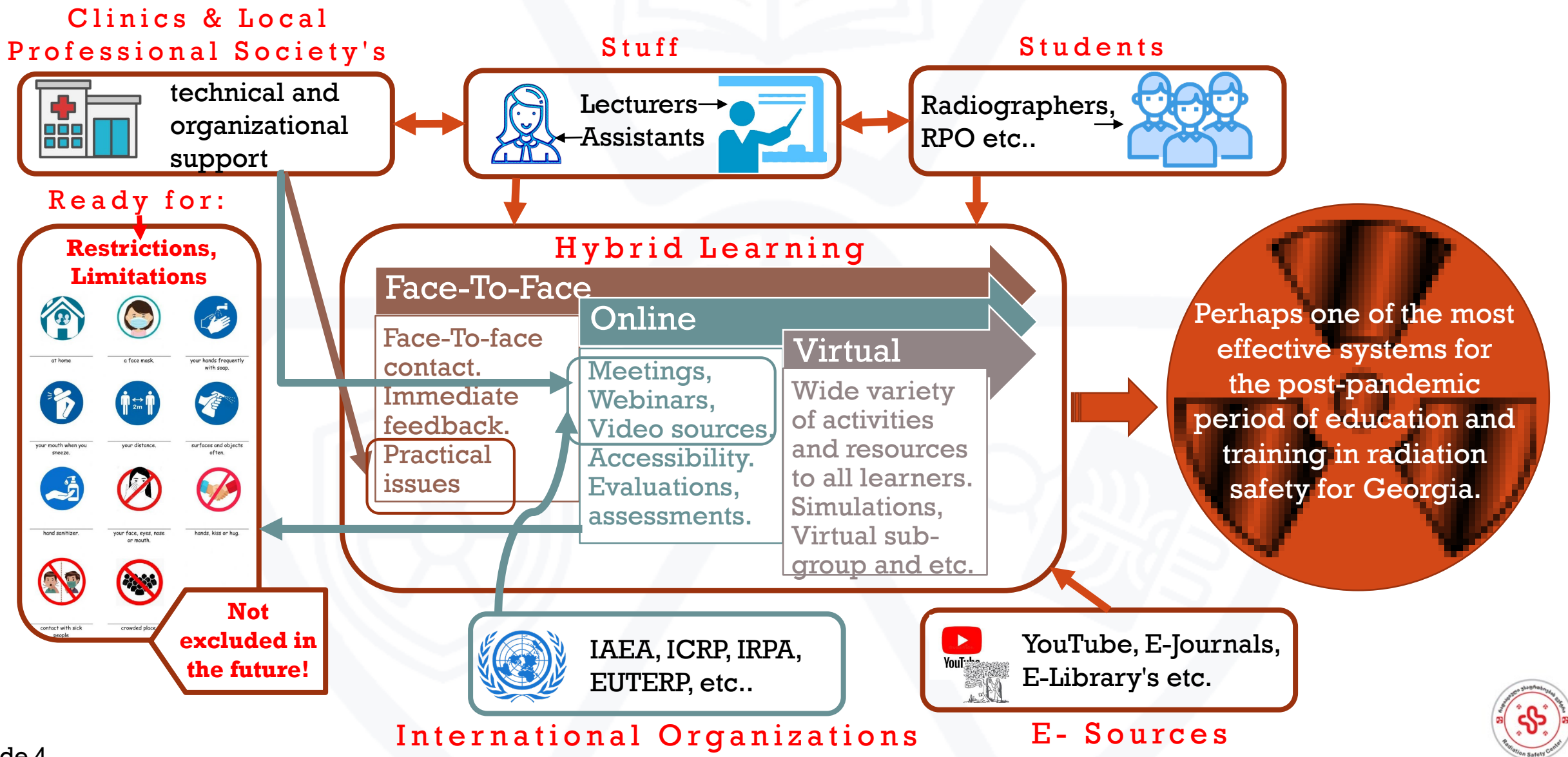
"One of my biggest fears as secretary of education is that we go back to how education was in 2020. That didn't work for too many students who looked like me. We've normalized disparities in opportunities and outcomes as a country and we cannot go back. Returning to the same system would be failing our students."

- Miguel Cardona, U.S. Secretary of Education

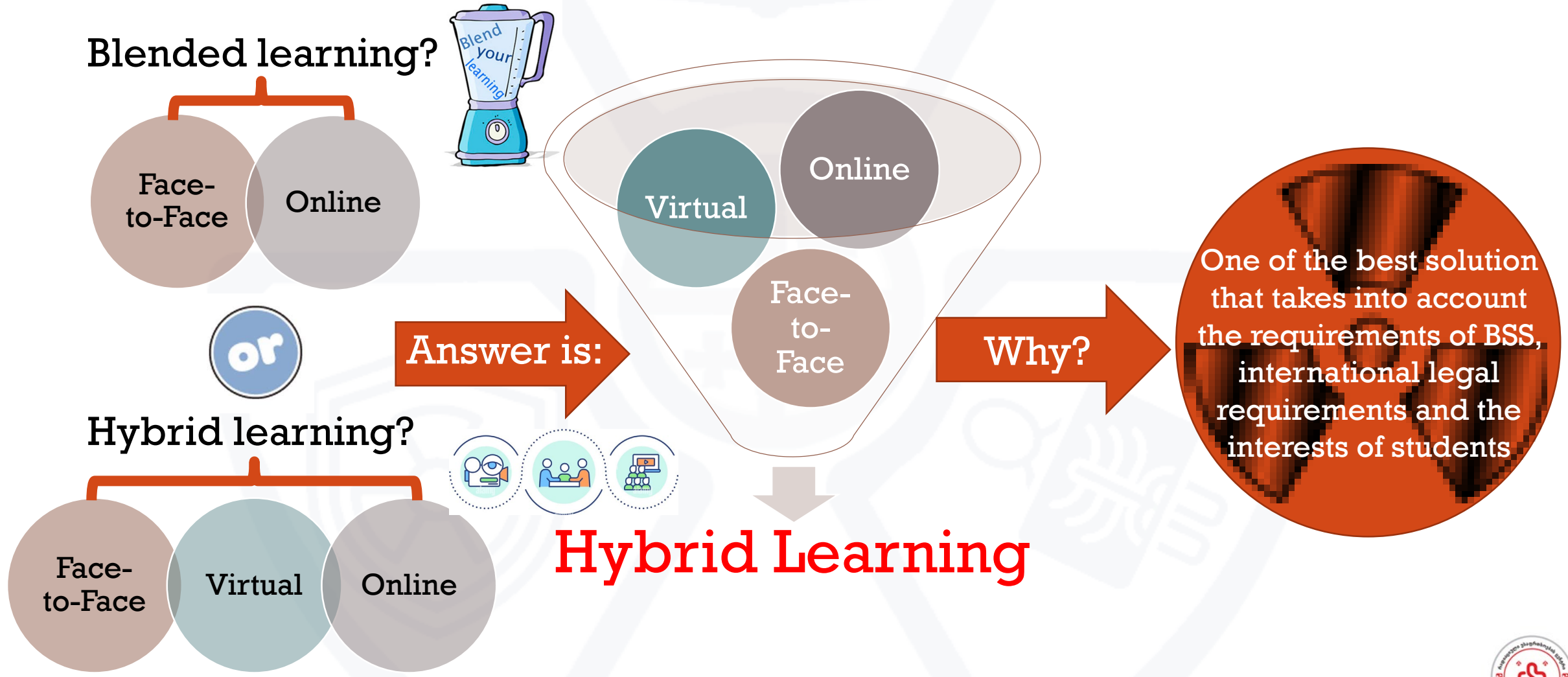
Source: Education in a Post-COVID Era | Harvard Graduate School of Education



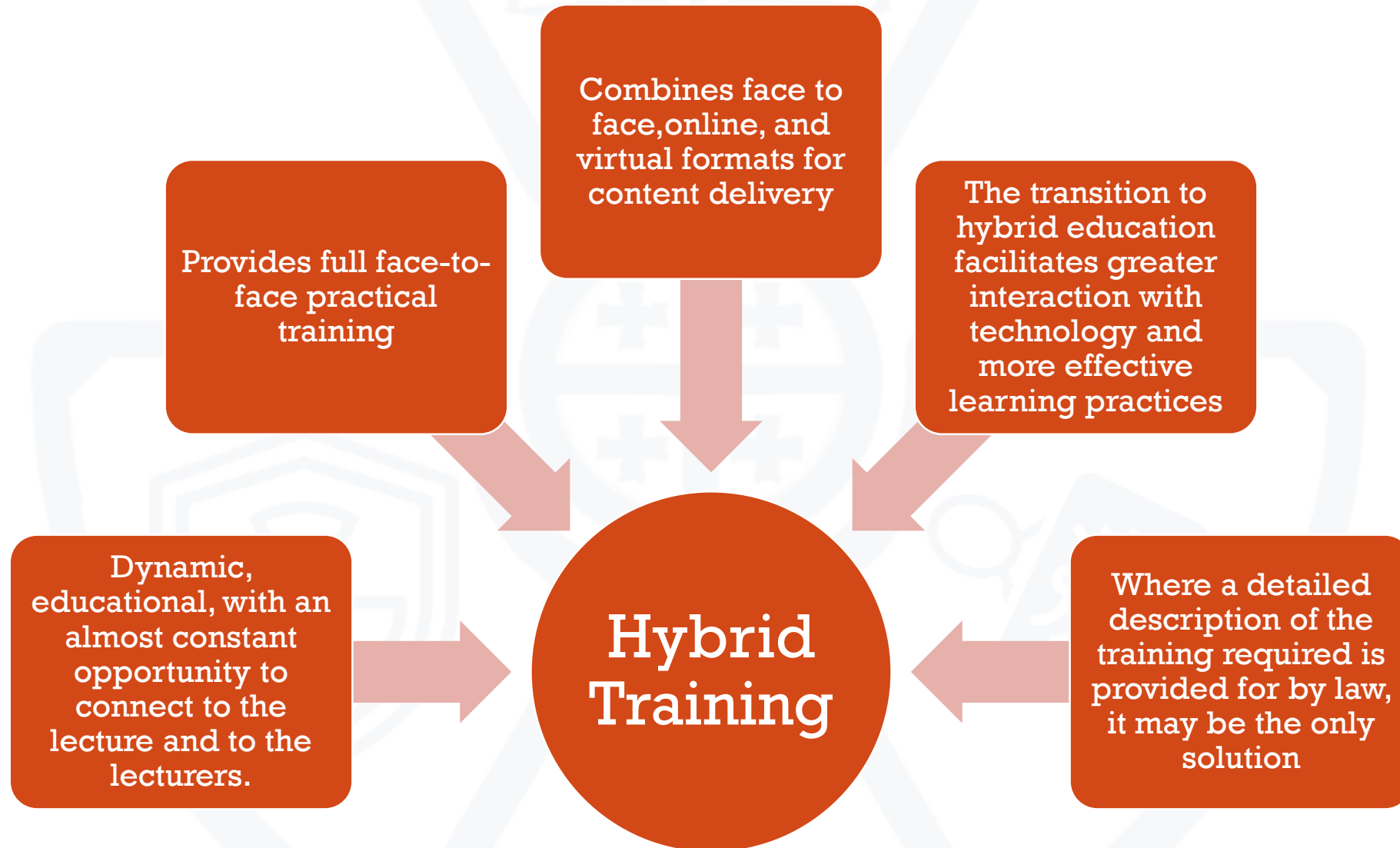
POST-PANDEMIC HYBRID SYSTEM DEVELOPED BY US IN THE FIELD OF EDUCATION AND TRAINING IN RADIATION PROTECTION



WHY HYBRID LEARNING IN CONTEXTS OF EDUCATION AND TRAINING IN RADIATION PROTECTION?



THE ADVANTAGES OF HYBRID LEARNING IN CONTEXT OF EDUCATION AND TRAINING IN RADIATION PROTECTION



PANDEMIC CRISIS - TRIGGER OF REFINEMENT

Time:

Before Pandemic

Pandemic

Post Pandemic

Face-To-Face

Online

Hybrid

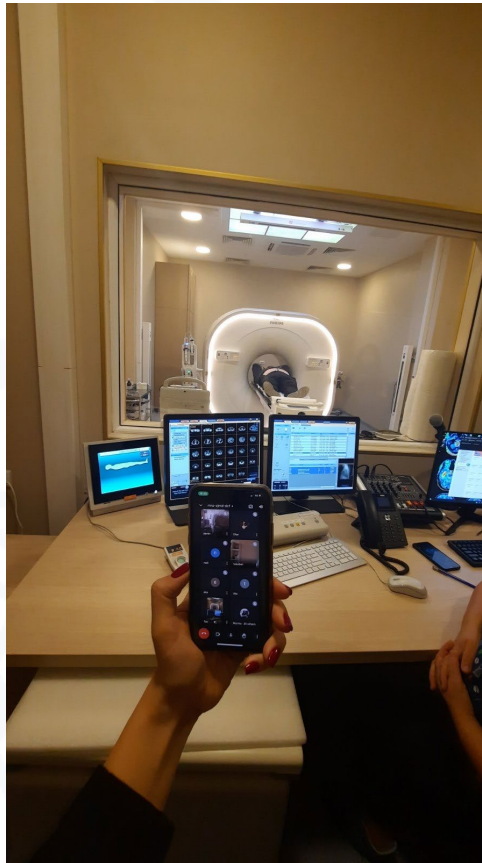
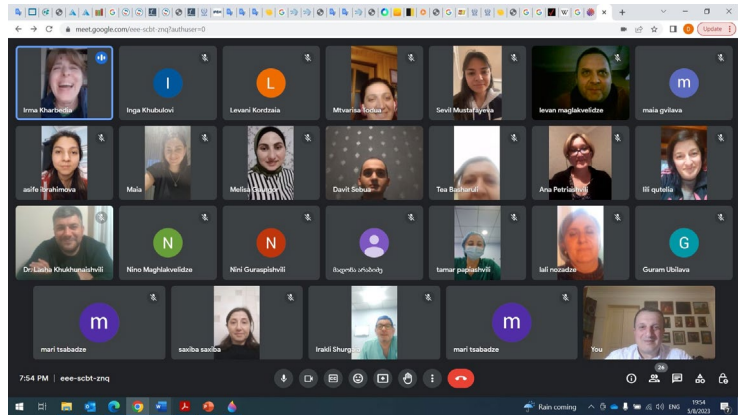
Face-to-Face contact with Teacher.
Teamworking.
Motivation,
Assessments and Practical Activities.

Flexibility in learning.
Location of teacher and student flexible during work or traveling hours. Online Video Sources, Tests and etc.

Get the best of both approaches. Find new ways to transfer knowledge, skills, values and attitudes. Hybrid approaches to teaching, learning, assessments.

Pandemic Crisis

AND WE START FIRST POST COVID-19 HYBRID TRAININGS...

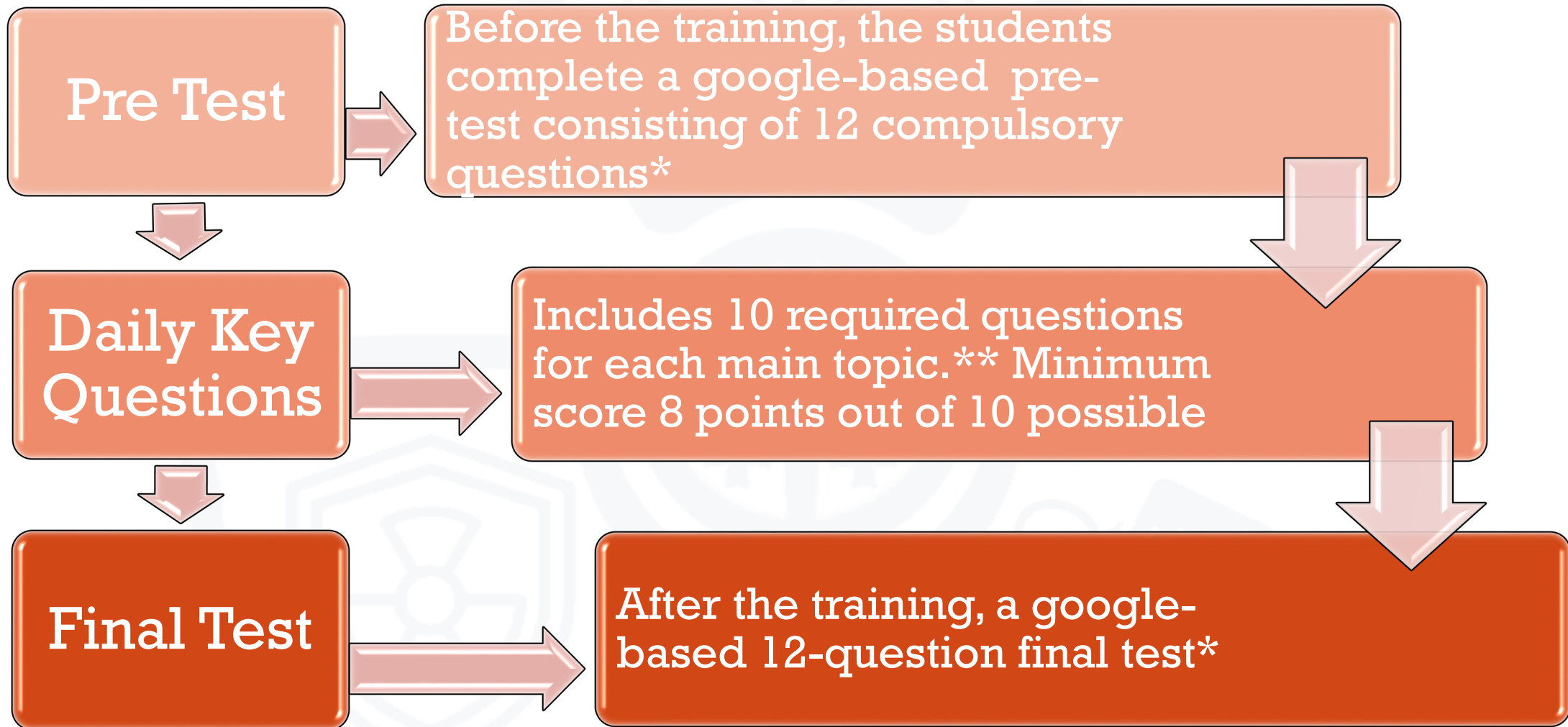


HYBRID VS ONLINE VS FACE-TO-FACE TRAININGS

Methods

- The students complete a pre-test and final test consisting of Google-based 12 compulsory questions.
- 10 mandatory questions were provided after the completion of each module. Each question was evaluated with 1 point. 8 points or more means successful completion of the module.
- We also used students Google-based self-assessment to fully analyze and evaluate the effectiveness of learning.
- The students were able to evaluate the training as separate modules according to the each topic mandatory test, as well as the effectiveness of the whole course using the final tests.

OUR ASSESSMENT SYSTEM

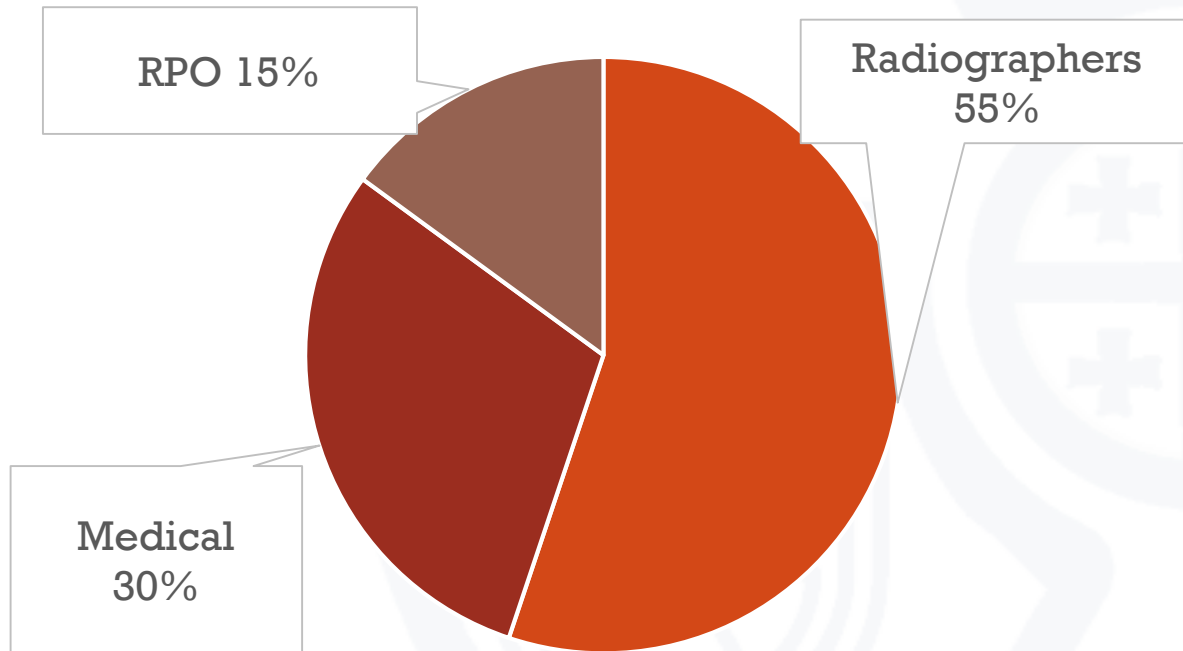


* - The tests provide some self-assessment of the students

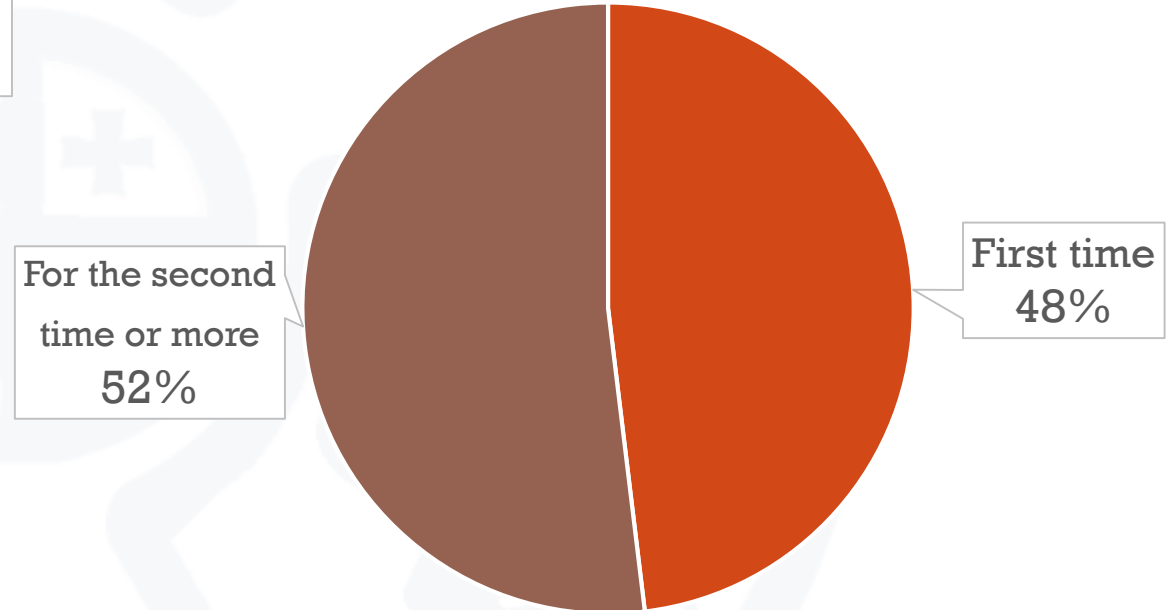
** - Sometimes questions depend on topics and students group specialization (CT, Dental, etc..)

DATA OF STUDENTS WHO HAVE COMPLETED A HYBRID FORM OF TRAINING

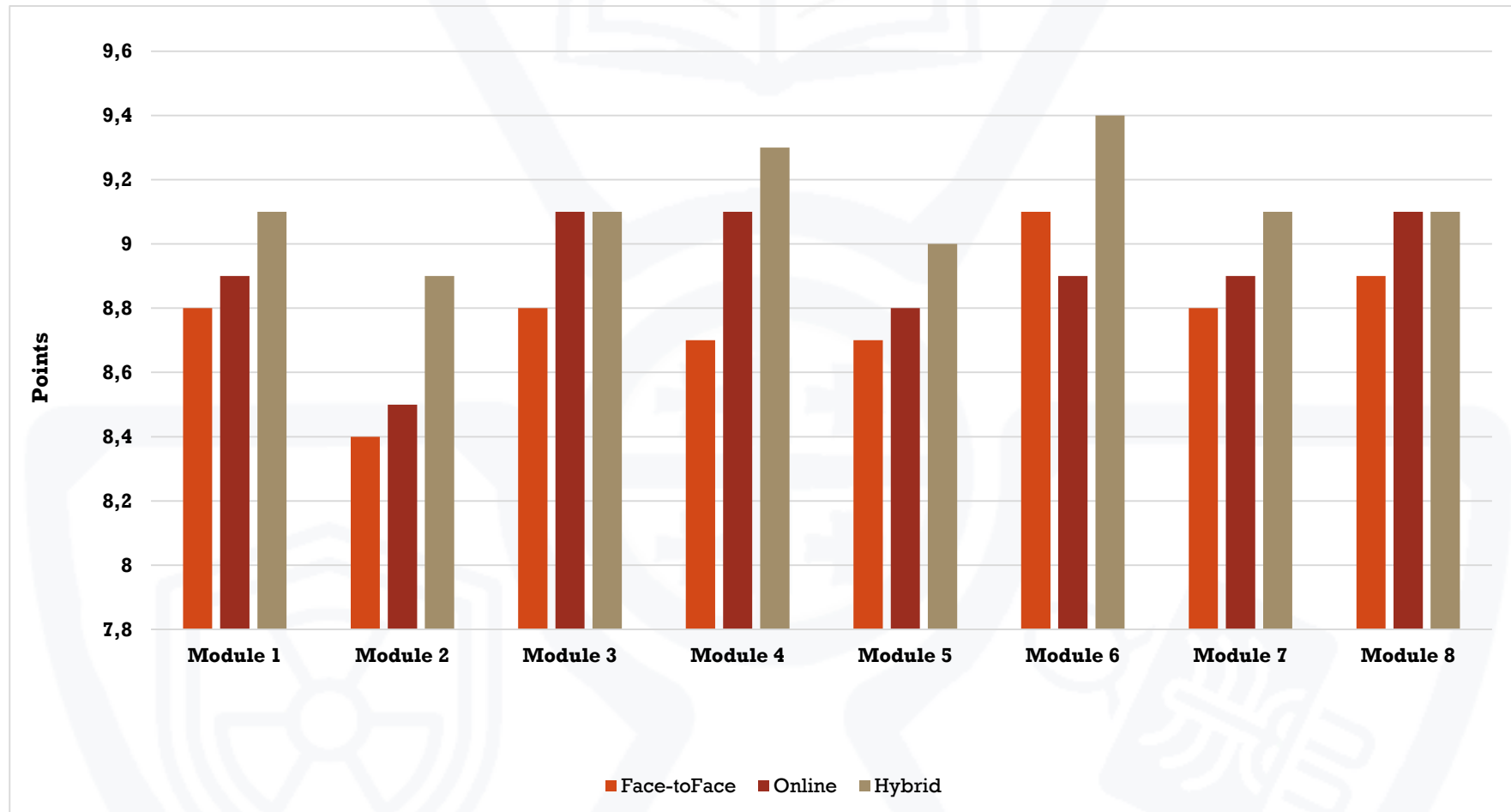
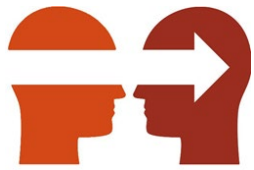
Professional Distribution



Student participation in training



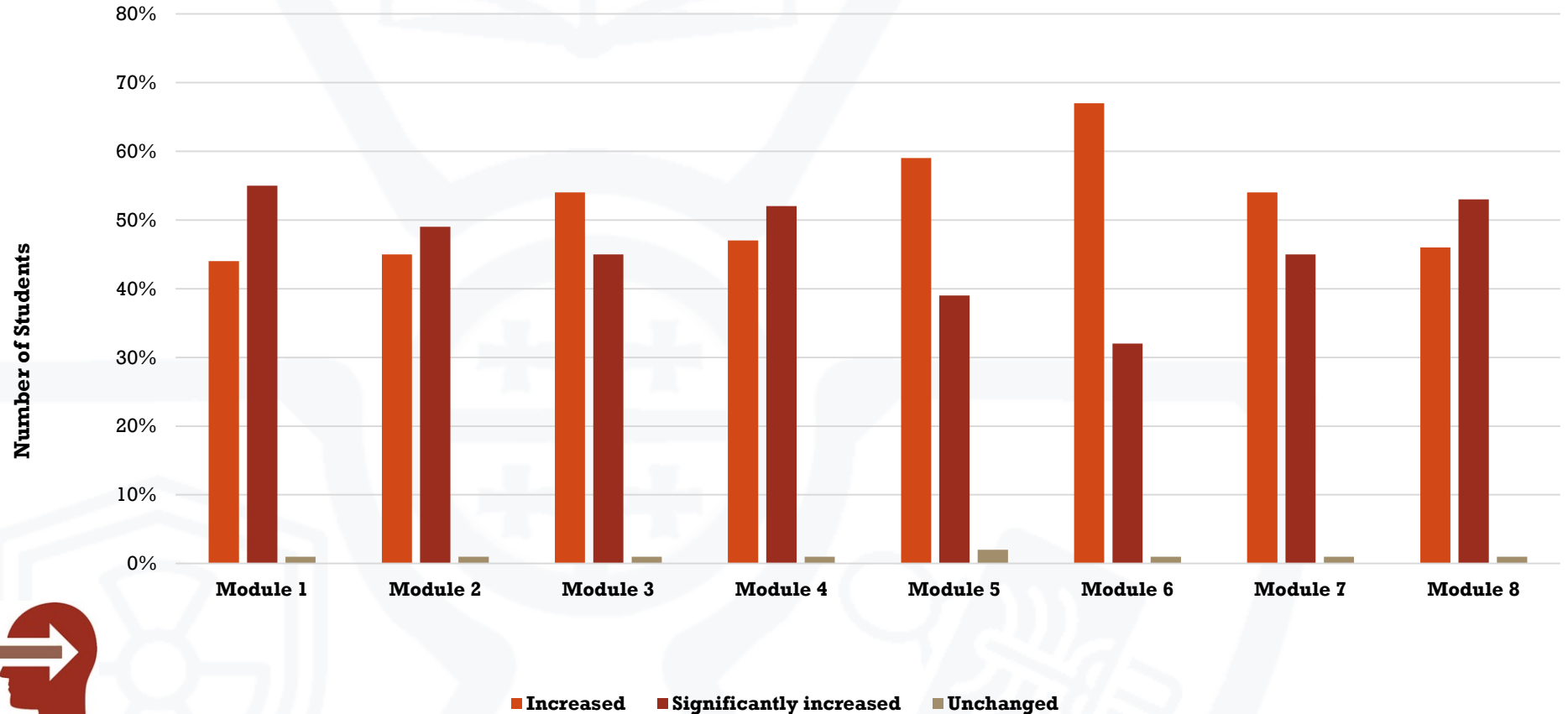
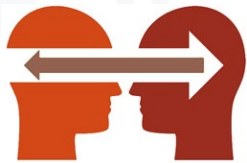
COMPARATIVE EVALUATION OF HYBRID, FACE-TO-FACE AND ONLINE LEARNING ACCORDING TO MODULES



Module 1- Overview of International and National Legislation on Nuclear and Radiation Safety; Module 2- Fundamentals of Physics; Module 3- Basic and special dosimetric quantities and units, dosimetry; Module 4- Ionizing radiation sources; Module 5- Biological effects of ionizing radiation; Module 6- Basic principles of radiation protection and safety; Module 7- Radiation protection of staff, patients and population; Module 8- Quality assurance.

HYBRID STUDENTS SELF-ASSESSMENT ACCORDING TO EACH STUDY MODULE

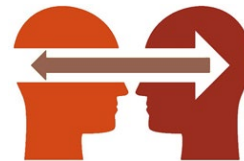
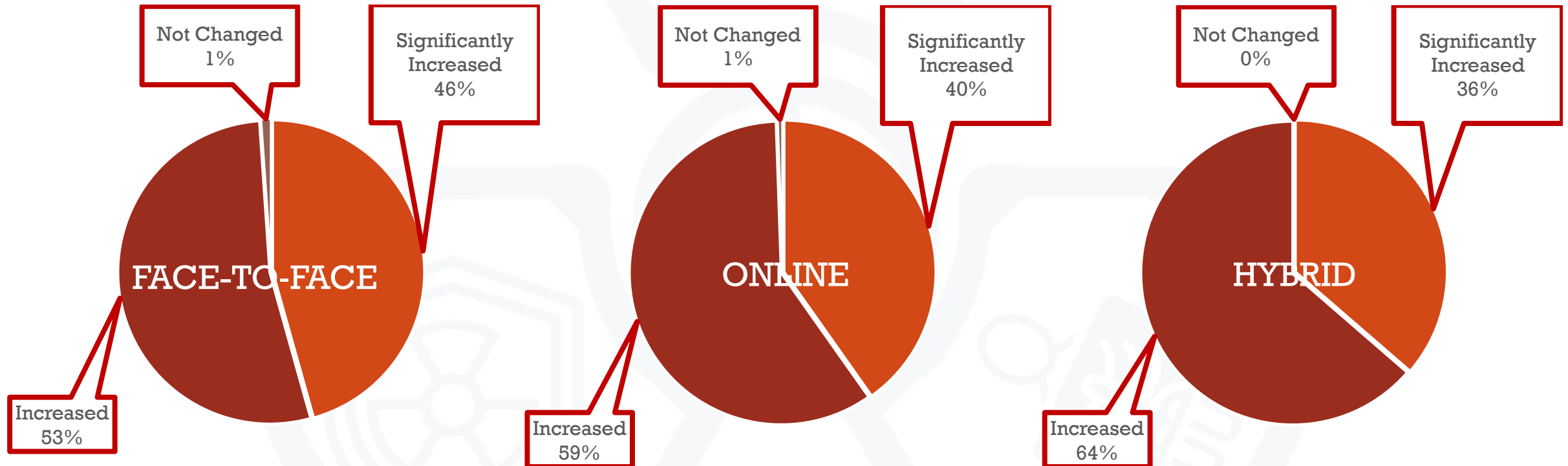
After completing each module, the question, how would you rate the increase in your awareness after completing the module, could be answered in three ways: Increased; Increased significantly; Unchanged



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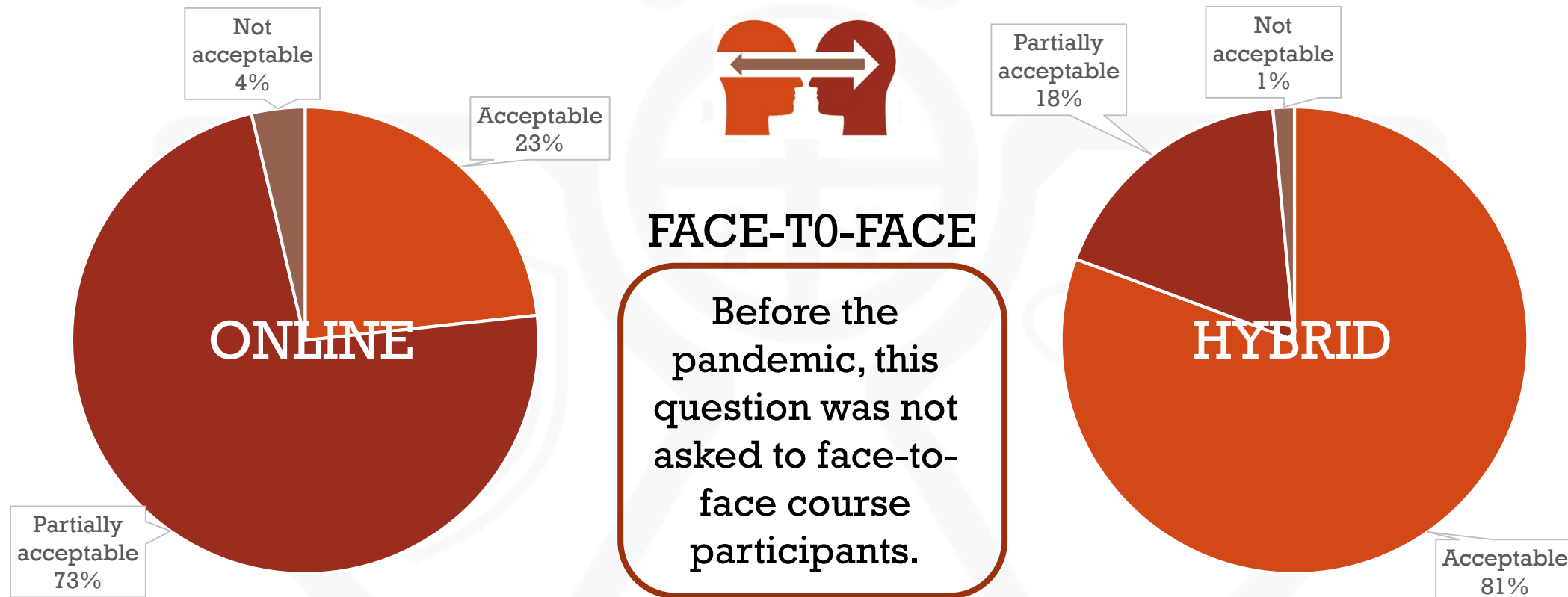
SELF-ASSESSMENT OF HYBRID, ONLINE AND FACE-TO-FACE STUDENTS AFTER COMPLETION OF THE COURSE

Question: Do you think that your consciousness after taking a course in nuclear and radiation safety issues? The answer was possible in three forms: increased; significantly increased; not changed.



EVALUATION OF THE ACCEPTABILITY AND SATISFACTION OF TRAINING BY HYBRID AND ONLINE STUDENTS AFTER COURSE COMPLETION

Question: Is Online/Hybrid learning acceptable and satisfying for you? The answer was possible in three forms: Acceptable, Partially acceptable, Not acceptable.



CONCLUSIONS:

- ✓ Comparative assessment of hybrid, face-to-face and online lectures showed that in most cases the number of points of assessments of each module in hybrid learning and the final grades are slightly higher than those in face-to-face and online learning.
- ✓ Compared to the self-assessment of online learners during the pandemic, the self-assessment of hybrid learners is slightly different, according to current data.
- ✓ Interviews with trained medical personnel during the renewed regulatory inspections, which were suspended due to the Covid-19 pandemic, show that online and even more hybrid training is no less effective than fully face-to-face training. This may be considered as one of the indirect indicators in terms of evaluation of results.
- ✓ Practical part of the trainings also takes place in a hybrid form. In addition to the face-to-face form taking place in the host clinic, there is an online broadcast of a practical lesson and a recording, which allows students from other cities to be included in practical classes. If the current group of students is mainly from two large cities, then practical classes take place in both and accordingly, there are two host clinics, and students choose which one to visit or can visit both. This greatly increases the experience, exchange of knowledge and information among listeners.

CONCLUSIONS:

- ✓ Undoubtedly, the pandemic served as a certain trigger both for various education systems in the whole world, and, in particular, for training on radiation protection for medical personnel.
- ✓ It should be noted that today post-pandemic learning is a form of hybrid training, which will mainly be a kind of online learning, but incorporate the necessary elements of face-to-face learning and e-learning.
- ✓ A number of issues such as recording lectures, their availability, Internet resources and platforms, simulators, virtual reality, computer and digital software, etc. require certain financial and human resources can not be solved at once only by training providers relying only on their own capabilities.
- ✓ The development and unification of approaches and requirements for hybrid learning in the Georgia could facilitate these processes and improve the possibility of obtaining additional funding both at the national and international levels, including within the framework of various projects.
- ✓ Effectiveness of this methods is not absolutely, significantly increases costs, the all problems are not always solvable.....

CONCLUSIONS:

OPPORTUNITIES



Time:

Before Pandemic

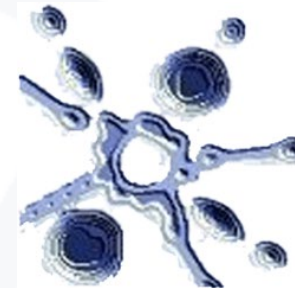
Pandemic

Post Pandemic

Today, already in the post-pandemic period, which, it seems to us, should be considered as an opportunity to consolidate and combine in practice a number of methods for teaching, as well as serving students, it is necessary to use and permanently improve a new training system and constantly search for new opportunities.

OUR TEAM





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THANK YOU!

