



# IN2IT+ INTEGRATING VIRTUAL WORLDS TO ONLINE COURSES

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# Massive Online Open Course

- MOOC – a personal story





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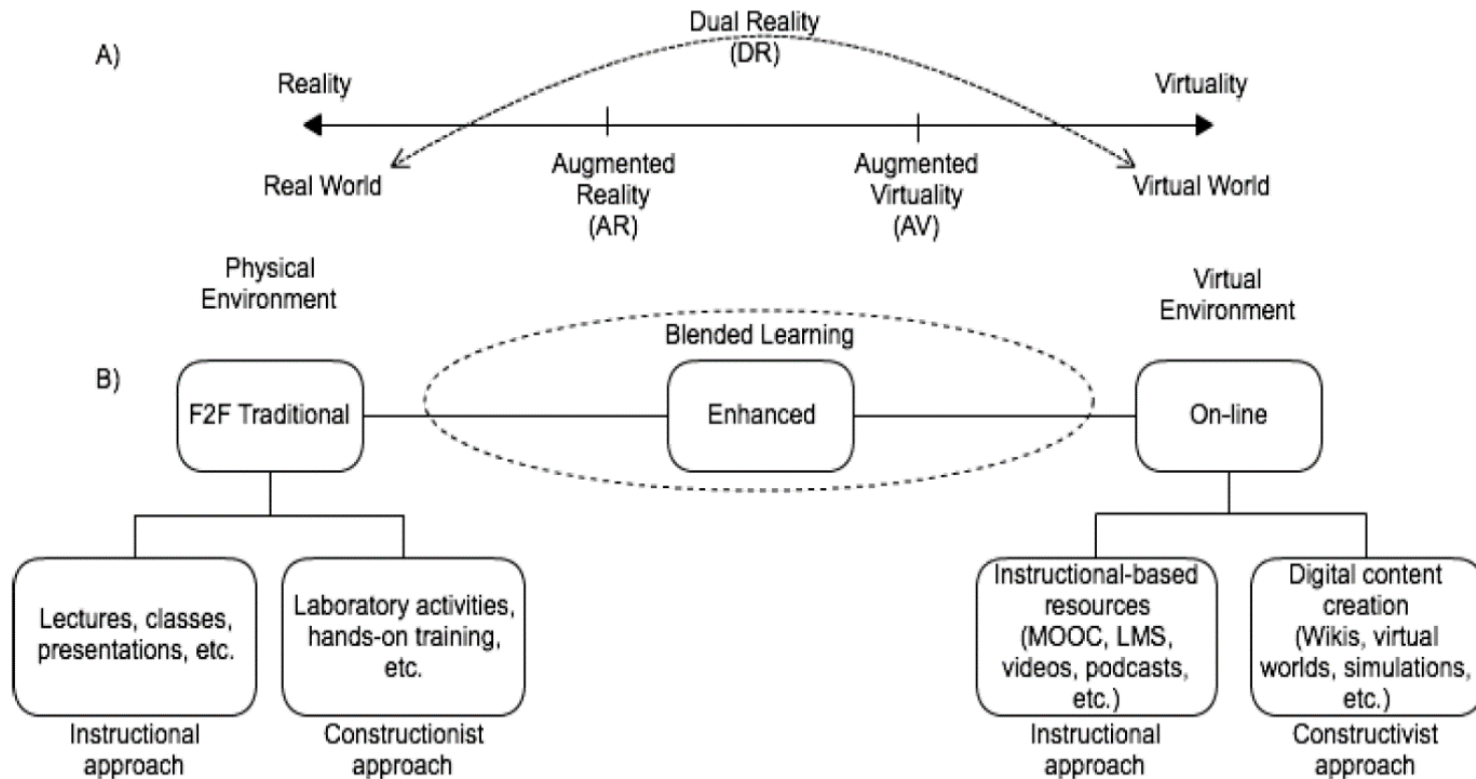
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# What do we know about VWs in HEI?

- Virtual Environments provide a 3D virtual canvas for users to populate with 3D representations of the real world, or simplifying visualizations of complex abstractions, enabling multiple simultaneous participants to access (Savin-Baden, Falconer, Wimpenny, & Callaghan, 2017).
- Virtual Worlds (VWs) are open-ended environments in which users design and create their own objects. VWs are considered to be online, multi-user, immersive 3-D environment in which users can interact with their surroundings and other users.



# E-learning



Milgram's Reality-Virtually continuum vs Garrison's continue of e-learning (Pena-Rios, 2016)





# Rational for using learning in VWs in HEIs

- practicing skills within a virtual environment offer advantages that complement learning through real-life practice: in particular, the exposure of learner to a wide range of scenarios (even more than in f2f program) at a time and pace convenient to the learner.
- VWs present educational potential in terms of role-playing, building and scripting items, creating the learning environment while learning and fostering dialogic learning and social interactions.
- It offers opportunities to move from scaffolding learning in HE, not bounded by time or geography and adopt different learning values from other learning spaces.
- VWs can offer the learners the opportunity of make mistakes without real-world results and to experience situations that can be ethically and practically difficult, or dangerous.
- Student can experience immediate feedback to their action and for the other user. They can change their behavior according to this feedback.
- VEs developments will have major impact on e-learning by adding 3D active environments.



# IN2IT + or IN2VW

- Will integrate Virtual Worlds into distance learning courses. In courses that the collaboration, interactions and feeling of real scenes are crucial to fulfil the activities, in places that immediate feedback is needed, in places where the spatial immersion is important, which occurs when an individual feels that a simulated world looks and feels "real" and he or she is really "there".
- This is a great opportunity to design and develop on line courses, which will enable students to cooperate in constructive activities and being active and creative in their learning. We suggest to use two of IN2IT courses and integrate VW to them, and to develop two new courses.





# IN2IT+ or IN2VW objectives

1. Establish a framework for a survey of the use of VWs in HEIs distance learning.
2. Form international teams for academic cooperation agreements to be engaged in multidisciplinary academic VWs on-line development activities.
3. Develop curriculum for international academic programs that integrating VWs in on-line courses; prepare online, virtual, teaching materials, and train academic staff in the partner HEIs for effective virtual teaching and learning practices.
4. Develop international professional communities of practice (CoP) to share knowledge and research opportunities that will be communicated via virtual tools and techniques.



# IN2IT+ or IN2VW objectives

5. Develop and exploit international academy-industry cooperation between partner HEIs and global organizations for academic staff to understand industry needs and for students' traineeship and employment experience in the global economy.
6. Implement an innovative technological platform to support the integration of VWs in online courses by identification and analysis of available technologies and stakeholder requirements; and then customize and integrate technological tools to foster enablers of integrating VWs in internationalization academic activities.



# IN2IT+ or IN2VW objectives

7. Develop sustainability and exploitation work plans within partner colleges and on national level to expand implementation of the project practices, competencies, tools, and techniques.
8. Disseminate the project's results and outcomes to HEIs and decision makers in Israel and Europe by delivery of on-site and online materials in seminars, conferences, videos, social networks, advertisements, and more.



# WP1 – Survey of the use of VW in HEI

T1.1 Analysis of the use of using on-line courses among the consortium institutions

T1.2 Analysis of the use of VWs activities in EU HEI.

T1.3 Development of a report with insights for further developments

T1.4 Development of guidelines/toolkit for using VWs for teaching and learning in the academia.



# WP2 – Creating international development teams

T2.1 Development and delivery of training workshops on international teamwork to build groups aimed to deliver results.

T2.2 Planning and performance of training study visits of Israeli colleges' representatives in EU universities.

T2.3 Development of outline work plans for international teams, which are aligned with the colleges' internationalization strategies and with the fields of interest.



# WP3 – Courses development

T3.1 Development and delivery of training workshops on VWs.

T3.2 Development of international virtual teaching programs for courses that include VWs' activities.

T3.3 Implementation and mentoring pilot international virtual courses.

T3.4 Delivery of virtual international program.

T3.5 Summary meeting on international virtual program.





# WP4 - Development and delivery of international CoP for knowledge-sharing

T4.1 Establishment of communities of practice.

T4.2 Organization of online and on-site meetings.

T4.3 Development of international relations network for collaboration.



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# WP5– Academy – workplaces cooperation

- T5.1 Analysis of the knowledge and skills that are needed for the workplaces.
- T5.2 Development of international online academy-industry plans.
- T5.3 Implementation and mentoring pilot international academy-industry VWs activities that enhance the knowledge and the skills that are needed.
- T5.4 Delivery of online academy-industry courses.
- T5.5 Summary meeting on international online academy-industry cooperation.



# WP6 – Technology platform

T6.1 Requirements and benchmarking analyses of the integration of VWs to the HEIs' platforms and preparation of a specifications report.

T6.2 Implementation of technological adaptations and customizations.

T6.3 Setting up the technologies for pilot online activities

T6.4 Maintenance and support to online activities.



# Work Packages

WP7 - Quality Assurance

WP8 - Dissemination

WP9 - Sustainability & Exploitation

WP10 - Project Management



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- What do you think about VWs in academia?
- Would you like to be a partner in this project?







# VWs

- It may contain one or more of the followings (Penta-Rios, Callaghan, & Gardner, 2018):
  - ▣ The illusion of being in 3-D space
  - ▣ Ability to interact with the 3-D objects
  - ▣ Digital representations of learners in form of Avatar.
  - ▣ Ability to communicate with other learners in the VWs.

More than 2.6 billion VW user accounts most of them are used for social and entertainment purposes.



# VWs History

- Virtual Worlds begins in 1990's with professional education such as flight simulators, Science place, Safty world, Global changes, Atom world, virtual Gorila exhibit etc.
- In those years, it was very expensive for schools and it was not use friendly, there were only poor instructional design of the virtual learning environment.
- Along the years, there was tremendous interest in harnessing 3D virtual environments for education and training.



# VLEs History

- The second generation is currently being developed, and it presents new technological capabilities.
- The literature in this field suggests central themes that emerge are:
  - Socialization;
  - Presence and immersion in virtual world learning;
  - Learning collaboratively
  - Trajectories of participation.



# Central themes for using VWs In HEI

- Socialization
- Presence and immersion in VWs learning
- Learning collaboratively
- Trajectories of participation

(Savin-Baden, et al. 2017)



The most commonly used is spatial immersion, which occurs when an individual feels that a simulated world looks and feels "real" and he or she is really "there" (also known as Presence) (The Immersive Learning Research Network, 2015).

This feeling of "being there" is the key element that allows constructivist approaches to be used in Immersive Learning (e.g. experiential learning, exploratory learning and problem-based learning).



# From Researches

- Researches show that 3D Virtual Learning Environment supports knowledge sharing and training, and enhances communicational and interpersonal skills (Karsakov, Bilyatdinova & Hoekstra 2014).
- Others indicated that transfer is more likely from virtual situations to real life situations, than early works on transfer across different real world settings.
- Dede (1995) argued that the capacity to shape and interact with the environment is highly motivated and sharply focuses attention. R
- Research that watch the interactions of children who suffer from social anxiety disorder with VWs showed that it was an effective and useful environment (Wong Sarver, Beidel, & Spitalnick, 2014).





# Main obstacles to adapting VWs to Edu

- ❑ The high cost of developing new virtual environments,
- ❑ The need for domain-specific activities inside educational virtual worlds
- ❑ The need of using it when it has real benefit.

In spite of these obstacles, this area keep on developing.





- <https://www.timeshighereducation.com/features/vr-new-dimension-learning>
- <https://www.youtube.com/watch?v=X-oeCkBbwWo>
- [https://www.youtube.com/watch?v=O\\_x4OLsfReQ](https://www.youtube.com/watch?v=O_x4OLsfReQ)
- OU <https://www.youtube.com/watch?v=-2H-xucyDfU>
- [https://www.youtube.com/watch?v=Qj\\_fKnZRoNI](https://www.youtube.com/watch?v=Qj_fKnZRoNI)

