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New advertising tools for school guidance

J. Alvarez (PhD directors JP Jessel (IRIT) & G. Methel (LARA)), O. Rampnoux (CEREGE)

Abstract — *The objective of this paper is to restore the process of development and installation of a project called "Technocity" which aims to develop technology courses of French State Education among the young people from 15 to 18 years old, with a very special care for the girls. We develop a gameplay to build a new school guidance tools. We choose to create a dynamic approach with video game and shortly report on different technical job. After, we explore the impact and the reception of this tool in different classrooms by childrens.*

Index Terms — **Advertising tools, Advertainment, Education, Edumarketgame, Innovation, Marketing, Reception, School guidance**

I. INTRODUCTION

Technical courses of study offered by the state education system, "Electro technical – Energy", "Electronics – IT", "System maintenance", "Mechanical engineering" and "Construction – civil engineering" find themselves in a dramatic situation in terms of attractiveness and recruitment as a result of their very poor image and reputation among young people. Even though there are real opportunities in terms of finding a job, attractive salaries and professions which are far from being routine, each year classes in the technological sector are being closed because there are insufficient numbers of candidates. Starting from this observation, the Sumotori communication agency has suggested to the state education authorities and the local education board in the Midi-Pyrenees Region (France) that they add to their communication plan and traditional tools through the development of a tool in order to boost the number of candidates and to improve the image of these courses.

"Technocity" is intended to participate in improving the image of five technological courses of study as seen by young people aged 15 to 18 with particular attention being paid to girls.

The idea is to innovate in the communication strategy through the use of new technologies. Sumotori has suggested to the local education board to try to attract young people and to reinforce the impact of the message by using the principle of the video game as a communication mediator. Indeed, children live in a pluri-mediatic universe and the use of traditional tool is no longer sufficient to achieve the required thresholds of efficiency. With "Technocity" we wanted to take a new approach to mobilising communication tools in order to have a greater impact and thus to keep their attention longer. In fact, "Technocity" represents a genuine disruptive innovation in information dissemination strategies for the professional orientation of students. The strategy is based on the idea of arousing interest and attracting the target with a recreational format and a medium which recalls their digital leisure activities and then encourages them to discover a message of a persuasive nature : discover and learn about the technological courses.

This experiment is a first for the local education board which has decided to give it a go and measure its impact. This

choice has been driven by the urgency of the situation. The economic pressure on the school system is more and more significant in terms of performance and efficiency. According to Gavarini (2004), "the child must be ahead of their pairs for a particular cognitive, cultural or artistic apprenticeship [...]. The school is the place where destinies are rapidly marked." Moreover, there is a noticeable gap between the skills and knowledge acquired by students in the school system and the labour needs of industry and the economic fabric. Today, the acculturation process of the school is insufficient as it no longer meets all the objectives that the republic imposes and relates back to the question of the individual, their identity and appearance, which de Singly (2003) calls *the individualised individual*.

"Technocity" combines in the same movement the recreational dimension and the informative dimension. In order to keep the attention for long periods, the video game is attractive and will offer mini reports at a later stage. At the end of a game, the student will complete a questionnaire relating to the professions shown in the videos. This is this a radically new approach which seeks to combine the digital leisure activities of the child, videos and games. Given that our ultimate aim is to modify the child's attitude towards technological courses, we can talk of an advertising product. But, as the concept contains video games which require dexterity and experience of games, we can also position this product as entertainment. We see emerging an illustration of what is usually called advertainment.

However, we must go beyond this term because, as a result of introducing into "Technocity" the quizzes which refer to the recreational educational space, we find ourselves in a more complex combination which brings together the stakes of entertainment, education and marketing. This innovative combination brings forth a new category of product which we could call Edumarketgame.

It seem necessary at this stage of our report to clarify as far as possible the different references used, because in the field of communication strategies, innovations are constant and adopt new technologies very quickly. Today, communication strategies already use video games to place products, the mobile phone to broadcast messages or ring tones which reproduce the sound associated with a brand. "Technocity" goes even further, because through this product, we are seeking to make video games compatible with a persuasive message which evokes studies and work. This antinomy is our major concern and is central to our thinking. Firstly, we will look at what is at stake in the development of "Technocity" and we will present the original facets of the product, and then we will present the results achieved in studies and inquiries carried out with children and teachers and representatives from the state education authorities.

II. PART ONE

A. Scenario development

In order to develop the game scenarios, the first step was to list the "federating aptitudes" which are looked for in the child

for each of the five predefined sectors. Thus, for example, for "Construction – civil engineering" we find "being a good organiser", "working outdoors" and "having a sense of responsibility". These "federating elements" are then associated with major existing families of video games (arcade, simulation, strategy) to determine the choice of gameplay for the five "Technocity" games. We were guided in our choice by the idea that, beyond recognising skills, these games have to stand out in order to offer a choice to cover a widely as possible the different groups of players which make up the target. In the end, we chose the following gameplays :

- For "Electro technical – Energy", whose "federating elements" are "reactivity", "safety" and "skill", an arcade game was chosen. The player has a set time to collect the energy capsules to repair a generator while avoiding traps of an electrical nature.



- For "Electronics – IT", whose "federating elements" are "rapidity", "analysis" and "perseverance" a strategy game was chosen. The aim is for the player to programme a robot to carry out missions. In order to highlight the electronic aspect of the sector, the game also requires the user to repair the robot's mother board in a random manner

Jeu Informatique

1 - Le joueur est invité à fabriquer le circuit imprimé qui va permettre à un robot de remplir une mission précise.

2 - Le jeu est divisé en 2 zones. Le joueur découvre sur la zone gauche un plan sur lequel est positionné le robot, des obstacles et un point à atteindre.

3 - La zone droite de l'écran présente une carte vierge que le joueur doit d'abord garnir avec divers composants : câbles, ventilateur, feu, mémoire, processeur, interface E/S. Dans un second temps il faut programmer le processeur avec différentes fonctions. Faire tourner le robot, le faire avancer, souler avec la pince... Une fois la carte programmée, le joueur réalise les actions du robot. Si la mission est remplie, le joueur passe au niveau suivant.

Temps restant : 10 secondes

De niveau en niveau le jeu se complique avec :

- Ajout d'obstacles qui accroissent les temps de réflexion
- Des fonctions supplémentaires à utiliser sont ajoutées au robot
- Diminution du temps de réflexion

- For "System maintenance", whose "federating elements" are "anticipation", "rigour" and "safety" a game involving reflexes and anticipation was selected. Given such serious components, it seemed

appropriate to use music to introduce a little poetry. Thus the scenario here is to ensure that a musical machine with rather unorthodox mechanisms operates properly.

Jeu de la maintenance industrielle

1 - Le joueur est invité à réparer le bon fonctionnement d'une machine musicale triagramme.

2 - Four fois le joueur doit anticiper les pannes qui peuvent survenir en changeant des pièces avant usage et en alimentant les sources d'énergie et les consommateurs.

3 - Le joueur doit également faire attention à l'aspect sécurité. Si le niveau est joué en entier sans aucune interruption, le joueur passe au niveau suivant.

Temps restant à tenir : 12 secondes

De niveau en niveau le jeu se complique avec :

- L'ajout de nouvelles pièces
- Le temps du morceau à jouer augmente

- "Mechanical engineering", whose "federating elements" are "spatial perception", "reflection" and "adaptability", the principle of the game is an assembly game along the lines of "Tetris". Initially, the principle of an assembly line where the different parts of an automobile are assembled more and more quickly seemed appropriate. Afterwards, the cars were replaced by scooters in order to remain close to the target.
- Lastly, for "Construction – civil engineering", whose "federating elements" are "being a good organiser", "working outdoors" and "having a sense of responsibility", we drew upon the first "Sim City", a game where the aim is to construct the layout for an entire town. For the reasons set out above, we limited the game to the construction of a road linking two towns : the player has to be careful of the budget, satisfy the inhabitants and respect the environment.



Budgetary constraints and production deadlines played a large part in the development of the games. Developing a 3D video game for general release such as "Warcraft III", "The Sims" or "GTA San Andreas", which could involve several hundred

people over many months or years, requires a budget well in excess of 1 million euros. Moreover, video games for general release must make a profit which requires sales of thousands, or even millions of copies. In the present case, the means at the disposal of the education authorities are quite relative and make it necessary to consider cheaper development alternatives. We decided to develop a multimedia video game using programmes such as "Flash" or "Director" which are simpler and quicker to use. The choice was even more limited by the fact that five games had to be developed simultaneously with little or no sharing possible in developing the modules as a result of the gameplay choices.

B. Style of graphics and sound in the games :

The conscious choice of 2D, unlike the most recent video games on sale, aims at producing a break in perception. This type of contract can also be found in most small cartoon animations on Internet, "webtoons" such as "Happy Tree Friends", which push the concept to an extreme degree by depicting animals with personalities. Thus, a 2D graphic universe exists which is recognised and codified by children and we found it logical to use it as a source of inspiration.



Moreover, as music and fashion are federating elements of identification for young people, the option of introducing variations with adolescent fashion models, associated with different styles of music also fits into the scheme of communal on-line practices. Each variation has its own music dedicated to its style of clothing and it accompanies the player through the different phases of the game.

C. The video sequences in the mini reports

In order to present the various technical sectors, the local education board had several different video films. They present interviews with young technicians who describe their jobs for 2 to 3 minutes and explain exactly what they do. Presenting the message through explanatory videos constituted a difficulty both in terms of scenario and narrative in that the user has to move from an active state (interacting in the video game) to a passive state (watching video extracts) which creates a genuine break. Moreover, when the first video sequence is shown, we are at a crucial moment in the narrative structure, because the real intention of "Technocity" is revealed. In order to stimulate the attention and strengthen the recreational dynamic, a quiz with questions linked to the contents of the videos is proposed during the video sequences.

A significant gain is made available in order to stimulate the memorisation work of the student : access to new Flash games by a connection to 6 "parker and badger" games from the website www.spirou.com published by Dupuis. It must be noted that these games are usually designed and developed with a view to advertainment. The local education board is relying on word of mouth which might encourage young people to access games with well known enduring characters. This idea sends us back to the question of how "Technocity" will be received, to the formation of preferences which are going to have an influence on the attitude towards the professions presented and thus how it will affect the capacity to develop a behavioural intention for career guidance, which is the subject of the second part of our report.

III. PART TWO

A. Research design

Distribution of the product takes place in two phases. First of all, through the intermediary of 1,000 CD-ROMs distributed in 600 colleges, secondary schools and career guidance centres in the Midi-Pyrenees region (France). Then an Internet site is set up with content identical to that of the cd-rom (www.technocity.fr). The idea is that the site enables young people who have discovered "Technocity" at school to continue exploring its contents at home and can show it to their group of peers and to their parents.

In order to comprehend the reception of "Technocity", we have put in place a complex study design (Evrard et al, 2003) which aims at covering the entire target, but more particularly students in 3ème (aged 14), because it is a key part in career orientation. At the end of the college cycle many students decide to opt for the technical sectors. First of all, we made participative observations with the students and interviews with education authority representatives and teachers in order to define a number of items and to be able to construct a questionnaire which will be put to a representative sample of the target population. The key idea is to assess the persuasive value of the concept thus developed on students after the orientation process through a comparison with pre-orientation statements, the perception of "Technocity" and the real orientation via the dossiers constituted by the students. Using the information thus collected, which will terminate at the end of the 2006 school year, we will be able to consider constructing a segmentation like that of Schaaper (1999) for the video game market. The identification of user profiles and the definition of a taxonomy of the students is necessary to enable the evolution of the communication tools during the next information and orientation campaigns put in place by the local education board.

In this context, we considered it essential, in order to assess the reception of "Technocity", to meet all the different classes in 3ème, the two types of class in 2nd (aged 15) as well as the classes of 4ème (aged 13), while also taking into account the socio-geographical parameters such as the urban, peripheral and rural zones.

B. Results, attitude and reception

In the end, our results cover six reports of participatory observation in 8 classes, and 12 individual interviews with secondary school teachers and representatives of the local education board.

Given that the entire study took place within a college or secondary school during sessions supervised by teachers, it is quite clear that this interacted with the reception of the product. Indeed, in the school setting, the child places himself in an apprentice situation and not in a play position. The institutional setting normalises the reception of "Technocity" and therefore requires distancing the speeches and the remarks made by the students. As a result, as the first sequence, after choosing a character, begins with a video game, the contrast with the school context produced a very positive and enthusiastic initial reaction from all the students. As Molinier points out, as a result of the labelling of the school around knowledge, skills and apprenticeships, and also a virtual refusal of the game in the school setting (Brougère, 1995), the recreational sphere appears as a contradiction, indeed a break with what the students expected, we are able to interpret this attitude in the light of the product.

As part of this research, we wanted to take a tripartite approach to the attitude and not a uni-dimensional approach. Indeed, by picking up on the work by Derbaix (1982) concerning the hierarchy of effects, which deal with advertising in particular, it appeared logical to us to seek to break down the attitude of the child into these three components, that is to say, the cognitive component, the affective component and the conative component. Knowing that the model which has been well-tested with children is an inverted sequence compared to the adult, we are in the presence of the following chain of events : affective – conative – cognitive.

Thus, the initial enthusiastic reaction of the children relates to the affective dimension of the product. Moreover, as in the case of advertising in its traditional form, we know that the peripheral elements (music, characters, colours and graphics) play a key role in the construction of this affective dimension (Kapferer, 1985, Guichard, 2000). All the consideration, conception and development work carried out beforehand is justified by this initial reaction by the children.

In a second phase, during our observations, we noticed that playing video games followed by watching videos does not produce any weariness in the short term. Given the constraints linked to the school setting, our experimentation and observation protocols could not exceed one hour. In numerous cases, we had to interrupt the game or video because the students did not wish to stop it themselves. From this assessment, becoming familiar with the product has been achieved and raises interest. From the point of view of attitude, once again the product encourages support, and in particular in the behavioural component. Lastly, with regard to the cognitive dimension which sends us back to a better understanding of the professions and sectors, the fact that a large number of students were able to finish complete sequences (video games and quizzes on professions) leaves us to think that the adolescents have memorised the information, at least in the short term. The question of transferring the memory of work to the long term memory of knowledge was not part of the declared aims of the product.

The exploration of behavioural intention remains to be explored and understood. Currently, our results do not enable us to reach any conclusion regarding the impact and thus, efficiency of "Technocity" in relation to student orientation. This is the subject of the second phase of our research design which is currently being developed. If a real impact exists, we will have to test the hypothesis of knowledge memorisation,

of the modification of their vision of industrial professions, and the fact that students have made appointments with career guidance counsellors or are seeking information about these professions. Lastly, an increase in the number of students in the classes previously out of favour may also be an indication of efficiency, but this would then require having control over all the variables interacting in this chain of events which leads to an actual enrolment in the training branch.

C. The innovative aspect of Technocity

The five games which make up "Technocity" do not offer innovative gameplays in an intrinsic manner, they are even of rather classical making. The innovative aspect lies rather in the way in which they are produced, from the context in which they are used and the global structure in which they are set. The objective of attracting college students and the genuine desire to deliver a persuasive message in an indirect manner constitute the novelty of the concept. If we compare "Technocity" with Food-Force (www.food-force.com), which was launched on the Web by the United Nations in 2005, we can find many similitudes and examples of converging development. The strategy deployed is similar : deliver a message to children (in this case, making them aware of humanitarian work) through video games. It is remarkable, when comparing the two products, to find the same global narrative structure : a succession of small and varied video games, and documents in the form of videos. Moreover, we notice, for both these products, a desire to associate teachers with the project in order to assist in reaching the target groups.

It seems to us that we are in the presence of an innovation which causes an organisational disruption. Indeed, in a technological continuity, the rupture comes from the proposed uses and the objectives in view, which leads to the consideration of constructing a new product offer : edumarketgame.

IV. CONCLUSION

Our reflection will only be complete when we have tackled the question of student orientation in all its complexity. The mobilisation and development of new communication tools are not sufficient to guarantee the efficiency of the tool. Indeed, school orientation is also an eminently social process, in which parents seek to enrol their children on a trajectory which is in line with their social status and their representations of professions and sectors. Parents are strongly aware of the importance of school and training in order to ensure more rapid integration into the world of work in an extremely competitive context. As a result, the question arises concerning the choice of the target for state education communication campaigns, parents or children and hence the genuine efficiency of a tool such as "Technocity". School orientation is a syncretic decision for parents in which the children are closely associated. As a result by targeting secondary school students, we hope to exploit this double socialisation (parents – children and children – parents) or social interactions (Gollety, 1999). The question of the impact of "Technocity" and its reception by parents remains complete and does not come within our research.

The other point to be analysed arises directly from the comparison between Food-Force and "Technocity". Even though they use the same narrative plan, these two products

do not make use of the same technologies (3D vs. 2D), and the influencing agent does not have the same legitimacy (United Nations vs. State Education) and they do not deal with the same themes. Having these two approaches available today makes us open to other study objects, to know if the different computer graphics approaches play a significant role in the reception of messages by young people, if edumarketgame will open as many new paths to be exploited in commercial strategies for industrialists and marketing professionals,

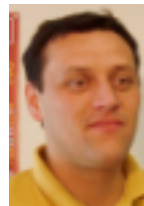
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Authors



Julian Alvarez Phd in communication and video game at IRIT (Institute of Computer Research of Toulouse) and LARA (Laboratory of audiovisual Research) of the Universities of Toulouse II & III (France). His research focuses on the way to use video games as tools for communications.



Olivier Rampoux, associate professor in marketing and new product in the European Center for Children's Products (C.E.P.E) at the Business Administration Department (I.A.E) of the University of Poitiers (France). His research focuses on child consumption practices, edutainment product and innovations targeting children. He is member of Management Science Research Center (C.E.R.E.G.E) at I.A.E.

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