

Grands Challenges



Grand challenge :

(Se) former entre réel et virtuel à l'heure de la démocratisation des technologies immersives

Learning and teaching between real and virtual worlds in the age of immersive technologies democratization

Atelier « Réalité mixtes, virtuelles et augmentées pour l'apprentissage : perspectives et challenges pour la conception, l'évaluation et le suivi »

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Problem description

- State of the art/ practices : Indicator relevance, work dispersion, poor pluridisciplinary articulations, risks (Physics, physiologic, psychologic, social ...)
- Multiple domains/issues: Learning - teaching - design - evaluation
- Articulating multiple facets:
 - technical, methods, paradigm and theories, organisational, economics, ethics, adaptivity

Social benefits

- Adding value to the increasing amount of industrial digital assets
- Fostering the design of learning Mixed Realities environments based on the pedagogical needs (learners / trainers)
- Simplifying design of adaptive content to users
- Addressing Health, Safety and ethical issues
- Economics competitiveness

Mid-term action program

Research and REX capitalization on interactions between gestural, emotional and symbolic dimensions in learning (at both content & modalities levels)

Elaboration of :

- Framework that articulates disciplinary viewpoints, terminological, theoretical and practical dimensions for analysis, design and evaluation
- Multidisciplinary design methods, tools and guidelines from
- Generic libraries of pedagogical primitives
 - user-dependant adaptations (teachers, learners; individual, team; accessibility)
 - autonomous characters and virtual entities orchestration, balancing control, coherence and adaptability in (more or less) open worlds
 - Normalization and standardization

Training : a new generation of multidisciplinary designers, project managers, trainers, etc

Indicators and factors

Quantitative and qualitative indicators

- Deployment and actual uses of adaptative systems
- Number of multidisciplinary publications and projects
- Published evaluations of learning outcomes (knowledge or competencies) covering diversity of population, types of “learning”, pedagogical situations, long time uses etc
- Existence and publication of guidelines, design patterns, etc...

Success factors and risks

- Whaou effect, overconfidence whatever existing evidence
- Ethical issues, e.g. control the adaptative system to prevent traumatic experiences while achieving pedagogical goals
- Design expertise loss or difficulties related to rapid technological and knowledge evolutions
- Interdisciplinary articulation