

DGEI



# Digital Games for Empowerment & Inclusion



CASE Aarhus Social and Healthcare College, Denmark

Sevilla dialogues June 2012  
Edited for European partners



Photo from the EU LABlearning project

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## The context

In June 2012 Aarhus Social and Healthcare College was invited to dialogues in Sevilla Spain with the EU Commission's research group *Digital Games for Inclusion*.

The research group's mission is to prepare future European policy and funding program initiatives in the field of serious games for inclusion, with a special focus on inclusion of young people and strongly linking to innovation of educational didactics.

The College's contribution is based on many years of experiments, but on the *EU LABlearning* and *Scandinavian Game Developers* initiatives in particular.

[www.lablearning.eu](http://www.lablearning.eu)  
[www.scangame.dk](http://www.scangame.dk)

This paper was produced for the Sevilla dialogues - and includes a number of recommendations at the end of the paper.

The case is expected to form part of the research group's material for the Commission.

## Intro - the case approach to serious games

In this case we build on a specific "educational" approach to serious games.

In our view serious games are not well-defined entities or products, but should rather be conceived as complicated processes, communities or a line of activities embedded in learning.

In our view serious games make less sense unless closely linked to creative learning settings, project and problem based didactics and open laboratories of learning communities.

And even more, we believe that the very nature of serious games is to be distributed along a long line of activities in the learning environments, from idea, to design, to open user dialogues, and to collaborative challenging and contributing to the game...

Serious games cannot be understood outside their learning context and mission.

Furthermore, in this paper we link closely inclusion and learning.

The same goes for the case presented in this paper.

A case describing how an education is trying to unfold the inclusion potential of serious gaming cannot be defined in the form of a limited number of elements, the interaction of which forms the case.

Serious gaming for inclusion is embedded in a long, almost epic, narrative, explaining the background, the complicated actions and the future prospective of the educational environment at large.

The headlines in the paper are provided by the DGEI research group.

### [Provide brief introduction]

Aarhus Social and Healthcare College is a typical vocational education providing education to the Danish care and social sectors.

The College provides basic education and training at three levels. The only access requirement is compulsory school.

The College trains around 900 students a year, employs around 100 teachers, and the educations are from 1½ to 2½ years long.

The students attending the educations are very young. In recent years the College has functioned as an "integration and re-motivation centre" for native and migrant youth with poor education and labour market perspectives.

40% of these young people have migrant background and represent very many different cultures from Europe, Africa and the Middle East.

In short, the College is challenged with what we can call disadvantaged, disengaged and drop-out risk youth. The College has been facing high drop-out rates, and many initiatives have been taken to reduce drop-out and to establish early intervention.

This has caused the College to establish an introductory year for young students not yet capable of following the first levels of the formal social and care educations.

The idea is to offer these young and very mixed groups of young people an empowerment year, in which they can build the capacity to attend the first level of formal care education - instead of walking the streets...

The introductory classes have now been turned into experimental media laboratories, a dramatic initiative launched in 2011.

As one of few vocational educations, the Aarhus College has given high priority to the integration of ICT in education since 2000. The College innovatively established an *in house* media team of professional media designers in 2003 to support the integration of ICT and media in the learning activities. This media team is quite famous in Denmark and in Europe, as the team has been working directly with teachers and students in both everyday activities and long-term national and European projects.

[www.sosuMedia.dk](http://www.sosuMedia.dk)

## [Motivation for developing interventions - context, goals opportunities, target groups etc]

The ICT and media initiatives from 2003-2010 resulted in a more dynamic learning environment, but the basic problems remained: ICT and media can be interesting alternatives to books and papers, *but do not basically change the didactic settings, the traditional classrooms.*

It became more and more evident, first of all in the introductory classes but also in the different formal educations, that ICT and media elements would not provide the needed changes and re-motivation of the young learners.

*ICT and media do not offer a didactic framework or learning principles.*

What was needed was a dramatic change in the basic approach to learning. Media would be an important dimension in this change, as it allows a variety of productive approaches, but the new learning settings could not be designed on the basis of media.

A new approach to learning was needed. This new approach had been discussed at the College for years, but had never been practices. The resistance among leaders and teachers was too massive.

However, it was decided in 2011 that the educations were in need of dramatically different learning opportunities, not only for the disengaged young people, but for most students.

Based on the College's strong project department, established in 2003, a number of project initiatives were launched. They all aimed to bring about resources (funding, time, space and partners) to support the media laboratory experiments.

In 2011 the Danish Ministry of Education funded a College project introducing media laboratory learning among the most disengaged students. The funding was for one year, and the project was carried out in collaboration with a higher education centre and two other Healthcare Colleges in Denmark.

In this project creative project based media processes were introduced, but the learning settings were not yet based on the new laboratory approaches.

This national project was followed by two significant European projects: the Comenius 2 years *LABlearning* project, granted in 2011, and the InterReg 3 years *Scandinavian Game Developers*, also granted in 2011.

The two projects were expected to produce a lot of synergy at the College, as the Comenius project provided the *innovative laboratory didactics*, while the InterReg project provided the *serious and social gaming input*.

[www.lablearning.eu](http://www.lablearning.eu)

[www.scangame.dk](http://www.scangame.dk)

Based on the national, the Comenius and the InterReg projects, the College decided at strategic level to dramatically change the traditional classroom teaching into project based media laboratories. In the first year (2012) for introductory students, in the second year for first level social and care students, and in the third year for second level social and care students.

The idea is that the experiments supported by the Comenius and InterReg projects should function as the lever for further experiments at the College, and that the innovative didactics should penetrate the entire College within a limited number of years.

The aim of these dramatic changes is clear: the traditional classrooms are not working for the new digital generations, especially not for disengaged youth; therefore innovative learning principles were strongly needed; learning principles that allowed the young people to engage in learning and to experience immersive learning.

The LABlearning project provides the basic learning approach: youth teams working in media projects linked to real life, to the community and including the talents and aspirations of the young people themselves. The teachers are now mentors for the youth teams, and the College will be populated by other professionals than teachers, such as media designers, game designers and community collaborators.

The media laboratories will be implemented in several European countries, but the Aarhus College is expected to be a Flagship laboratory.

The InterReg project Scandinavian Game Developers provides new business models for young game developers, working in game incubators or establishing small companies, now involved in long-term collaboration with teachers, mentors and students at the College, instead of producing entertainment games for the market.

The new business models of the game designers include three levels of action:

- developing and producing serious and social games in close collaboration with the end users and clients (students learning by using)
- supporting the youth teams' own game design and game development (students learning by designing)
- developing visions for projects and educations based on the learning principles embedded in digital games (gamification of projects and educations)

In short, the Comenius project provides the innovative didactic, the InterReg project provides the gaming dimension.

The synergy between these two resources is expected to be significant.

A very strong background resource for these initiatives is the *Intel Computer Clubhouse Network* partner in the LABlearning project. As full third country partners were allowed in EU educational projects from 2011, the partnership included this global network, born at the MIT Media Lab in the early 90<sup>th</sup> and recognized as the *most experiences and powerful youth and media project* in the world.

One of the interests of the US partner is to take the clubhouse experience from non-formal to formal learning, which coincides totally with the interests of the LABlearning project.

The media lab approach is deeply inspired by this network.

### [Principal actors]

The key framework actors in this process are the College management, the College's international and media departments and the EU project partners. Without qualified strategic management, without strong funding experience in Europe, without creative project professionals, the College initiative could never be launched. The initiatives are based on 10 years of hard international and media work, to a great extent financed by the College itself.

The key implementation actors are the teachers and mentors, the College's media designers and the young game developers from the InterReg project.

The College has formed a special mentor and media designer team, called *The Blue Team*, to manage and carry out the media laboratory experiments, including the gaming design and gamification.

The Blue Team has empowered itself through 6 months of dialogues, both in-team and with external professionals such as experienced Danish serious games developers.

The many resources needed for all this have been and will be co-financed by the College.

### [Role of Policy actors, and means used]

Policy actors emerged at two levels: first of all in connection with the European programs granting the projects, secondly in connection with the heavy co-financing request of the InterReg project: the *Region of Central Denmark* provided almost the full co-financing for the Danish partners.

However, the direct support from policy-makers in Denmark to such experiments is almost non-existing - a lot of research and policy papers, but very little practice and funding of practice.

This is why the College has been struggling for years to be able to carry out the present experiments.

## [Perceived and actual outcomes and impacts, compared to other approaches]

The College has been at the centre of inclusion through learning of disadvantaged youth and adults for two decades. Thus the College has experienced most of the strategies to fight drop-out and disengagement.

The most significant strategies throughout the last two decades have been:

- developing multicultural competences among teachers and institutions
- developing and practicing systematic guidance and counselling resources
- developing and practicing early warning measures
- integrating ICT and media in classroom teaching
- offering different social activities supplementing the traditional teaching activities
- developing and carrying out experimental projects funded by national and European programs (Comenius, Leonardo)

All these initiatives have clearly helped reducing drop-out and to some extent disengagement.

*The problem is, however, that despite all these initiatives, the basic difficulties remain unchanged!!*

And the recent rhetoric and discourse in global initiatives like PISA has made it more difficult to take proper action, as most educationalists are more and more focused on quantitative test results rather than student engagement in quality learning.

The problem is that no matter how qualified the above listed measures might be, they are still stop-gaps in the big picture. They all try to add new things to and to "modernize" the basic classroom didactics of the industrial paradigms.

All this forced the College to make dramatic strategic changes in 2011: *we need to re-think the entire educational set-up and ideology*, as Mitch Resnick from the MIT Media Lab put it many years ago.

Europe has been discussing this for many years, but mostly at theoretical level.

The College, then, developed a strategy for what we call *media based laboratory learning*, building on extremely learner-centred, problem based and project based learning principles, including active use of advanced media and gaming, and linking strongly to the local community.

This strategic step included cancelling the classrooms, the old teacher roles and the traditional idea of what "teaching" means.

The "revolution" will start with the youth groups mostly in need of new learning opportunities: the new and very young students attending the College, most of them suffering from educational allergy. After producing lessons learned from these activities, the learning principles will be taken to the formal health educations one by one within a period of 3-4 years.

The dramatic didactic changes are carried out bottom-up, spreading to still wider circles in the College community, but in strong interplay with the College managers.

It goes without saying that these dramatic changes seriously challenge all basic structures in the organisation: the teachers, the administration, the curricula, the assessment system, etc., etc.

*Most educational institutions, no matter the level, are not able to make such changes.*

They need to be prepared through years of support initiatives, such as teacher training, employing new kinds of staff like media or game designers, developing a mutual language of change in the organisation, carrying out a number of focused pilot projects, etc.

*It is extremely important that national and European funding is available for educations to prepare these needed and dramatic changes.*

Why, then, did the College have the capacity to make such changes?

Due to:

- 10 years of *in house* media collaboration between teacher teams and media designers
- 10 years of European funding of innovative lifelong learning experiments

- The availability of a very strong international and project department in the organisation with professional fundraising skills
- A change in the management of the College: from a more traditional educational leadership to a much more aggressive leadership based on change and globalization challenges
- The College's willingness to employ and finance qualified staff members at high level, constantly feeding the College with innovative initiatives and backing them up with strong national and European networks

The College's funding of the dramatic changes decided in 2011 was designed like this:

In 2011 a large pilot project on media based laboratories was carried out among selected groups of young students and teachers, funded by the Danish Ministry of Education, and in cooperation with a few other educations and a higher education (evaluation and quality assurance).

The process was very complicated, as could be expected, but the results were clear: *as soon as the media labs are working well, and the former teachers, now mentors, are getting familiar with their new roles, many disengaged young people "wake up" and participate in dramatically new ways.*

What was very clear in the evaluation: the experiments could *only* be carried out because professional media designers were available for the teachers. *The collaboration between teachers, media designers and youth teams is extremely powerful.*

This positive, albeit limited, experience led to the next step: funding of the European *LABlearning* Comenius project and funding of the InterReg *Scandinavian Game Developers* project.

The *LABlearning* project should provide higher level media lab didactics and the *Scandinavian Game Developers* should integrate games, game design and gamification at a systematic level.

In spring 2012 a number of activities have taken place to prepare the "revolution" that the new young students will be facing after summer: no classrooms, no teachers.

The activities have included teacher and mentor training, inspiration, many dialogues between teachers, mentors, game designers and media designers - both at local, Scandinavian and European levels.

The College is expected to be the Flagship media and game lab for the other media labs in Spain (Salt, Girona), Italy (Reggio Emilia) and Holland (Assen).

As mentioned earlier, the famous Intel Computer Clubhouse Network from Boston US is a third country partner and delivering precious inspiration from their 20 years of global media and youth experience.

Already after 6 months work, the *LABlearning* and *Scandinavian Game Developers* projects' look extremely promising and the impacts of the projects, and the synergy between the projects, can hardly be overestimated.

A small example is that more and more teachers and departments at the College are stating a clear interest in participating in the media labs, and that the projects are invited to all sorts of presentations across Europe.

### [Main difficulties encountered in process]

The fact is that it is extremely difficult to find funding for such experiments, nationally and at European level, and this includes funding for serious games and gamification.

Our experience is that neither the Lifelong Learning Program nor the media programs can be used for these experiments.

The funding of serious games is even more problematic. Only large enterprises are able to fund serious and social games.

*Therefore new business models are urgently needed for serious and social games, and the Scandinavian Game Developers project aims to develop precisely such models - based among other things on the College experiment.*

Serious games cannot be produced for the market, but must be designed and produced in close collaboration with the end-users and the education, corporation or institution involved.

Game developers should increasingly look for employment in mixed learning teams in educations and in private businesses, rather than produce quasi-serious games for the market.

The market model does not offer all the learning benefits in the design process as the new collaborative models do. A great part of the learning lies in the development of the games, not only in the use of the games. This is overlooked by many actors in the education as well as in the game sector.

Summarizing, there are three main difficulties in establishing such media laboratories:

1. It is extremely difficult to fund such experiments, both at national and European level. Most funding programs do not provide the flexibility to allow such experiments; a good example is the Leonardo program, which is kind of strange, as especially vocational training is haunted by increasing drop-out and disengagement. National funding programs for such projects are almost absent. Funding of serious games and gamification is even more difficult.
2. The national education systems are limiting the freedom of the educations to make experiments. Based on benchmark activities such as PISA, most educations are occupied by providing test results. Most educations are under great pressure from the national governments, and this reduces the capacity and motivation to carry out the highly needed experiments and changes.
3. The European teacher and teacher training cultures are very traditional. It will take decades to change these cultures, and heavy interventions should take place already in the teacher training institutions.

This means that "media lab and game learning experiments" mostly take place in higher education, if at all, and especially linked to research circles. Most schools and colleges are unable to launch and carry out such experiments; and it is precisely in these institutions the dramatic changes are needed.

One of the main difficulties the College and the teachers faced in this long process was and still is the overwhelming gap between the rhetoric and discourse of innovation in education, integration of creative media and the exploitation of the learning capacity of digital games and gamification, - and the serious lack of implementation opportunities.

*Many educations and teachers are discouraged because they listen to and participate in the blossoming rhetoric of learning innovation, but when they try to take action they face mountains of obstacles.*

One major example is that the College has developed a strong and detailed concept for a serious game called *BODYexplorer*.

*BODYexplorer* allows the learner, or the care worker or the elderly, to conduct quests and research within the fully animated human body - travelling along the natural infrastructures of the body, and facing challenges linked to how lifestyle diseases affect the different parts of the human body.

Many professionals have agreed that the concept of this health game is extremely strong and that the game might be used and benefit large groups of the population, and groups of the population is need of inclusion in particular.

The background to the game project is that disadvantaged groups of citizens cannot be reached efficiently through traditional public campaigns.

The College has spent many resources for *three years* to get this serious game funded, or at least co-funded, but without any results.

College staff has produced quality applications to European programs, to national programs, to private enterprises with social responsibility programs and to the regional and national Danish authorities.

Of course the College will continue to search for funding for this serious game, but the story presented is a good example of the gap between the rhetoric of innovation and the practical reality and real funding opportunities.

It goes with saying that a healthcare College might be able to develop strong and useful game concepts, and also to form the needed professional consortium, but

an average vocational education is not able to find the ½ million euros needed to produce the game.

### [New knowledge, experiences, technologies, institutions created]

Allow me to focus here on *new knowledge*, or what we call *lessons learned*, as these lessons learned might be valuable both for policy-making and funding programming and for educational change in general.

#### *Formal - non-formal*

When creating media and gaming labs for inclusion and re-motivation we need to tear down the wall between formal and non-formal education: when the key driver of engagement among the young people is their talents, aspiration and curiosity, the old school frameworks are not working. The young people need to be able to follow their interests and conduct their quests without being limited by traditional infrastructures such as time, physical space and support resources available.

#### *Media fluency*

Young people are technology and media fluent as to social communication and entertainment, but they are certainly not technology fluent when it comes about *learning with media*.

*Research shows that the youth groups mostly in danger of disengagement and drop-out are precisely the youth groups less technology fluent as to learning with the technologies.*

Research show that in the US the white and Asian youth groups are more or less interested in using standard technologies for learning, but the same is not true for the black and Latino groups.

These are serious obstacles to media and gaming labs for learning, and it is highly recommended to allow considerable time-to-change for these youth groups, as they will not automatically engage in media and gaming activities for learning.

#### *What is gaming?*

When talking about serious games, games for learning and gamification of educational processes or settings, we should take into account that the world of gaming is constantly changing! In fact, it is the very nature of the gaming world to change...

*Funding programs are in danger of being obsolete even before they are launched!*

Gaming today is not about playing a game on a consol - at least not serious gaming. Gaming today is a social process, a collective quest, an unpredictable dialogue between young people from different cultures and involved game designers.

The distinction between the game designer, the gamer and the game is slowly disappearing: gaming is becoming an open-ended epic, and open-ended exploration and research process, involving what we once called designers, users and user communities.

At the same time, more and more game design software is openly available, and more and more games are designed and re-designed "in the clouds" - inviting gamers to change, elaborate on or challenge the "game", even in real-time.

*This is a huge challenge to both educations and funding programs: they are not ready to offer the needed flexibility to support such extremely creative and powerful learning processes; they are always several steps behind!*

This calls for innovative and very flexible funding measures. Both educations and funding programs must accept to let go of the full control of the processes.

#### *Community*

Tearing down the wall between formal and non-formal youth education is only a small part of what we really need to do: tearing down the walls between traditional education and the community.



In media and social gaming labs it is neither possible nor useful to uphold the walls of the old "institutions" (a discourse belonging to the industrial era). Media and gaming projects should precisely include strong links to community players and real life, including labour markets.

This also means that re-motivating youth includes their being in the community, carrying out useful tasks, and community players appearing in everyday life in the educational "institutions".

The Intel Computer Clubhouse Network is an excellent example of community directed media labs.

A serious health game should, for instance, link constantly to the local hospital, health practitioners, elderly and expertise in the field: you cannot win the game alone, you need the community, and winning the game means a change in the community.

#### *New business models for games*

When 50 quality entertainment games are produced, only 1 serious game is produced. The open market works perfectly well for (some) commercial games, but not for serious or learning games.

*The entire development, design and production process for serious games is totally different from commercial games.*

Future funding measures for serious games should take this into consideration: serious games are long processes of social dialogue, not classic production processes. If not, serious games are not serious or taken seriously.

New business and cooperation models for the development of serious games are urgently needed to exploit the great and not yet fully recognized potentials of serious games.

This is one of the missions of the Scandinavian Game Developers project.

[www.scangame.dk](http://www.scangame.dk)

The development of serious games must be user-driven, include a variety of players and stakeholders and should be created in close collaboration and experimentation with the end-users, or what we now should call: the co-designers or gaming partners.

Developing a serious or learning game is a long social process, including very different parameters and quality issues from developing commercial games - although many new commercial games, especially strategic and epic online games, are using extremely strong social design models.

*And more: the learning outcomes of developing a serious game is not merely linked to the result of the process, but is to a great extent linked to the very development and design of the game.*

It is easy to imagine a very successful serious game never being turned into a classic "product". Some serious games (as well as some entertainment games!) will never end, and the primary role of the game designers might be to facilitate and moderate the users' own development contributions...

#### *Traditional school buildings*

The new media and social gaming labs challenge the very heart of what we called *education*: even the buildings in which we "teach", "organize" and "assess".

Traditional school buildings are not useful to media and gaming labs, as they are strictly linked to industrial education: based on time and place structures, not on learning needs.

Educations therefore need to engage in a re-design of their physical spaces, or we simply need to create new and more distributed "schools", based on learning principles not on industrial control systems.

This is closely linked to the idea of gamification: a project, some rooms, a space, or even an entire school could be designed on the basis of the learning principles embedded in good digital games. Physical space matters, perhaps even more than we imagine...

The *Quest2Learn* in New York City is an example of gamification of the physical space and the organization of the frameworks for learning.

The Aarhus College is planning to build a brand new College "building" from scratch. An extensive design process is being developed, in which college staff,

students and external partners will take part within a 12 months period in 2012/13.

Media and gaming lab learning principles will play a considerable role in these design dialogues.

### [Prospects for future development; types of challenges faced, and support required]

The College is developing a long-term strategy for dramatically changing the basic educational approaches, and the media and gaming experience will be at the centre of the strategies.

The College will systematically expand the media and game based learning environments to all the College' educations within a 3-4 years time framework.

The College will base this development on the following key resources:

- The creation of a special Learning Centre at the heart of the College, consisting in trained media and gaming lab mentors, technology support functions, *in house* media designers and probably very soon also *in house* game designers or contracted game designers
- The ability of the international and project department to raise the needed funding or co-funding from national and European sources
- A considerable own-funding from the College's annual budgets
- Strong collaboration with partners and consortia in Denmark, Scandinavia and Europe

The strategy includes building a new "school", taking into consideration future time and space needs such as for media and game lab learning.

The College wish to collaborate with stakeholders and partners in Europe in support of the design of the new "school", and will be interested in transfer projects through which the College's design process is exploited as an inspiration to other educations in different countries.

The College experience and strategy will be presented at a European conference in May 2013 entitled *Re-motivating disengaged youth - unfolding the inclusion potential of learning technologies*.

The conference will present the above mentioned projects and initiatives, offer prominent keynotes on serious games and gamification and will invite the expected 200 participants to plan future joint action in the field of media and gaming labs in Europe.

In case relevant Commission policies are available at the time of the conference, the College will invite a Commission representative to explain the 2014-20 games for inclusion policies.

The College is in 2012, as a special focus area, preparing major initiatives within the new European Research and Innovation Program, *Horizon 2014-20*.

*The mission is to offer new ways of creative and user-friendly implementation models of new health technologies in hospitals, health centers and in the private homes of elderly and handicapped persons.*

The background to these initiatives is that serious problems occur when *hardcore health technology is confronted with social life*. We believe that serious games can offer a communicative and mediating bridge between hardcore technology and social life.

Even though the College has prepared these dramatic innovations for more than 10 years, it is still very difficult for an average educational institution to play flagship roles in Europe.

Therefore the College is, of course, also in the future strategic initiatives, dependent on co-funding from strong external sources such as the Danish Ministries and the European Commission.

But, to speak frankly, most of the old, present and new European and national funding programs are not designed to support such "process oriented" changes.

Nor are they designed to support experimental collaboration between game developers and educations - or to support basic media and game based didactic experiments in general.

*It is the experience of the College and of many partners in our European networks that the innovative and promising rhetoric of the education and media programs is dramatically castrated and devaluated along the administrative implementation processing of the programs.*

The College is therefore foreseeing serious difficulties as to future funding opportunities, even though the College is playing the role of flagship initiative on many of the innovative European learning and gaming scenes.

Another source of concern is the increasing interest in benchmarking activities such as the PISA tests.

The idea of the PISA test was to inspire national governments to improve their national education systems, but it has turned out that the PISA tests are mostly used as pressure on the national educations, forcing educations to focus on quantitative test results (being themselves rather questionable) rather than developing new learning opportunities for the increasing number of disengaged youth.

*In a time where we seem to lose an increasing number of youth people, we use the PISA tests and similar benchmarking approaches to focus on traditionalism in education instead of innovation.*



Photo from the EU LABlearning project

## Recommendations for the design of policy and support measures: *what kind of experiments and practice should be encouraged and supported?*



### 1. THE APPROACH TO INCLUSIVE SERIOUS GAMING

Serious games for education should not be products for consumption, but processes for construction.

The learning and inclusion effects of serious games are distributed along the development of, design of, production of and social dialogues around the emergence of the "game".

Support policies and funding initiatives should take this into account.

### 2. FROM PRODUCT TO PROCESS

A "game" is a commercial game for entertainment, produced on open market terms.

In education the word "gaming" is more appropriate, as it ranges from employing game developers as educational staff, designing and producing serious games or "gaming" in close collaboration with the users and the community, using gaming in learning processes - to gamification of projects, classes, rooms or buildings - gaming communities.

New business models for serious games are urgently needed. Serious games for inclusion cannot be produced for the market, but must be designed and produced in close collaboration with the end-users and the education, corporation or institution involved, as the market model does not offer the wide range of the learning and inclusion benefits as the collaborative models do.

Support policies and funding initiatives should take this into account.

### 3. GAMING AND EXPERIENCING LEARNING

The commercial market is turning towards the production of small games for hand-held devices. This is also true for some forms of "serious games". Such games might be useful for many things, also for education and inclusion.

*However*, the real potential of serious gaming for inclusion, especially for drop-outs and disengaged youth, as well as for adults with poor learning experience, lies in games offering an epic and social dimension, allowing the learners to experience immersive, community based and productive learning.

*This is the true inclusion potential of serious gaming.*

Support policies and funding initiatives should take this into account.

### 4. COMMUNITIES OF GAMING

For educations and large training centres (as well as many other organisations) to develop into creative and inclusive media and gaming labs, it is of immense importance to re-think what kind of staff is employed.

The learning, inclusion and social potential of media production and serious gaming cannot be expected to unfold, unless the institutions are able to create mixed communities of "teachers", mentors, media designer, technology supporters and game designer.

This change is caused by the shift in focus from "content" and "curricula" to providing engaging social processes of immersive learning, based on an extensive use of media and gaming - and it represents a fundamental new approach to *didactics*.

Support policies and funding initiatives should take this into account.

## 5. FUNDING FOR YESTERDAY'S GAMING?

When talking about serious games, games for learning and gamification of educational processes and settings, we should take into account that the world of gaming is constantly changing!

*Funding programs are in danger of being obsolete even before they are launched!*

Gaming today is not about playing a game on a console, at least not in serious gaming. Gaming today is a social process, a collective quest, an unpredictable dialogue between young people from different cultures and involved game designers, in which the learning and inclusion effects are diffused across a wide range of activities and processes.

The distinction between the game designer, the gamer and the game is slowly disappearing: gaming is becoming an open-ended epic, and open-ended exploration and research process, involving what we once called designers, users and user communities.

At the same time, more and more game design software is openly available, and more and more games are designed and re-designed "in the clouds" - inviting gamers to change, elaborate on or challenge the "game", even in real time.

This is a huge challenge to both education and funding programs: they are not ready to offer the needed flexibility to support such extremely creative and powerful learning processes; they are always several steps behind!

The world of education often reacts by researching the past instead of searching the future...

Support policies and funding initiatives should take this into account.