Increasing Academic Brand Awareness through Virtual Reality

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Abstract

In the global campus, Virtual Realities not only produce student-generated information and ideas, but they improve collaboration within and between the triple helix components: academic staff, students and employers. Using virtual reality (VR) technology, students will be able to be more prepared when they hit the real economy. Since technology is moving at a fast pace, it is time for universities to acknowledge VR technology use in view to increase their brand awareness and attract more prospective students.

The aim of the paper is twofold. Firstly, it emphasizes the benefits of the VR application implemented within "Dunarea de Jos" University of Galati, the unique initiative in Romanian higher education system. Secondly, it attempts to identify the VR technology capabilities to increase the academic brand awareness in the internationalization strategies through a quantitative survey on professional networks, such ResearchGate and Academia.edu.

We discuss the results to highlight the VR technology's pivotal role in bridging the gaps between the methods to give lectures and worldwide students' expectations to learn in a more entertaining way.

Keywords: *virtual reality, augmented reality, higher education, virtual tours, active learning*

JEL classification: M15, D80, M31

1. Introduction

Since virtual reality (VR) becomes increasingly accessible, this incredible development that is currently expected positive impact it will have on the future of several areas such as education, health, journey and also marketing. In their quest to remain in step with future updates, many brands already found creative ways to take advantage of the positive benefits of this technology. Virtual reality allows

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brands to experiment by showcasing product attributes, informing consumers and showing first-hand how a brand can fit a lifestyle.

The project University "Dunarea de Jos" of Galati in VR, managed by Brandvertising Media, was designed to be viewed on all platforms, PC, phone, tablet, as well, have compatibility with VR headset devices, such as OCULUS RIFT, HTC Vive, Oculus Gear and Google Cardboard. The big advantage of this application is that the University is closer to students, making total transparency adopting new VR technology.

By implementing virtual reality tours, University "Dunarea de Jos" of Galati becomes the first university in Romania that implement this type of technology to provide a clearer picture of those who want to explore the conditions offered to future students.

Interactive virtual reality experiences create a sense of familiarity and increase physical campus & University visits, applications, and yield rate.

The aim of this paper is to highlight the role of VR technologies in making higher education more appealing for students, but also their impact on driving brand awareness, especially when virtual tours are integrated in the higher education institutions (HEIs) online communication strategy.

2. Theoretical background

Many studies revealed that the virtual learning environment is more effective, and engaging than the traditional learning one (Piccoli et al., 2001; Koskela et al., 2005). Virtual reality has been introduced in higher education institutions as communication spaces, simulation spaces and experiential spaces. Its impact has been observed at the level of participants' affective domain, learning outcomes and social interaction (Hew & Cheung, 2010). Frequently used educational activities based on VR tools are self-paced tutorials, displays and exhibits, immersive exhibits, creative academic writing, role plays and simulations (Warburton, 2009). Virtual reality technologies are suitable for assessing students' achievement levels using knowledge-based, abilities-based, or skill-based measures (Merchant et al., 2014).

In the case of a virtual reality educational game, it is very important to evaluate the usability of the typically complex virtual reality environment of the game since it is not recommended to make the students' learning process more difficult than it already is (Virvou & Katsionis, 2008).

Academic environment is facing new forms of organization, most often integrated into collaborative networks, or their more complex forms, virtual organizations, these new forms as a response to the complexity and business turbulence (Roja and Nastase, 2012).

Innovative approaches of education provide students with a more efficient learning environment where they can have more interactions with their peers and professors, as well, with the availability of online learning facilities, such virtual reality tools (Kose, 2010). The principles of supporting students' active learning

within a VR environment are paired with a strong sense of presence in which they feel comfortable in a virtual context (Dawley & Dede, 2014). Experiential learning has more advantages in terms of the many approaches in which VR technologies can be harnessed to facilitate students' learning progress (Vo et al., 2017).

Augmented Reality (AR) is different from Virtual Reality (VR); while in VR landscape, professors and students are expected to experience a computer-generated virtual environment, in AR, the learning environment is real, but extended with information and imagery from the system (Lee, 2012).

3. Methodology

This research framework involves a pilot study conducted on a convenience sample – 50 respondents, affiliated to diverse higher education institutions from Europe, approached with an invitation to fill out a 10 items questionnaire.

The items included into the research model reflects how respondents perceive VR multiple roles in entertaining the learning environment, driving academic brand awareness, transforming the educational process into an interactive one, promoting a sense of belonging to an academic community, engaging the learning experience, but also virtual tours impact on online awareness of HEIs and level of adoption of professors, as well.

The response rate to the invitations sent via Research Gate and Academia.edu was 36,49% in order to achieve the target of 50 respondents for the pilot study. Cronbach's alpha value is 0.781, which indicates a high level of internal consistency for the scale with this specific sample of respondents.

Due to the limited number of respondents, we were unable to perform statistical analyses in order to test hypotheses, focused on correlations between research model variables.

4. Findings

VR experiences can have a profound impact on both professors and students, improving both teaching and learning in a more entertaining way. Thus, the majority of respondents agree (44%), respectively strongly agree (38%) the idea mentioned above, considering that VR encourages better social interactions between students and their professors (Figure 1).

The new learning environments require a high propensity of VR academic users (professors and students) to immerse in a fully digital experience; however, there are still pedagogical barriers to overcome through enhanced self-directed experiential learning, mediated by VR technologies.

As students from worldwide are increasingly engaging in online learning, especially in MOOCs (Massive Open Online Courses), VR drives the development of online learning management systems, able to extend the prospective learners database and to increase academic brand awareness. In what concern the respondents' opinions on VR role in driving academic brand awareness, most of

them (72%) appreciate that VR tools enable a higher interest and implicitly audience in online learning (Figure 2).
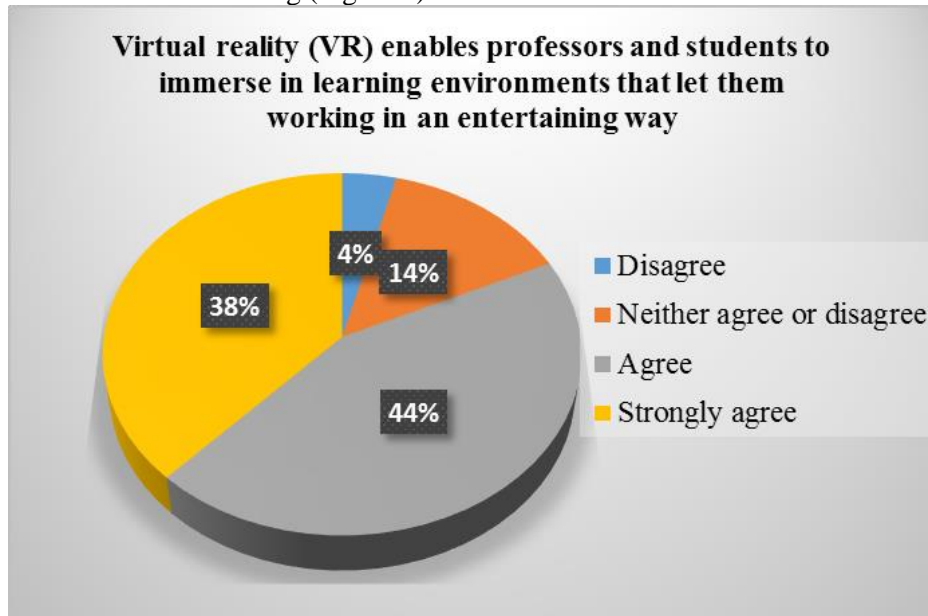

Figure 1 – Respondents' perceptions regarding VR role in entertaining the learning environment

Figure 2 – Respondents' perceptions regarding VR role in driving academic brand awareness

Given the huge opportunities available in academic branding activities, decision makers from higher education institutions (HEI) are willing to spend more time pondering questions like: In what ways does VR lend itself to the academic brand awareness process? Pertinent answers to such a question creates the framework for building the online reputation of a HEI, based on VR technologies.
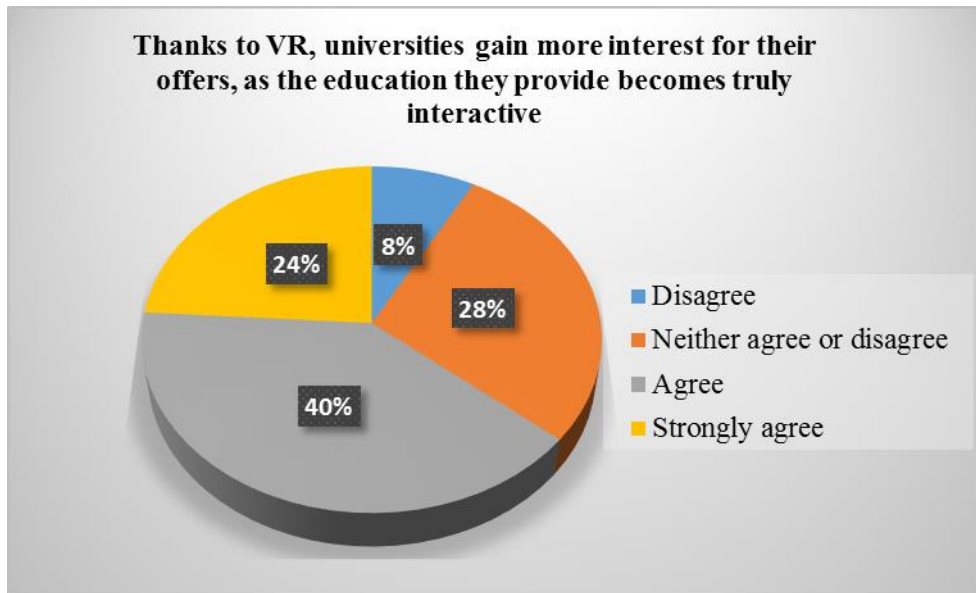

Figure 3 – Respondents' perceptions regarding VR role in transforming the educational process into an interactive one

When students use VR technologies, they are able to spot multiple information sources within their field and even unlock further information. The education becomes more interactive by means of VR technologies, according to respondents' opinions (64% of them – Figure 3 highly appreciate VR role in giving educational landscape more interactive for learners)

Virtual communities of practice are more and more appreciated in the higher education (good examples are ResearchGate and Academia.edu). The sense of belonging to an academic community is particularly relevant when VR capture opportunities of keeping in touch and mediating academic communication beyond the traditional methods. The answers to the third question (Figure 4) are in line with the previous statements.
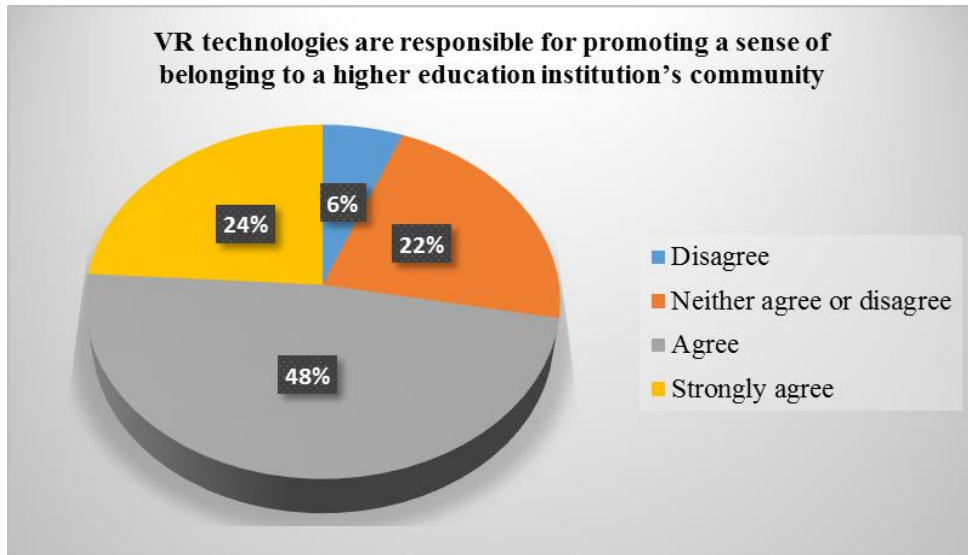
Figure 4 – Respondents' perceptions regarding VR role in promoting a sense of belonging to an academic community

By facilitating students to directly interact with their learning platforms, virtual reality makes courses more appealing, thereby increasing engagement rate and motivation to learn. The positive effects of VR on learning motivation are emphasized by the current research results – Figure 5, where 76% of respondents are in line with motivational paradigm related to VR application to educational content.
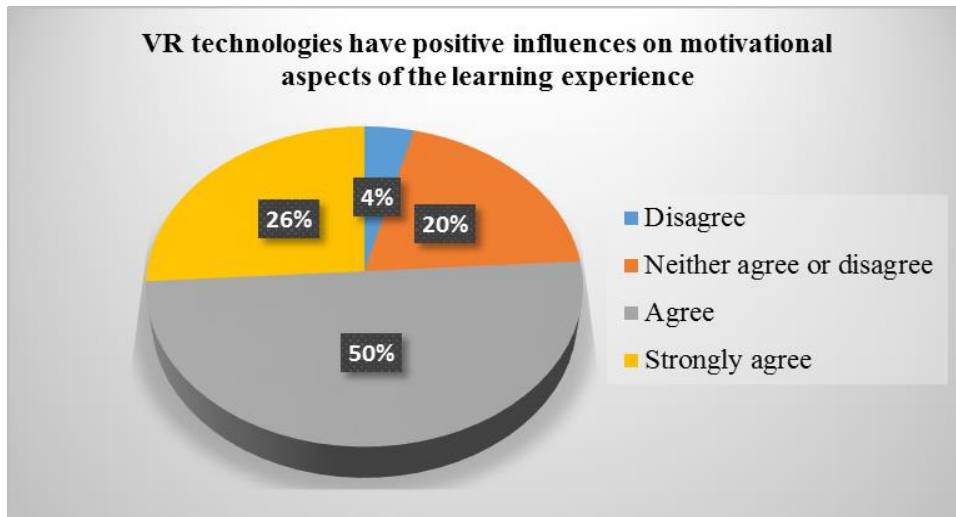

Figure 5 – Respondents' perceptions regarding VR role in engaging the learning experience

Nowadays, universities need a highly dynamic online presence to remain competitive in the global campus. Virtual tours represent powerful Digital Marketing tools to entice prospective students to visit a campus in person. This research highlights that 92% of respondents are convinced by the virtual tours' benefits in the process of promoting a HEI in an interactive way (Figure 6).
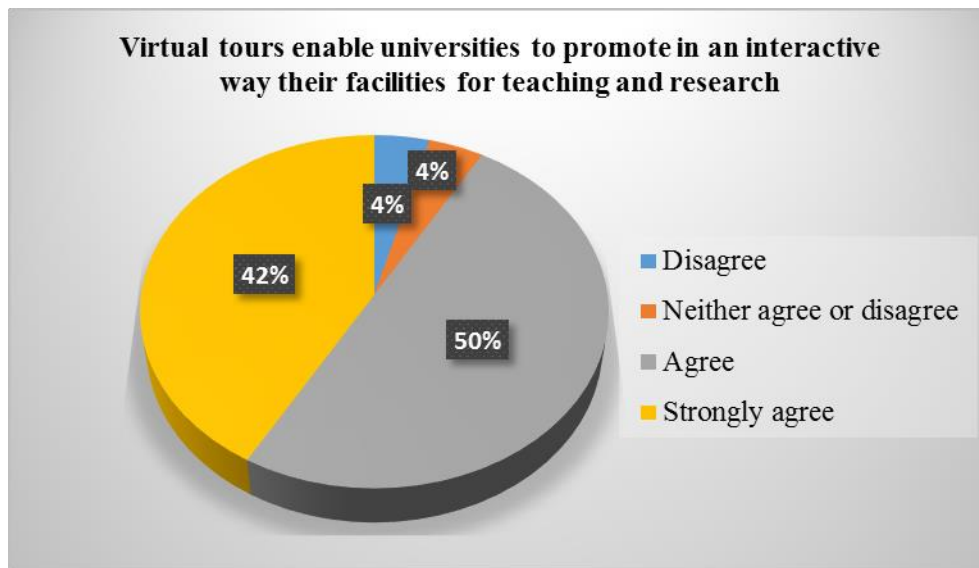

**Figure 6 – Respondents' perceptions regarding virtual tours' role
in promoting a HEI in an interactive way**

The digital transformation of HEIs needs to be driven by high exposure of the academic brand towards achieving the necessary outcomes. Virtual tours are perfect venues to connect digital channels to give the HEI a 'personality'. Moreover, virtual tours leverages VR technologies role to drive traffic from the part of prospective students and the proof of new digital capabilities, outlining universities' commitment to keep up with the trends of digital transformation. Figure 7 reveals how respondents strongly agree (44%), respectively agree (34%) upon these ideas, previously shared.
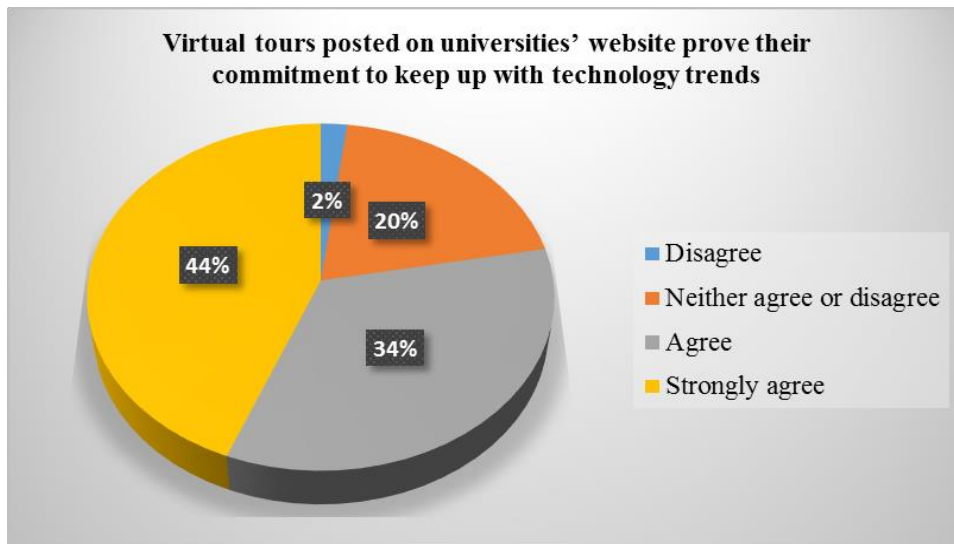
Figure 7 – Respondents' perceptions regarding virtual tours' role in revealing HEI commitment to keep up with technology trends

The opportunity to provide cost effective access to high fidelity VR tools must be captured by any HEI. The potential of a VR technologies in enabling academic efficiency is significant, as the costs for the technologies have the tendency to decrease. The contextual information related to VR technologies applied in education can influence students' self-regulated learning behavior. The distribution of results, emphasized in Figure 8 (80% are highly aware of the VR role in enabling the academic education efficiency) legitimates the idea that context overcomes content, when we discuss about VR technologies for academic purposes.
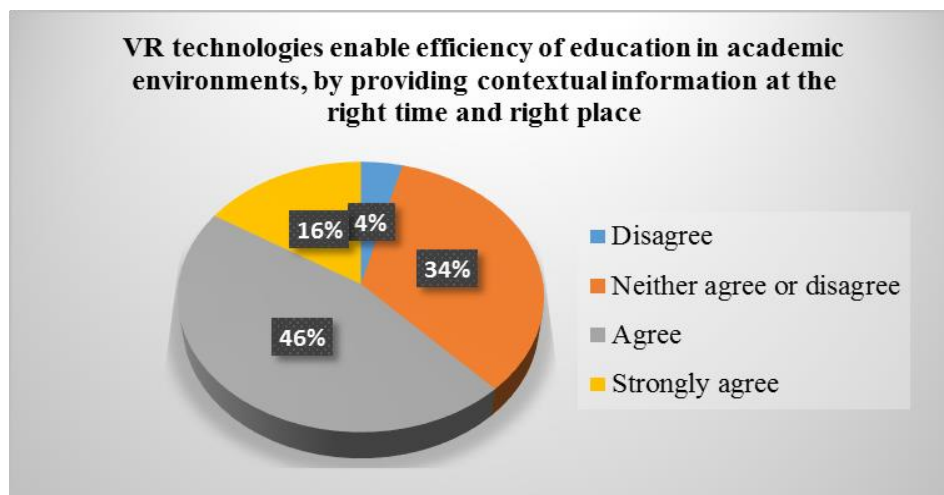

Figure 8 – Respondents' perceptions regarding VR role in enabling the academic education efficiency

One of the most important issues regarding VR technologies adoption level in higher education consists of professors and students' readiness to use effectively these tools. On the one hand, the professors, especially the older ones, manifest a propensity to adopt with difficulty any technological development; on the other hand, the young professors and students are eager to adopt teaching and learning innovations into mainstream practice. There will always be people who will oppose the change (Nastase et al., 2012). Respondents' perceptions regarding professors' difficulties when dealing with VR technologies (Figure 9) reveal interesting insights, as the distribution of answers is balanced on agreement with the statement (28%), neither agreement, nor disagreement (28%) and disagreement (24%).

Universities should convince both professors and students who are using digital tools based on VR technologies of their reliability when are integrated in the classroom. We consider that a blending of formal and informal methods of teaching and learning can foster integration of VR technologies in the pedagogical innovative approaches.
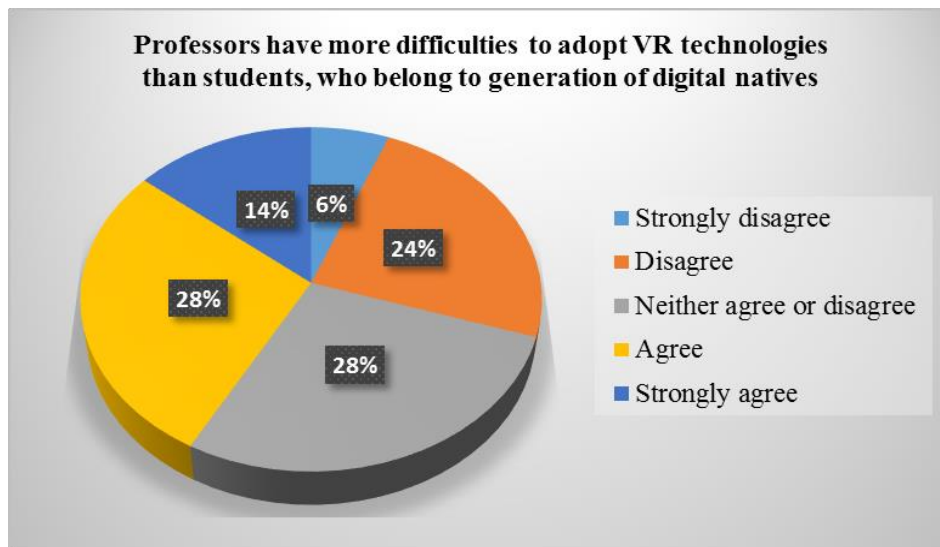

Figure 9 – Respondents' perceptions regarding professors' difficulties when dealing with VR technologies

Universities should benefit of affordable virtual reality interfaces in order to make education more accessible to wider range of students. However, there are still tools not too affordable for educational purposes, such as Oculus. However, the company which own this tool is working on a new headset in an attempt to make the technology more affordable. The most expensive VR tool which can be used in educational process is HTC Vive that can teleport learners to any place.
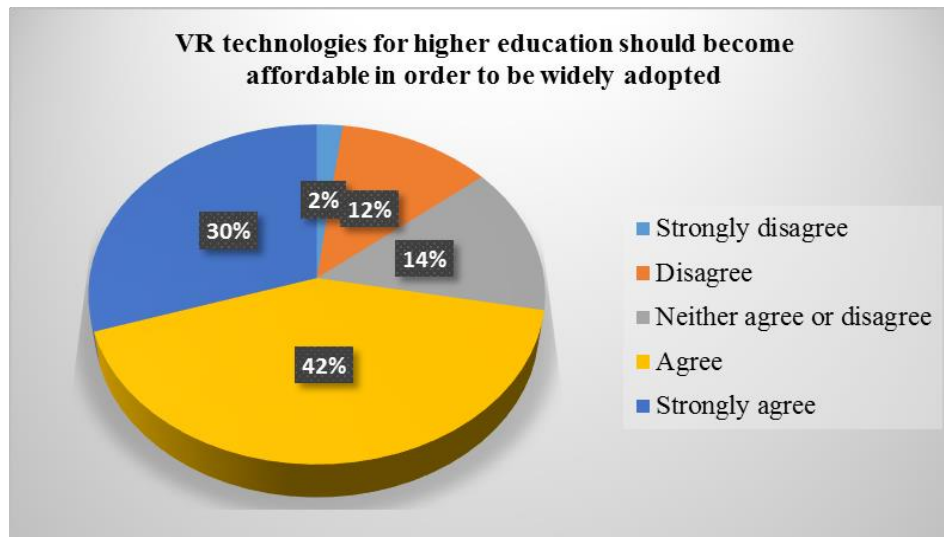
Figure 10 – Respondents' perceptions regarding the need for affordable VR technologies

The answers to the last question (Figure 10) emphasize that the main part of respondents agree (42%), respectively strongly agree (30%) with the idea of cutting the financial pressures regarding VR technologies adoption.

5. Conclusions

In order to demonstrate how the VR technologies enable the integration of learning knowledge into practice, we examined a sample of 50 respondents (academic staff) with decisional responsibilities in their universities. Nevertheless, our results clearly show that the innovative learning contexts, based on the immersion of VR tools in academia, supported significantly greater understanding of the VR technologies' benefits in the global campus, with respect to active learning requirements.

Findings of this study reveals that VR technologies can play a significant role in providing a learning framework that let professors and students to work in an entertaining way, a higher institutional brand awareness, more interest for HEI offers, as the education they provide becomes truly interactive, a sense of belonging to a higher education institutional community, motivational pillars for immersing in a totally new learning experience. Virtual tours embedded into university websites enable the interactive promotion of the academic campuses, proving in the same time their commitment to keep up with technology trends. There are still debates regarding the capacity of both professors and students to adopt easily VR technologies in their work, while the majority of respondents consider that VR technologies should become affordable in order to be integrated at a greater extent in the academia.

The present study has several limitations. First of all, it's just a pilot survey, with a limited number of respondents, grouped in a convenience sample. Another limitation regards the impossibility to perform descriptive statistics analyses due to the small sample.

In order to evaluate the advantages of VR technologies for HEIs, further work should be performed on a large scale, inviting decision-makers from academia and students to express their opinions regarding the issues approached into the research questionnaire.

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