

THE APPLICATION OF OLFACTORY MARKETING AS AN EDUCATIONAL RESOURCE FOR THE DEVELOPMENT OF TRANSVERSAL SKILLS AND COMPETENCIES WITHIN BUSINESS COMMUNICATION

LA APLICACIÓN DE UNA EXPERIENCIA OLFATIVA COMO RECURSO EDUCATIVO
PARA EL DESARROLLO DE HABILIDADES Y COMPETENCIAS TRANSVERSALES
DENTRO DE LA COMUNICACIÓN EMPRESARIAL

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ABSTRACT

Introduction: Sensory marketing applied to Tourism seeks to provide novelty and value through the design of experiences based on the use and empowerment of the senses. In the present study, an investigation is carried out focused on the analysis of a fragrance with the aim of motivating students, their creativity and inducing critical thinking. Through the study, students are proposed to reflect on the perceptions and memories evoked and their application in the labor market. **Methodology:** From a positivist paradigm, it tries to explain the reality of the participating subjects and describe the importance of the influence of sensations and memories associated with an olfactory experience within the transversality of a subject. Through the use of a mixed research methodology, the great influence of sociodemographic variables and the association of memories with the fragrance are evident, arousing the interest and motivation of the students. **Results:** Exposure to an olfactory stimulus complements the learning of the



content, and the development of transversal skills and competences in students of different higher education degrees. A notable influence of olfactory perception on different sociodemographic variables is evident. **Discussion:** The experiential learning of the feelings and memories associated with a fragrance helps the development of critical thinking in students for its application in the labor market. **Conclusions:** This innovative activity allows the development of skills helping to understand the subjective perception of individuals and the importance of olfactory experiences as communication tools at a professional level within the field of Tourism and Marketing.

Keywords:

olfactory marketing; creativity; tourism; events; teaching-learning; consumer; critical thinking

1. INTRODUCTION

Nowadays, the creation that brings novelty and value gains special relevance in fields focused on design. It is precisely this discovery in the creative process, which can be considered significant, that allows communication to occur in a unique way, with the aim of creating a greater impact and/or a positive memory. Sensory marketing seeks to achieve this goal through the design of experiences based on the use and enhancement of the senses, something that is reflected in tourism and events, sectors that aim to create creative and memorable experiences.

1.1. The approach to creativity in the classroom.

The concept of creativity has evolved, moving away from ideas that almost exclusively associated it with artists or gods, to become part of human competencies. If etymologically creativity is associated with forming or producing, the concept is surrounded by other nuances that go beyond the merely productive and are relevant to multiple fields of study, including learning. Setting aside creative inspirations represented in ancient Greece through the muses, current definitions of creativity focus on the ability to generate new ideas, processes, or concepts through original solutions. According to Mednick (1962), the creative process could be defined as 'the formation of associative elements in new combinations that meet specific requirements or are somehow useful' (p. 221). In this combination, the farther apart the elements are, the more creative the process or solution will be. Following a line influenced by connectivism, Koestler (1964) believed that creativity centered on the connection of independent and disconnected levels of experiences at the beginning of the process, which is an interesting aspect for the present research. Romo (1997), in approaching the definition of creativity, states that it is 'a way of thinking whose result is things that are both novel and valuable' (p. 53). In the approach to the educational context, creativity should be understood as a cross-disciplinary discipline within higher education, being an element that should allow the acquisition of diverse competencies, whose applicability transcends the academic sphere and remains permanent for students in their future professional experiences.

The teacher faces a challenge when seeking learning through creative content since these must also be formulated from creativity itself, generating novelty: a transcendent novelty. This challenge becomes even more significant when considering the current social context, where relevant innovative approaches must be integrated into formal

educational models, where science is often presented as dogma, and where stereotyped thinking can prevail (González, 2020). Approaches to critical thinking in the classroom should promote future searches for alternative and appealing solutions in professional environments. The foundation of creativity lies in the heuristic, in exploring and discovering the next transformative step, which is why exercises that demonstrate which creative alternatives are applicable in future professional contexts should facilitate this type of thinking.

Furthermore, the learning resulting from critical thinking is approached in this research with the aim of encouraging students to adopt this approach through reflective questions, prompting them to seek affirmations of reality. After presenting creative solutions and proposals related to their field of study, a more direct question is posed to the students to encourage a critical approach, observing and reflecting on the potential suitability of a specific alternative in a new context, demonstrating the need for rigor.

1.2. The Senses and Creativity in Business Communication: From Proust's Madeleine to Sensory Marketing

In the work *'In Search of Lost Time,'* Marcel Proust describes what is probably the most famous olfactory flashback in literature. The protagonist, thanks to the scent emanating from a simple madeleine, manages to automatically evoke a series of childhood memories. The well-known 'Proustian madeleine effect' shows how, through the sense of smell, the writer describes the vast structure of memory opening up.

An odor, a fragrance, or a perfume generates communication in a process between sender and receiver. As in any communicative process, when considering the message to be conveyed, we must understand that in the case of odors, the receiver's context is variable. Larrea (1997) provides an extensive historical and cultural approach to the world of smells, and it is evident how he gathers examples from writings that demonstrate the geographic, individual, and cultural dependence on certain odors.

To this end, Rengade (1886) already pointed out in the 19th century the following:

According to individuals, and even according to countries, which may seem stranger, an odor is considered either pleasant or bad; musk, unbearable for many people, is the preferred perfume of those who seek excess in everything; asafoetida, which we find horrible, constitutes the delights of the Orientals; but there are odors, some of them quite harmless in reality, so antipathetic to certain organisms that they can cause genuine accidents. (pp. 154-155)

When discussing tourist destinations, Izaguirre (2012) adds biochemical aspects: 'Pleasant smells perceived at the destination stimulate the olfactory area of the frontal lobes, while unpleasant ones activate the amygdala and the insular cortex of the temporal lobe' (p. 151).

Cultural factors are not the only aspects to consider in the perception of odors. The same scent can influence positively or negatively depending on the memories and feelings associated with it, as well as internal and external factors of the individual, as stated by Gómez-Gallo and Hernández-Zelaya (2020): 'In the perception of odors, the internal environment of each individual, including their habits, principles, tastes, personality, and education, plays a role, while external factors are influenced by the environment' (p. 205).

Therefore, there are several variables that significantly affect odor perception. A notable example is the gender of individuals, as pointed out by theorists like Petri et al. (2003), where women's sense of smell is more sensitive than that of men, capable of detecting odors masked with chemicals in their study. Larrea (1997) emphasizes the importance of another factor, which is the age of the individual; partly linked to the general aging of organs, age-related changes are present in olfactory quality, 'with the superiority of this sense decreasing as the individual's age increases' (p. 216). These aspects are of significance in the present study, as the uniqueness of each student must also be considered, which can impact academic performance (Tejedor and García-Valcárcel, 2007).

When approaching creativity from a marketing perspective, we encounter elements that make it more appealing as they align with potential objectives pursued by marketing itself and other communication strategies. Similarly, it is evident that the sense of smell plays a prominent role in the perception of something when it is communicated. It should come as no surprise that this fact is actively being considered by sensory and/or experimental marketing due to the emotions it generates and the impact associated with positive or negative impressions. For some authors like Bell and Bell (2007), this potential is more than considerable, given that the emotions an individual can experience daily are mainly influenced by the sense of smell, enabling them to remember and recognize more than ten thousand odors.

The impact of the visual in our society is highly relevant, and sensory marketing takes this into account. However, it is also beginning to expand to other senses, and the importance of the perception of odors and their influence on people is evident. These two senses, sight and smell, share similarities because 'both are senses with a great capacity to evoke emotions and memories, but above all, both function constantly and involuntarily' (Castillo and Bigné, 2022, p. 65). The combination of perceptions from different senses multiplies the impact of memory by tenfold and facilitates decision-making based on emotions stored in memory (Lindstrom, 2008).

Scent marketing focuses on the application of fragrances in the business and commercial context to stimulate feelings and modify customer behaviors. It can also be used to influence the mood of employees, patients, event attendees, and others. This technique is employed to create a brand identity through the use of fragrances, which has become an increasingly common and effective communication strategy.

In the leisure and tourism sector, one of the pioneering examples of scent marketing is found in Disney theme parks. The American company was among the first to make a clear commitment to the sense of smell in its facilities, initially seeking that sensory association for memorable realism in its attractions. Through the Smellitizer system (patented in 1984 as aroma-emitting systems), they incorporate scents and fragrances reminiscent of burnt rubber or gunpowder in the context of themed attractions, or the smell of popcorn with the intention of increasing sales and consumption. This combination of engineering, neuroscience, and chemistry, applied at precise moments, serves to imprint the memory of the destination in the minds of park visitors (PhDPrincess, 2020) and even generates a subsequent desire to purchase scents that transport them back to the destination and the experiences they lived (Bricker, n.d.).

Today, many brands strive to achieve these described objectives using similar sensory marketing techniques based on the creation of 'odotypes.' These can be defined as olfactory stimuli associated, in the context addressed, with a particular image, product, brand, or moment. More precisely, Bonadeo (2005) establishes that an odoype would be defined as 'the stable aromatic form that is inscribed as one of the elements of identification for a brand, which, together with the logo, the isotype, and other levels of identification, functions as an index for recognizing a specific brand' (p. 23-24).

Following this line, according to Iannini (2010), there is also the concept of a brand's olfactory logo, which is a scent directly identified by the customer with the product or service offered. For Bradford and Destochers (2009), marketing works with these odotypes at three levels: as simple direct products (like a perfume or an air freshener), as a promotional technique that enhances the attraction to other products (the smell of a new car in a dealership), or as a point-of-sale air freshener (scent present in a specific space). In the field of tourism and events, these approaches can be applied to a destination, a place like a hotel, or an event, in a two-way process: the odoype evokes past memories and at the same time contributes to creating future memories.

Scent branding is an element present in the communication of tourist destinations. Basto Gómez (2015) pointed out that 'scents (...) portray cities, they are like a fingerprint that identifies them' (p. 21); in the Spanish case, it is reflected in popular music themes that evoke the special scents of a city like Seville (marked by the strength of the odoype generated by the high presence of orange trees and their orange blossom aroma). In a less artistic but more relevant context to the proposed study, there are experiences like the one developed by the City of Madrid and the airline Iberia Express. In this case, the Tourism department of Madrid Destino created sensory experiences using the recognizable scent of a typical violet candy originally made in a small confectionery called La Violeta. The fragrance was used on the aircraft for their various routes to the Spanish capital, where passengers were also given a box of candies during the journey (Europa Press, 2017). These examples illustrate the importance of the senses, in this case, smell and taste, in the tourist's experience when visiting a destination, building mental images of the place through them (Izaguirre, 2012).

1.3. The importance of the olfactory experience as an educational resource and its influence on creativity for students

The present research focuses on the presentation and analysis of a creative experience centered around an olfactory tour of the city of Granada. The company Walk in Granada offers a visit to the Andalusian city through a journey to its iconic landmarks, where visitors are encouraged to 'travel to different eras of our city through different personalized scents related to each era, place, and theme of the city' (Walk in Granada, n.d.). Beyond the immediate experience, the product description itself emphasizes the future impact of the experience, providing a kit with the fragrances encountered on the tour so that participants can 'reminisce as many times as they want the most emotional memories of their visit to Granada' (Walk in Granada, s.f.).

Similarly, event design seeks to create memorable encounters and generate a positive impact on participants through creativity. This creative phase is emphasized by professionals in the industry, but there also appears to be room for further growth in its

specific application. Through a study conducted with over 600 professionals in the MICE¹, only 27% of these professionals believed that the five senses were being effectively used by the industry. This data contrasts with the fact that in 78% of cases, multisensory events were considered to provide more creative and memorable experiences for events. Of the five senses, respondents considered that sight was the most effectively utilized, through light activations such as projections or visual illusions, while smell and touch were identified as poorly integrated into events.

Undoubtedly, in the context of event organization and in the quest for original approaches that contribute to creating lasting impacts and emotions, creativity is a value that cannot be overlooked. There is a reason for its existence and implementation, and it is a fact that carries motivation beyond purely cognitive aspects. A person within the industry who has developed creative abilities will also have that intrinsic motivation. Furthermore, they will see that for success and value in their proposal, they will have a series of extrinsic motivations, contributing to creative achievement. Therefore, 'extrinsic motivation can have an additive effect on intrinsic motivation to promote creativity' (Romo, 1998, p. 255).

Through the study, students are encouraged to reflect on the perceptions and memories evoked and their relationship as a communicative element in line with the hypothetical use of fragrance in the classroom. The transfer of the context of the fragrance field of study to the classroom is not merely anecdotal. In addition to presenting a problem closer to the student to reflect upon, it also considers the importance of classroom environmental factors that can impact the learning process of the students themselves. Many authors have researched classroom environment, although research on different levels of odors is much more limited, possibly linked to the fact that we live in a society that seeks deodorization of spaces associated with hygiene (Larrea, 1997). Focusing on child studies, the research from the Domus Academy Research Center (2009) pointed to the importance of odors in the early stages of knowledge acquisition because 'the world of childhood is imbued with smells, and smell is tangibly one of the instruments of children's knowledge. The different school environments also have a smell given by the presence of specific materials, by the people who inhabit them, and by the activities that take place' (p. 87). In parallel, this aspect should be considered as a possible inclusive educational strategy, especially in educational contexts where the senses facilitate the development of students. Thus, seizing the opportunity to generate knowledge because the activation of multiple senses can be helpful for those who have other sensory disabilities such as visual impairments (García and Martí, 2019).

It could be wondered whether in later stages of learning, the power of smell is being undervalued and, in parallel, whether the introduction of fragrances could create better-structured spaces. Beyond environmental creation, there are other studies that point to a possible improvement in competencies relevant to what happens in the classroom, indicating that fragrances such as the smell of roses or jasmine would enhance memory (Gorman, 2004) and concentration (Mattila and Wirtz, 2008).

¹ "MICE" (acronym for Meetings, Incentives, Congresses & Events). This term encompasses the events industry related to meetings, conferences, incentives, and other types of events.

By formulating the question, the aim is to generate that reflective activity characteristic of thinking, seeking guidance for action. Likewise, the foundation of this thinking should be based on the result of one's own reflection but also on the analysis and consideration of others' reflections (López, 2012). Therefore, the chosen solution should be consistent with the set of reflections, in order to find the most relevant one.

It is worth noting that, considering the application in academic and professional contexts related to tourism and events, an investigation adapted to the teaching and learning context is proposed.

2. OBJECTIVES

The study considers aspects of great relevance such as creativity, transversality, critical thinking, and the value of multi-sensory experiences, specifically, the sense of smell.

In this way, the general objective set in the research is to motivate students and their creative learning and induce critical thinking through sensory experience as an innovative resource within the classroom. More specifically, the following objectives have been proposed:

- Observe perceptions according to the variables of gender, age, and nationality.
- Explore the feelings and memories evoked by exposure to the fragrance.
- Investigate the transversality of competencies and learning outcomes of subjects and training modules regarding the application of knowledge and the decision-making process.
- Research whether the use of a fragrance sparks interest and motivation in a subject.

3. METHODOLOGY

The methodological approach of the research is within the positivist paradigm, which aims to explain the reality of the participating subjects and describe the importance of the influence of sensations and memories associated with a fragrance as a resource for teaching and learning. The ideographic approach seeks individual understanding of the perceptions of the participants, corresponding to an intentional sample based on available subjects.

The quantitative and qualitative data collection techniques used have been document review, surveys, and observation. The instruments used have been content analysis, the questionnaire (Google Form), and the observation guide, respectively.

A review and analysis of information on general and specific competencies, as well as learning outcomes for each of the course guides and training modules, has been conducted. The research aims for students to analyze the information available to them and investigate their perceptions and feelings. In this way, they can appreciate the importance of conscious and unconscious olfactory reactions, helping to understand their communicational potential.

The questionnaire consists of 9 questions. Both quantitative and qualitative variables are used to collect information regarding age, gender, place of origin, and academic degree.

Additionally, to delve into the perception of the fragrance, its association with memories and sensations, the ability to identify its composition, and its possible application as a resource in the classroom. The format of the in-depth questions is open-ended and aimed at exploring the participants' perception of the fragrance. The observation guide used records information such as date, group, and subject. It also includes items related to the motivation and interest shown by students in the olfactory perception activity, including an open section for observations. This will allow the collection of comments on the novel perception of this educational resource associated with their subjects.

The study involved 103 students from various nationalities pursuing different higher education programs, including vocational training and postgraduate university studies. Data was collected from January 16 to January 24, 2019. Out of the eight fragrances offered in the olfactory tour of Granada, the second one was chosen for its simple composition and mildness. Its commercial name is Carmen, as it alludes to the different olfactory perceptions that tourists can experience while strolling through the gardens (Cármenes) located in the neighborhoods of Albaicín and Realejo in the city of Granada.

The obtained responses have been coded for subsequent exploratory analysis and to identify patterns of concurrence and discrepancy among the participants.

The sensory practice provided to the students consisted of having a glass jar in which the aroma is vaporized onto a piece of cotton, which remains closed until the start of the activity. To eliminate any remaining odors in the classroom and help cleanse the participant's sense of smell, a glass container with coffee beans is used, which the students smell before opening the jar containing the fragrance.

Before starting, in order to contextualize the activity, participants receive explanations about the importance of the sense of smell and the experiential records that reach the brain through the olfactory bulb. The activity serves as a means to introduce concepts related to sensory marketing, advertising, brand identity, and their importance within companies. It also addresses innovation for the development of tourist destinations and its current application in various sectors, so that participants can be creative and critical in their responses to the study.

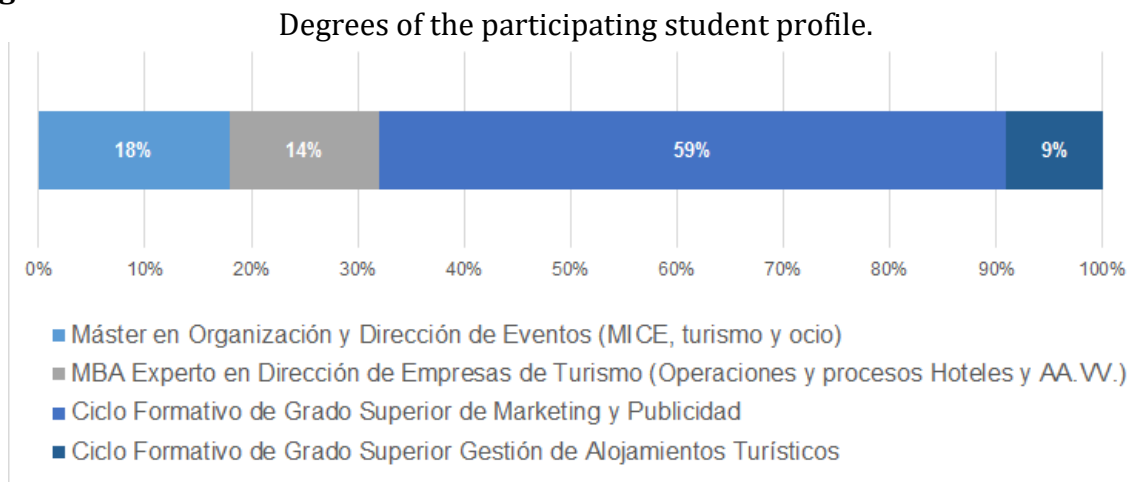
4. RESULTS ANALYSIS

4.1. Profile of the participating students

According to the conclusions of the report from CRUE Spanish Universities (2017), one of the most demanded degrees in the Spanish university system is Business Administration, and among women, there is a preference for Tourism studies. Additionally, women have slightly increased their enrollment in master's programs. Regarding studies in Vocational Training, women represent 29.3% of students in Basic Vocational Training, 43.7% in Intermediate Level, and 47.7% in Higher Level, with the Hospitality and Tourism professional family being one of the most significant in terms of student enrollment (Ministry of Education and Vocational Training, 2020). The participating students responded to a brief survey as part of an experiential activity within the classroom. The degrees in which the study was conducted include two postgraduate programs: the Master's in Organization and Management of Events and an MBA in Tourism Business

Management. Additionally, there are two Higher-Level Vocational Training programs: one in Marketing and Advertising and the other in Hotel Management.

Figure 1.



Source: Author's own work.

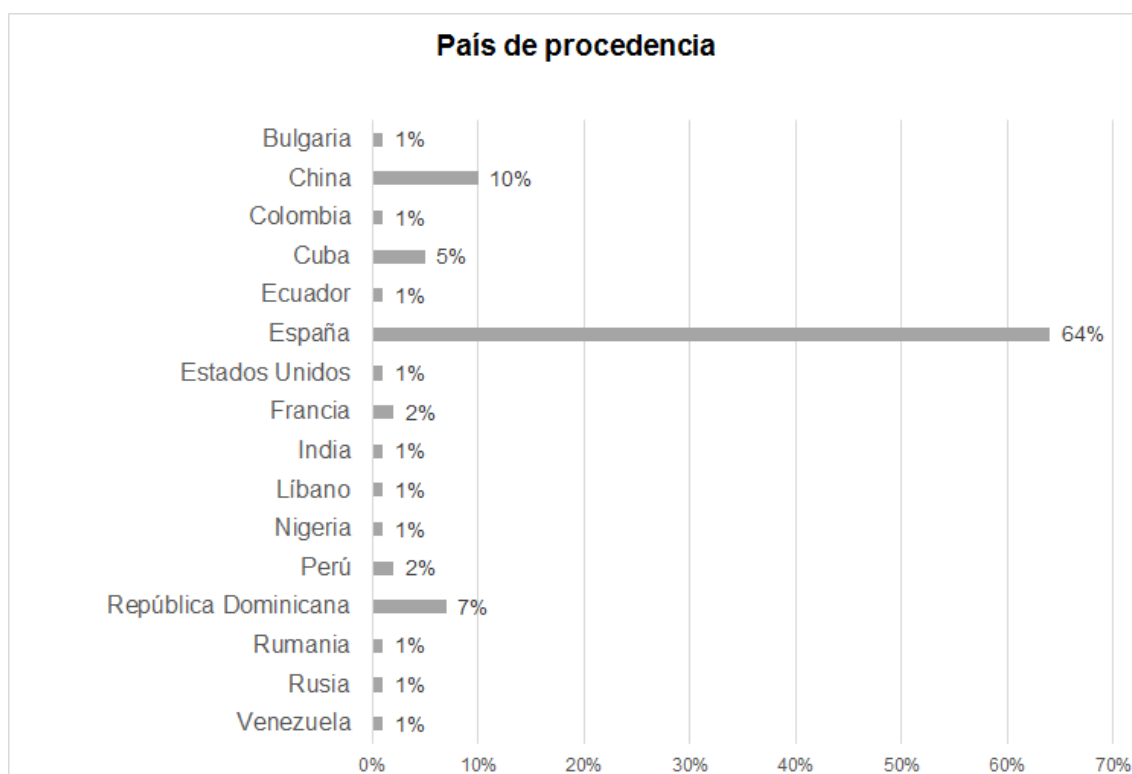
In this way, and through the selection of modules and subjects related to the tourism market in the events industry, their processes, logistics, marketing, and public relations, the contextualization and focus of this study are established. The participating students in the study consist of 53% females and 47% males. The largest age group represented is between 21 and 25 years old (48%), followed by the age group of 17 to 20 years old (38%), and, in a less representative manner, the age group of 26 to 40 years old (14%).

As seen in Figure No. 1, students studying the Higher Level Vocational Training Cycle in Marketing and Advertising represent more than half of the participants (59%), followed by students from the Master's in Event Organization (18%), the MBA in Business Management (14%), with the Higher Level Vocational Training Cycle in Hospitality Management being the least represented (9%).

Regarding the countries of origin, as shown in Figure No. 2, there is the presence of international students. The countries are located on different continents, although the majority of students are from Spain (64%), which corresponds to the location where they are studying.

Figure 2.

International origin of participating students.



Source: Author's own work.

4.2. Transversality of creativity and critical thinking

Creativity is seen as an essential ability that a student must develop in any academic program. Therefore, students are encouraged, both directly and indirectly, to acquire creativity as a competency, being able to demonstrate and apply it as an achieved learning outcome in their professional fields.

That is why it is relevant to analyze the teaching guides of the subjects and professional modules that have been the focus of this study. The most relevant competencies and learning outcomes are compared to help determine the cross-cutting nature of the activity across different subjects.

The choice of the four degree programs coincides with the business sector targeted by the olfactory tour designed by Olfático (2020) (formerly known as Olfativamente). They offer a multisensory visit of the city of Granada, promoting the development of a destination that hosts numerous tourism events. Therefore, all the programs fall within higher education. On one hand, there is postgraduate university education represented by the MBA in Tourism Business Management or the Master's Degree in Organization and Management of Events. On the other hand, there are Vocational Training programs such as the Advanced Vocational Training Course in Hotel Management and the Advanced Vocational Training Course in Marketing and Advertising.

The olfactory product used in the classroom, created by the company Walk in Granada, consists of different olfactory icons related to tourism. This justifies the implementation

of this activity within programs designed for tourism, events, or marketing. Therefore, it is justified to examine the competencies and learning outcomes set forth in the didactic or learning guides of the subjects and professional modules to conclude the existence of a possible common link among them (see Table 1).

Table 1. *Comparative Analysis of Competencies and Learning Outcomes of Programs by Subjects.*

GRADUATIONS	SUBJECTS / PROFESSIONAL MODULES.	COMPETENCES	LEARNING RESULTS
MBA Expert in Tourism Business Management	Operations Management, Logistics, and Processes	C.1. Apply acquired knowledge in new environments. C.2. Analyze relevant information for the creation and management of companies.	Master decision-making in operations management.
Master's Degree in Event Organization and Management	MICE, Tourism, and Leisure	C.1. Understand knowledge that provides an opportunity to be original in the application of ideas. C.2. Develop the capacity for autonomous learning.	Handle MICE as a "country brand" strategy and control the types and techniques to enhance the event.
Higher Vocational Training in Hotel Management	Protocol and Public Relations	C.1. Implement innovative management systems. C.2. Supervise proper customer service and after-sales service.	Apply the fundamentals and elements of public relations and business protocol in the tourism sector.
Higher Vocational Training in Marketing and Advertising	Public Relations and Marketing Event Organization	C.1. Solve situations with initiative and autonomy, with creativity and innovation. C.2. Organize and manage marketing and communication events.	Characterize the organization of marketing events.

Source: Author's own work based on the different teaching guides provided for the study.

In reference to the competences, in the MBA Expert in Tourism Business Management program, the activity was carried out with students enrolled in the subject of Operations Management, Logistics, and Processes. Two of the most relevant competences (C.1. and C.2.) indicate that students must be resourceful, creative, and able to adapt to new contexts related to their business studies in the tourism sector. Therefore, they are expected to possess certain skills associated with improvisation and imagination in decision-making within a tourism-related business. The next subject, MICE, Tourism, and Leisure, part of the Master's Degree in Organization and Management of Events, states in its competences that students must present unique ideas that differentiate themselves from others in order to succeed in the context of researching event organization and management (C.1.). It also aims to develop their capacity for autonomy and adaptability to changing environments by applying corporate communication and public relations strategies (C.2.). Continuing with the analysis, the next professional module, Protocol and Public Relations, part of the Higher Vocational Training in Management of Tourist Accommodations program, considers through its competences that students need to be innovative, relying on communication tools and information technology (C.1.), while also knowing how to provide proper customer service (C.2.) by using the knowledge acquired in public relations in after-sales service. To conclude this comparative analysis of competences, the last competences listed in the table belong to the professional module of Public Relations and Organization of Marketing Events of the Higher Vocational Training in Marketing and Advertising program, where it is indicated that students must have a strong problem-solving capacity in their professional field, addressing challenges with initiative, creativity, and innovation, both individually and collectively (C.1.). It also emphasizes the need for them to have the necessary knowledge to efficiently supervise event organization in all its processes (C.2.).

In all the competitions gathered here, it is expected that students acquire the necessary knowledge that allows them to thrive in their professional fields, making them decision-makers with a certain degree of autonomy and the ability to execute these learnings creatively in any situation they encounter.

Once the teaching-learning process is completed, it is expected that students achieve certain learning outcomes that verify whether the expected successes have been positively fulfilled. Building upon the same analysis conducted earlier with the competencies, a comparative assessment of the learning outcomes is also carried out for the four mentioned degree programs (see Table 1).

In the subject of Operations Management, Logistics, and Processes (MBA in Business Management for Tourism), the expected learning outcome for students is that they are capable of making decision-making processes as efficiently as possible. This aims to enable them to be competent in choosing the best possible option for problem-solving they may encounter and for selecting the best strategies for the benefit of the company. Continuing with the subject of MICE, Tourism, and Leisure (Master's Degree in Event Organization and Management), one of the expected learning outcomes for students is that they know how to employ the EMP (Country Brand Strategy) in business tourism, using all their creativity to achieve the highest intangible value possible. The professional module of Protocol and Public Relations (Higher Degree in Management of Tourist Accommodations) defines in one of its learning outcomes that the objective to be

achieved should be that students can design and handle themselves with certain skills in any event within the tourism industry, adeptly interacting with any type of audience attending the event. Finally, the professional module of Public Relations and Event Organization in Marketing (Higher Degree in Marketing and Advertising) sets its learning outcomes as the ability for students to use logical reasoning for calculating deadlines, budgets, and everything involved in the organization of events.

4.3. Association of memories with fragrance

The fragrance designed to convey the olfactory experience of the gardens of the Cármenes in the tourist destination of the city of Granada is associated with three clearly differentiated memories and with the majority of representation.

The first corresponds to the memory of a very close family member (17%): grandmother, mother, sister, or great-grandmother. Specifically, it is associated with the smell of a cream or perfume they used, even the scent of their home. Among these family members, the most remembered are the grandmother and the mother, in contrast to the sister and great-grandmother. The second most represented memory association is with a garden (16%). The smell of the countryside, plants, the fragrance of various flowers like roses, lotus flowers, ylang-ylang, or *Cananga odorata*, along with the sensation of moisture. The third most frequent memory association is with an elderly person's perfume (14%), particularly the grandmother's, associated with a floral aroma and in some cases, baby clothes. It is followed by memories of an air freshener (7%) and soap (5%). Memories of cleaning products (floor cleaner, detergent, fabric softener) (4%) are mentioned with the same representation, as well as memories of an elderly person's clean house (4%), the memory of the scent of a cream (4%), and associations with childhood moments (4%) and summer (4%). With a lower level of representation, there are associations with deodorant (2%), a store (2%), talcum powder, and hence, a baby (2%), and others indicating that they don't know how to identify the associated memory that it triggers (2%).

In a less representative group, associations include wood, bath/shower gel, the fragrance of a bath, or the smell of menthol when one is sick or has a cold. Finally, memories of cleanliness, an aloe vera plant, painting classes, memories associated with the sea and summer, and even an expired cosmetic are also mentioned.

4.4. Memories and sensations provoked by the fragrance

The feelings and memories provoked by the Carmen fragrance among the participating students have turned out to be diverse but particularly interconnected. Primarily, a sense of nostalgia (10%), tranquility and serenity (10%), and cleanliness (10%) are most commonly expressed, followed by family memories (9%) and a feeling of freshness (8%). Six percent (6%) indicate that they do not experience any specific sensation from this fragrance. Coinciding with the same percentage, there is a pleasant feeling of well-being (4%), joy (4%), love and affection (4%), and a sense of connection and harmony (4%).

For 3%, it evokes a feeling of aging and maturity, followed by peace (3%), sweetness (3%), and sensitivity, softness, and tenderness (3%). In this regard, there is an equal representation indicating not being able to explain the feeling and sensation provoked by the scent.

With lower representation, some mention that it takes them back to childhood (2%), they perceive a sense of warmth (2%), protection and security (2%), comfort (2%), but there is also a feeling of suffocation and anxiety (2%), indifference (2%), and an unpleasant sensation (2%). Finally, feelings of melancholy (1%), freedom (1%), excitement (1%), and saturation (1%) are also mentioned.

4.5. Ability to identify the components of the fragrance

Sixty-eight percent (68%) claim to identify the fragrance, while 32% respond negatively. Among those who do not identify it, although with a slight difference, there are more women than men, and they are between the ages of 17 and 25, accounting for 79%, followed by 21% who fall in the age range of 26 to 35 years. The students come from various countries, including Spain, China, the Dominican Republic, Cuba, Peru, Venezuela, India, and Nigeria.

Regarding those who respond affirmatively, they are under 30 years old, and 63% of them are female compared to 37% who are male. In this case, they come from Spain, China, Venezuela, the Dominican Republic, Colombia, Peru, and France. They tend to identify the scent with various flowers without specifying the type (26%). Among those who do specify, they mention rose (13%) and jasmine (13%). Others indicate that it is orange blossom (7%), lavender (7%), and wood (7%). To a lesser extent, wet grass (2%) and talcum powder (2%) are mentioned. With minimal representation, it is identified with musk, aloe vera, lily, lotus flower, forest freshness, fresh flowers, mint, a plant, oranges, and citrus.

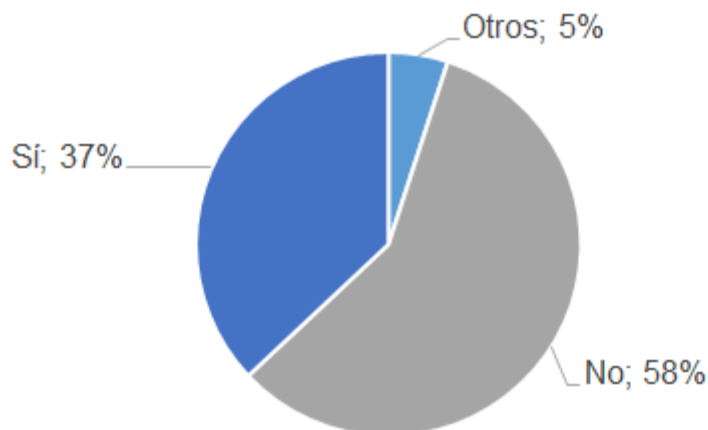
The individuals who have responded with a specific flower or plant have been mostly women from China, Colombia, Spain, France, Peru, the Dominican Republic, Russia, and Venezuela.

4.6. Potential use of the fragrance as a communicational resource

The participating subjects indicated that 58% would not use the Carmen fragrance in the classroom, while 37% responded affirmatively. The remaining 5% believe it could be used depending on the circumstances, and there was one respondent who claimed to have forgotten the fragrance and couldn't provide an answer.

Figure 3.

Application of the fragrance within the educational context of the classroom.



Source: Author's own work.

The individuals who responded negatively were mostly women (55%). They spanned the ages from 17 to 35 years, with a higher number of responses falling in the age range of 21 to 25 years. They justified their negative response to the use of the fragrance primarily due to its intensity (35%), with one person mentioning it made them nervous. Nineteen percent (19%) stated that they did not like the scent, followed by those who believed that it would distract them by reminding them of past moments (8%). With the same level of representation, some mentioned they wouldn't use it because it's not a fresh fragrance (5%), it might induce sleepiness (5%), or its scent seemed irrelevant (5%). Finally, the following observations coincided in percentage: it's sweet and strong (3%), they wouldn't use it indoors (3%), it could be discouraging (3%), it doesn't encourage studying (3%), it could be used for other purposes (3%), it should provide a refreshing feeling for classroom use (3%), it's better suited as a bathroom air freshener (3%), and it doesn't improve the atmosphere, although it reminds them of something positive (3%).

Regarding those who responded affirmatively, it also coincides that the majority are women (53%), and all age groups are represented except for the age range of 31 to 35 years. Most of the responses come from individuals between the ages of 21 to 25 years.

They affirm the appropriateness of using the fragrance because it harmonizes, calms, and relaxes (44%), due to its pleasant scent, the pleasurable sensation, and because it's not intense (33%). They agree that it could be used as an air freshener for the clean feeling it conveys (14%). To a lesser extent, some mention that the fragrance could be used in the classroom to experience the sensations of spring and summer (6%), and finally, because it is a sweet, soothing aroma that provides a sense of home (3%).

4.7. Possibility of using the fragrance as a communication resource.

All the groups were motivated and encouraged to carry out the activity because they found it innovative and different. There are comments about the originality of the activity and the interest in olfactory marketing applied to various business sectors. They seem to be aware of the usefulness of fragrances based on the reactions and feelings they have experienced.

5. DISCUSSION

The participating students correspond to the available sample who have completed various degrees during the specified period. Therefore, the particular context of the results is observed, and although it has limitations, it allows for the study of motivation in their creative learning, aiming to induce critical thinking through sensory experience as an innovative resource within the classroom.

Master's degree studies are aimed at specialization within a field of knowledge, and similar to vocational training programs, they aim to facilitate a quick entry into the job market. To achieve this, from the teaching perspective, candidates need to be trained to develop various competencies and skills. The study includes variables such as gender, age, and degree since they are subjects of monitoring and analysis within the supply and demand of higher education by CRUE Spanish Universities (2017) and the Ministry of Education and Vocational Training (2020). University students are typically between 20 and 25 years old, and women tend to choose higher education more often, with Tourism being one of the most popular fields of study among females. This age range corresponds to the period when individuals have full sensory capability (Larrea, 1997, p. 2016). Culture and social environment are determining factors because we are exposed to a variety of scents that can become part of our olfactory records, helping us to distinguish the olfactory notes and their composition.

Regarding the identification of the fragrance, the sense of smell does not possess a scientific classification system; it is subject to the subjectivity of each individual, as noted by Synnott (2003, p. 434). The participating students make their own interpretations based on their culture and social environment. More than half of them claim to identify the fragrance, and they are mostly under 30 years old, with a majority being women. The variable of gender does influence the perception of an odor, as Petri et al. (2003) have noted that women's sense of smell is much more sensitive than that of men. In fact, the responses identifying specific flowers were mostly provided by women. The fragrance of rose, jasmine, orange blossom, lavender, aloe vera, lily, lotus flower, mint, oranges, and citrus has been identified. Musk is widely used as a base in the production of many perfumes due to its woody base notes; in this case, it was identified by only one female student from Russia. The responses identifying the scent of wood were only provided by women from the Dominican Republic, France, and Spain.

The association with memories is directly connected through the olfactory bulb to the brain. We live in a society where branding is prevalent, and more and more companies and tourist accommodations use this technique to stay in the memories of visitors and consumers. Bradford and Destochers (2009) indicate how odor marketing is used in direct products. Therefore, we have olfactory overexposure, which is evident in the subjects' responses as they associate it with cleaning products, air fresheners, perfumes, creams, soaps, and deodorants linked to close family members, their homes, or the olfactory perception upon entering a store. There is a correspondence in the memories evoked by the fragrance with what Álvarez (2011, p. 152) mentioned regarding citrus scents evoking memories of freshness, conveying a sense of freedom and neatness. The impression of cleanliness and order is influenced by the scent of lemon, and the scent of orange can help reduce possible feelings of depression.

The feelings and sensations provoked by the Carmen fragrance in the subjects have been diverse. Larrea (1997) exemplifies the historical and cultural influence on the world of smells. It is worth noting that there are factors beyond internal ones that influence each individual's perception of an odor, as Gómez-Gallo and Hernández-Zelaya (2020) have asserted, in which external factors intervene just like internal ones (p. 205). The students only have their sensory references at their disposal. The memory of childhood is evident, and the majority have a positive recollection. At the same time, they are aware of how it could affect their mood during a session, potentially causing distraction, relaxation, or even drowsiness. Most of the emotions a person experiences daily are processed through the sense of smell, with approximately 75% of emotions being connected to it. A person can recognize and remember more than 10,000 smells (Bell and Bell, 2007).

The sensation of nostalgia can be interpreted as a positive or sad cherished memory or even melancholy due to the close family memories it evokes. Many of the respondents perceived a feeling of freshness, although some also found it not fresh enough for their liking. A significant number of subjects found the fragrance pleasant, while others found it unpleasant to the point of making them feel nervous.

The application of the aroma to create an ambiance or even improve the scent appears to be the most representative use. However, as Gorman (2004) and Mattila and Wirtz (2008) suggest, scents like rose or jasmine can aid memory and concentration. The fragrance used in the activity was designed for outdoor use, which is why it lingers longer, addressing the sensation of a strong odor and weariness reported by some participating subjects.

Creativity as a cross-cutting aspect is evident in the study; students contribute their perspective on the innovation of using a scent as a resource within the classroom. As Romo (1997) indicates, it relies on aspects of value and novelty. The students received initial information as context, emphasizing the importance of the sense of smell, its direct connection to the brain, and its association with memories. This information sparked their interest and introduced basic concepts of sensory marketing, its relationship with advertising, brand identity, and its significance within the tourism and event organization sectors at a professional level. Through the activity, students must apply their knowledge in an experiential environment to enhance their creativity, regardless of the studies they are pursuing. Facing a novel activity that can be worked on in a cross-cutting manner within their subject allows them to explore various combinations within the creative process, as indicated by Mednick (1962), drawing on their experiential learning as a reference. Since it is a different exercise within a class session, the creative challenge involves connecting independent and disconnected levels of experiences at the beginning of the process (Koestler, 1964).

One of the objectives of the activity conducted in the classroom is to inspire and enhance the creativity of students from various professional areas in which the experiment has been conducted, whether in marketing, event organization, or the tourism sector. The aim is to immerse the learner in experiences and allow these experiences to help them explore different perspectives and foster their talent in generating new ideas. Through a comparative analysis of the educational guides provided by these degree programs, it is evident that all these disciplines aim to ensure that students, through the teaching and learning process, acquire competencies that develop and enhance their critical thinking. This critical thinking is essential for success in their respective professional

fields. Whether through decision-making, problem-solving, or adaptation to new contexts, students must evolve and even become a differentiating factor, and all of this cannot be achieved without the competency of creativity as a true learning outcome.

By formulating the question about the possible application of the fragrance within the classroom, the aim is to generate that reflective activity inherent to thinking, seeking guidance for action. Similarly, the foundation of such thinking should be based on one's own reflection but also on the analysis and consideration of the reflections of others (López, 2012). Therefore, the chosen solution should be consistent with the set of reflections to find the most relevant one. There are studies indicating that certain odors influence people's mood and enhance concentration, significantly impacting memory enhancement, such as the scent of jasmine (Hernández Callejón et al., 2016). It has been used in companies with the goal of improving productivity and performance. Students are faced with a different activity in which they must extract feelings and memories associated with the aroma and then make a decision about their sensory experience and its potential application. During the process, they learn to be creative by critically analyzing the experienced information.

The uniqueness of aroma perception means that each individual, through their own memories and evoked feelings, forms their opinion without considering the rest of the responses in order to make a collective decision.

6. CONCLUSIONS

After conducting the study, the following conclusions are reached:

First: The variables of gender and age affect the identification and perception of the fragrance by the participating subjects. The variable of origin narrows down the association with specific memories of specific places. Social and cultural environments are reflected in the study's results.

Second: Students experience concurrent feelings and memories evoked by the aroma and are aware of their influence, both positive and negative. The majority recognize the potential effects that could arise when applied within a classroom, and they recommend or discourage its use based on their sensory experience, providing well-argued reasons.

Third: There is a proven transversality among the four subjects and training modules regarding their competencies and learning outcomes. Students must develop their skills to be resourceful, creative, and adaptable to a changing reality, capable of improvising autonomously with imagination to foster innovation while relying on communication tools. Regarding the learning outcomes, they should be proficient in problem-solving, adapt to changing environments, apply critical thinking, and autonomously make decisions.

Fourth: Students show a predisposition to engaging in different activities in their daily classroom life, but the use of an olfactory fragrance has proven to be particularly novel, adding an emotional connection to their feelings and memories. Conducting the activity has allowed them to connect with their emotions, fostering interest and motivation due to the activity's transversality with their subject, as well as enabling them to share their experience with their group at the end of the activity.

Final Conclusion: The association with memories through the fragrance designed to convey the olfactory experience of the gardens of the Cármenes in the tourist destination of the city of Granada has enabled the realization of an innovative activity, introducing students to new concepts that they can use in their future professional roles. Through creative and experiential learning, critical thinking has been induced by analyzing the scent and its potential application in the classroom, thereby increasing motivation and group integration.

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