

# CONFIDENCE in Behaviour Changes through SERIOUS GAMES



## STATE OF MARKET ANALYSIS – EXECUTIVE SUMMARY

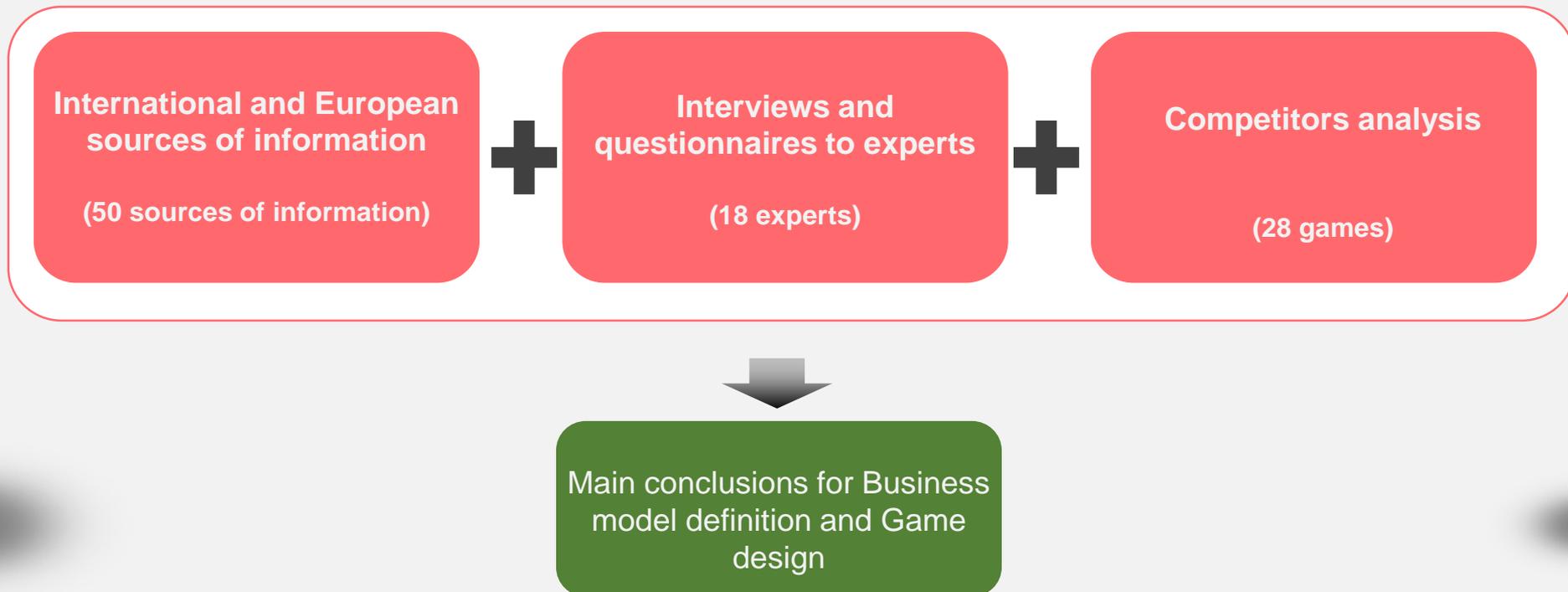


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# OBJECTIVES

The objective of the market analysis document is to analyse the market and future trends in the use of technology for education, serious games, bullying prevention and safe use of internet and mobile devices. There have been used different information sources, inputs from interviews and questionnaires to experts and main competitors.

The objective of the study is to know needs, trends and global educational context related to bullying, safe use of internet and mobile devices in order to guide the business model and the definition of the e-Confidence solution.



# USE OF TECHNOLOGY IN THE SCHOOL

The digital transformation affects the education sector fully and the wave of disruption is covering and modifying all its elements and sections, reason why companies and educational institutions are making an adaptation effort of their contents, resources and objectives to the reality of the digital world.

The OECD Digital Economy Outlook 2015 shows that most of the OECD countries establish as a fundamental pillar of their national digital strategies the promotion of ICT adoption in the education sector and the promotion of ICT-related skills.

Recent studies about trends in education show that the classroom is no exception to this trend. **Digital learning is an inherent part of the educational system**; whether it's schools providing pupils with tablets or laptops, or students bringing their own devices (BYOD) into the learning environment. In fact, technology analyst Gartner value the educational tech market at almost £17.5 billion.

Major tech companies are getting into the education industry with mixed results. Education technology companies are leveraging big data to improve classroom engagement and make learning more effective. They're focusing on everything from online courses to personalized testing to standardized APIs for K-12 schools, and investors are champing at the bit to fund their data-driven initiatives.

Techcrunch shows an interesting view of the differences in the use of technologies that are given in classrooms according to the school stage in question. **Gamification has been the primary trend in driving engaging materials for young children.** Digitally delivered content allows children to engage in play that builds their cognitive functioning, enhances their vocabulary and increases their number fluency.

# SERIOUS GAMES AND GAME BASED LEARNING

The motivation and attention of a young person in learning is the first step in developing habits and skills that will support them in realizing their academic, civic and career potential. Studies demonstrate that **game based learning are tools that maintain the motivation of students developing their critical thinking and metacognitive skills.** Video games help young people to increase their creativity, promote their socialization or improve their decision making.

According to ISFE and European Schoolnet survey (2009) the **great majority of the teachers confirm that pupil motivation is significantly greater when computer games are integrated into the educational process:** this increased motivation sometimes seems to be linked to the greater self-confidence that some pupils develop when using games in the classroom. Their previous knowledge of games (not necessarily of the game in question) gives them the opportunity to guide and help less experienced pupils. With or without previous experience of games, the best pupils also have the chance to help others, and they derive satisfaction from this. In addition, the ways in which mistakes and different learning rhythms are managed in a game take the drama out of learning.

# BULLYING PREVENTION

In existing studies and policies of prevention and intervention on bullying, there is unanimity in describing the phenomenon as a form of aggression that is intentional, repetitive, and implies an inequality of power between victim and aggressor. **The highest incidence of reported bullying, both online and offline appear in the 13 and 14 years**, far surpassing the means of harassment carried out through messages, networks, platforms, instant messaging and, in general, any of the options considered.

Comparing the incidence of bullying and cyberbullying, **it is noteworthy that in five years the percentages of boys and girls who claim to have been victims of harassment have doubled in absolutely all age groups and socioeconomic strata.**

The bullying can be stopped through preventive work. Many factors have proven effective in the prevention of bullying. Below are the key factors determining how to create a safe and secure school:

- Create an unified approach: this means that teachers, other school staff, students and parents all get involved in the work to create a safer, secure environment
- Include others: all the adults in school must communicate and stand up for the school's values, in and out of class
- Plan to stop degrading treatment and discrimination/equal treatment plan
- Work based on the schools's situation
- The students are the experts
- Systematic quality work: actions must be documented, evaluated and followed up to know whether progress is being made

# SAFE USE OF INTERNET AND MOBILE DEVICES

Minors are now growing in a hyper connected world, and this ecosystem, as well as providing them with an enormous amount of opportunities for learning and personal growth, also places them in a position of vulnerability to the threats and risks involved in surfing the internet. The growing tendency to access the internet through mobile devices requires that educational interventions aimed at developing a safe behaviour in the internet and paying particular attention to the opportunities and risks of mobile internet, since the online experience is significantly different as we access from laptop or through mobile (smartphones and tablets).

**School systems can play a strategic role in promoting a safe and responsible use of the internet,** complementing parental mediation and compensating the training of those children whose parents are not sufficiently informed or not sufficiently competent. But teachers and centers may not be sufficiently prepared and equipped to meet this challenge.

To fulfill its role and promote the digital skills of children and adolescents, schools need to be equipped with ICT and integrate digital technologies into the teaching and learning processes. In addition, the introduction of internet safety into the school curriculum should go beyond the list of "things that should not be done".

**Serious games and Game Based Learning are methodologies that present enormous potential** to be integrated into the strategy developed by schools to promote a positive and responsible use of the internet and mobile devices.

# MAIN CONCLUSIONS

Main issues that e-Confidence project needs to take into account for business model definition and game design are the next ones.



## Didactic Guides

It is a relevant aspect from all areas of the study. The results of working with serious games serve as a basis for teachers to work with students in other type of dynamics



## Change of behaviour

Justify properly that e-Confidence serious games are relevant to change behaviours from 12 years old children, as the market study analysis would recommend educational interventions for early ages



## Didactic guides for families

As families will be part of our business model it will also be important to develop didactic guides for them

# MAIN CONCLUSIONS



## Bullying

It is important for the design of serious games to simulate victim role but also stalker role



## School policy

e-Confidence needs to explain how to integrate serious games in the whole school policy.  
(The most effective programs to prevent bullying incorporate development of social and emotional competences, leadership of directors and teachers, promote the student role to help their pairs and the creation of a global initiative)



## Reports for teachers and families

It will be a key aspect of e-Confidence their integration with LMS and the possibility of follow-up offered to the teacher, as well as the ability to add other resources after working with the serious game

Reporting should also compare results from different groups and levels

# MAIN CONCLUSIONS



## Mentoring between pairs

It has been shown that the most effective programs are those in which the most pro-social children help the rest to resolve conflicts. It would be interesting for serious games to provide advice through the figure of older students



## Evidences of effectiveness

Only a few competitors analysed shows with data and facts what is the degree of effectiveness of the games. It is key that e-Confidence include this information in the presentation of the product



## Several languages

It will be differential that e-Confidence is available in several languages from the beginning, as almost all competitors are only available in English

# MAIN CONCLUSIONS



## Game design issues

Not locate scenarios and characters with real world locations to avoid cultural issues

Allow to repeat chapters to increase score, without needed to start from the beginning

3D it is not essential



## Budgets and diplomas

Design of virtual budgets and diplomas to reward those groups with good results



## Missions and complexity levels

Missions of game related to real life situations and social and emotional education

Several levels of complexity

# MAIN CONCLUSIONS



## User manuals and FAQs

Virtual learning platforms are not very widespread into the schools. It is necessary to design simple manuals for e-Confidence that facilitate login and monitoring of the results by teachers



## Rankings and competitions

Include some competition or ranking among schools



## Native apps

Since there is a clear trend towards the use of mobile devices in school it will be relevant that e-Confidence uses Xtend native apps for iOS and Android

# MAIN CONCLUSIONS



## Mobile devices

Use of mobile devices is an area that is very little discussed in the games analysed. e-Confidence has to emphasize that serious games cover this subject

## Price

Almost all the games analyzed are free. Only six games are commercial solutions. It will be necessary to define a proper added value proposal to be competitive with free games

# THANKS

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