HoloLens / niche and thematic window displays – v1:

MaFEA – Making Future Education Accessible
PR3 - EDUCATIONAL LEARNING PATHS

Technology tools:	HoloLens 2
Tool version:	
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College:	Escola de Comércio de Lisboa, Portugal
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Subject of the lesson(s):	# Retail Business; #Visual Merchandising; #Marketing; #Sales Promotion; # Trade and sell; # Management # Retail Promotion# Augmented Reality

HoloLens / niche and thematic window displays

Intention: What do you wish for or hope to happen? (Intentions are often not measurable or tangible, but help you in developing the design process.)
1. Currently, professions related to the area of commerce are very competitive and increasingly require professionals capable of thinking and doing things differently. We believe that it is during the period of their training and the completion of their professional courses that they should be faced with the greatest challenges. Today, technology by itself is no longer a novelty. The real challenge is what we can do with it and how we can use its potential to benefit the education of our students.   2. Given this equipment - HoloLens, and the teaching team that is trying it out, our main goal is to help develop key skills such as creativity and critical thinking, in a context of designing and projecting small exhibition areas (such as niches, which are exhibition areas on a smaller scale that exist in one of our training companies) and that will serve, especially for Window Shopping, Commerce and Sales and Marketing students to anticipate the placement of products in store space. Augmented reality appears, therefore, in this context as a way to go further, given the real and physical resources that the school has (which are relatively small), in a perspective of adding and improving the manipulation of different objects and the endless possibilities of composition in a three-dimensional space.   3. It is our intention that students, when carrying out this type of exercise, understand that it is not fundamental to fully replace the reality that they know and work on daily (and that will be, to a large extent, the reality that they will find in the labor market), but that they learn and feel that with the right technologies they can project beyond it, in a search for creative solutions that may later result in practical solutions that may even be simple, but that prove to be effective. Our intention is that our students learn to manipulate equipment like this and that they understand it as an extension of the creative process and not as a definitive solution to a problem or challenge they have to solve.

Desired Outcomes: One or more measurable and tangible goals the teacher aims for with this lesson/these lessons.
1. Learn how to use the software HoloLens;   2. Use HoloLens as a Visual Merchandising tool in the different school pedagogical labs (ECL Store, ECL Food Store) and training company;   3. Another goal is to motivate students to learn the technical content of some subjects and help them develop working methods that encourage their creativity.

Agenda: HOW are you going to reach the goals? Description of the lesson plan / educational activities / working methods.
1. **Problem identification**: Unattractive product display in the store (in this exercise, what matters is that the students are able to clearly identify a problem that will systematically arise in their professional careers: how to make store front windows and the arrangement of products inside them attractive enough for customers to buy).   2. **Challenge**: Use HoloLens as a tool to improve product display and, consequently, attract customers' attention.

3. Once the activity is defined and negotiated, the students will be divided into groups of and each working group needs to:
   a. select a business area (for example, Sports);
   b. in the HoloLens select the app 3D Viewer, in the gallery select a product Line (for example, Balls);
   c. meanwhile, each group can decorate the exhibition space with elements representative of the business area, arranging them in a technically correct way and following specific composition models (circular, pyramidal, etc.);
   d. using the HoloLens, create specific exhibition areas for each type of product.

Roles: Who facilitates what? Who participates? What do we expect of the students?

1. Teacher facilitates the use of the tool
2. The participants are Teachers and students of the Business Team
3. The goals of the project are:
   - helping students take advantage of technologies as business facilitators;
   - showing students (and make them realise) that technologies are fundamental to the environmental sustainability of business;
   - new technologies are important pedagogical tools to increase young people's motivation and engagement in the learning process.

Rules: Rules or principles are about how you want to learn and work together.

1. The teamwork between teachers and students from different business areas, namely Commerce, Sales & Marketing, Visual Merchandising, requires a certain type of rules that need to be accomplished:
   - in each team, each student has a different role, to which a specific responsibility is added (some examples of these roles are communication, technological equipment, maintaining the well-being and good environment among all, etc.);
   - throughout the activity, it is essential that each group explains to the teachers who are accompanying them which options they took to solve the challenge, so that they can get the proper feedback;
   - at the beginning of the activity there is a briefing with all the students where all the rules regarding the functioning of the equipment are explained to them, so that they can use it safely and enjoy its potential;
   - at the end of the activity there is again a moment with the students to evaluate the activity, share opinions about what went well, what went less well, and what could be improved in a similar exercise (metacognition).

Time: Describe the time path: What time do we start / finish / break? When is the time for reflection? What happens between contact times?

1. The activity takes **4 hours**:
   - 1 hour for real product display in the defined space;
   - 1 hour to login HoloLens, choose the images at 3D viewer and to explore the use of the glasses.
   - 1 hour to evaluate the results of the activity.
   - 1 hour to evaluate the activity (in the form of a debate): self-evaluation, hetero-evaluation, co-evaluation and metacognition.