

Visitor satisfaction on cultural offer and services at the Salento Aquarium (Nardò, LE). Management and enhancement of an educational agency

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ABSTRACT

Educational agencies concern with economic, social and environmental points of view in order to meet sustainability. A visitor satisfaction investigation has been performed to support the educational agency Salento Aquarium, opened on 5 June 2015. From 8 Aug. 2015 to 9 Sept. 2016 visitors were asked to fill in a questionnaire, divided into 3 sections: personal profile, characteristics of the visit, satisfaction. The 877 respondents were students (50%), teachers (18%), groups of varying composition (32%). Most of them claimed to have had an excellent "experience", although they lamented the lack/weakness of official communication. The results emphasized differences existing between visiting students and teachers, these last being, surprisingly, a preferential target (more than students) of the aquarium proposal. All the results were judged as useful in directing the financial resources towards the maximum effectiveness of the cultural proposal.

Key words:

visitor satisfaction, summative evaluation, aquarium, culture and tourism management, heritage enjoyment.

RIASSUNTO

Indagine di gradimento dell'offerta culturale e dei servizi dell'Acquario del Salento (Nardò, LE). Gestione e potenziamento di un'agenzia educativa

Per raggiungere la sostenibilità, le agenzie educative devono confrontarsi con aspetti economici, sociali e ambientali. Un'indagine sul gradimento è stata condotta riguardo all'agenzia educativa Acquario del Salento, inaugurata il 5 giugno 2015, per valutare ex post l'efficacia delle esposizioni e dei servizi. Dall'8 agosto 2015 al 9 settembre 2016 è stato somministrato un questionario anonimo, diviso in 3 sezioni: profilo personale del visitatore, caratteristiche generali del percorso, dettaglio del gradimento. Le 877 compilazioni ottenute provenivano da studenti (50%), insegnanti (18%), e gruppi di varia composizione (32%). La maggior parte dei visitatori afferma di aver vissuto un'ottima "esperienza" nonostante essi lamentassero una certa assenza di comunicazione ufficiale. I risultati ottenuti hanno evidenziato una netta differenza tra studenti e insegnanti, con questi ultimi a rappresentare un target preferenziale dell'offerta museale dell'Acquario. I risultati sono stati considerati utili a indirizzare le risorse finanziarie per una massima efficacia della proposta culturale.

Parole chiave:

indagine di gradimento, valutazione museale, acquario pubblico, gestione turistico-culturale, fruizione del patrimonio culturale.

INTRODUCTION

Museums and aquaria are usually non-profit institutions/organizations oriented to the fulfilment of the social function of collection, preservation and public education. As any organization, museums have to be concerned with economic, social and environmental points of view in order to meet sustainability (Di Pietro et al., 2014).

Museums have shown their interest in offering quality services to their visitors, in order to thrive on the highly competitive leisure and tourism market (Rad-

der & Han, 2013). In fact, an important number of indicators used for measuring museum sustainability are based on museums' ability to attract visitors and adjust their offer to contribute at the same time both to tourist development of their respective regions and increase of social inclusion (Pop & Borza, 2016). It is well-known that for any increase in quality are involved high costs and this could be perceived as an economic disadvantage (Zima & Sabou, 2010). On the other hand, visitors' loyalty comes from their satisfaction, which in its turn depends on the quality of the experience they are offered, from the moment

they park their vehicles or decide to contact a museum by telephone, up to the moment they exit the museum, having received the appropriate information or the leisure experience they desired (Rowley, 1999).

To contribute to the sustainable development of the community it belongs to, a museum must be preoccupied with measuring and improving the quality of the services it provides to visitors (Pop & Borza, 2016). The museums' mission is to conserve cultural resources and contribute to the development of society. Such institutions (and implicitly the products and services they offer) hold a significant role in the sustainable development of tourism, by means of the cultural and heritage tourism (Marković et al., 2013). By protecting the cultural heritage and by offering visiting experiences of it, museums facilitate the development of cultural tourism without endangering the heritage resources.

The Salento Aquarium is the result of the project "interdisciplinary Aquaria for the PRomotion of Environment and History" (A.Pr.E.H.) funded by the "Greece-Italy" European Territorial Cooperation Programme (2007-2013). To promote historical and natural submarine heritage on both sides of the Ionian Sea (the Salento Peninsula - SE Italy - and the Island of Cephalonia - NW Greece), the project has set up two small public aquaria, respectively at the localities of Santa Maria al Bagno (Nardò-Italy) and Lixouri (Cephalonia-Greece) (Posi et al., 2015; Belmonte et al., 2015).

The Salento Aquarium at Santa Maria al Bagno, object of the present study, was conceived as playing a key role in local cultural and economic policy (Alfonso et al., 2011), also contributing to urban restyling through the functional conversion of an unused public building. The Aquarium is concerned with economic, social and environmental targets to meet sustainability and the building management, species conservation and scientific research aim to gain effectiveness and "professional quality" of the cultural offer.

The Aquarium has a reception/souvenir shop and a multi-purpose room (devoted to educational and multimedia contents) which were the starting point of visits and, at the same time, the places devoted to hospitality, temporary exhibitions and conferences. Service and accessory spaces are completed by the toilet area and a work area for managing the specimens' health status (with additional 5 tanks). The rest of the building is a sequence of 4 rooms hosting a total of 17 tanks of marine water hosting about 400 living organisms belonging to 100 different species. The scenarios are either natural (sand and rocks) or artificial, with the reproduction of ancient and modern shipwrecks occurred in the same area of the Aquarium.

During the planning stage of the Aquarium proposal, to follow the approach suggested by Munley (1987) a questionnaire based "front-end evaluation" was performed to examine the visitors' familiarity with the

topics to be possibly exhibited. The investigation was useful to identify elements linked to the experience of visitors, and to identify lacking information other than key concepts, to encourage them to visit, to pay attention and to be involved in (Posi et al., 2015). According with the evaluating strategies started by the "Pietro Parenzan" Museum of Marine Biology, managed by the Di.S.Te.B.A. (University of Salento) (Miglietta et al., 2005), all useful data to the Salento Aquarium exhibition proposal were gathered by this approach.

The summative evaluation aims at evaluating visitor reactions related to many components of the exhibition. It considers different project elements (such as visitors flows, time spent, exhibits) which can be analysed only after the set-up has been completed. The main objective is to determine the general effectiveness of the cultural offer as well as the success of the individual components. Through this process, visitor behaviours and experiences are compared with the objectives defined at the beginning of the project (Bollo, 2013).

The Salento Aquarium, as a product of a "front-end evaluation", represents the perfect situation where to enhance the cultural offer through a day by day tuning on the public needs and desires, but also shunting the communication to correct behaviour and opinions. Hence, the study here described is a summative evaluation conducted after the aquarium opening to the Public (5 June 2015) on the effectiveness of the educational agency, including many aspects related to services, management, exhibitions and didactic, together with the mission of educating and informing the public.

METHODS

Quantitative evaluation methods, based on a questionnaire, allow the classification of opinions into predetermined categories and make it possible to collect many data on which to base statistical analyses and generalized conclusions (Miglietta, 2013).

From 8 August 2015 to 9 September 2016 the Aquarium has been visited by about 15,000 visitors. A sample of them was asked to fill in a semi-structured questionnaire divided into 3 sections: the first dedicated to the personal profile, the second on the general characteristics of the visit, the third on satisfaction. The offer included visits linked to specific events, autonomous, guided by the text of a specific brochure (carto-guided) or through the virtual tour proposed by the official website, but most of all with an accompanying expert guide. The interviewees were students, teachers, tourists, individual visitors, groups of variable composition.

To avoid analyses mistakes due to low level of instruction and the related incompatible data, children less than 10 years old have been not asked to fill in

the questionnaire. Limited to one page (Dierking & Pollock, 1998) and organized into different thematic areas (Losito, 2004), the questionnaire was filled in anonymously by each interviewed. An on-line version of the questionnaire (proposed through the Google Suite Modules platform) was promoted on the web (official website and social media pages of the Salento Aquarium, or local news portals) but also within the reception through panels comprehending a QR-CODE to make participation easier. The studied public sample has been composed by teachers, schoolchildren and other visitors randomly involved by the Aquarium personnel. The questionnaire begins with some simple introductory questions, then addressing more specific topics (Ortalda, 1998) providing a range of response options.

On the front page of the questionnaire sheet (printed version), interviewees were first asked to state the date and the personal profile: gender, nationality, residence, age, level of education, occupation, and the place where they stay for their summer holidays.

Then visitors had to fill in the general characteristics of the visit (in the framework of programmed events; autonomous; carto-guided; according to the on-line virtual tour; with an accompanying expert guide; on a specific argument thanks to the accompanying expert guide). Laboratory activities, even if asked, weren't object of evaluation because finally activated as a pilot program out of the present survey, due to funding reasons. Always within this section of the questionnaire interviewees were asked to indicate: the name of the accompanying expert guide; if it was the first, second or the more time they visited the Aquarium; how they discovered the existence and the localization of the structure. The last questions of the general characteristics section were the duration of the visit and a general evaluation of the experience.

On the back of the printed questionnaire, a table asked to state specific satisfaction indicators within

a range of values. The indicators were: parking (in the surrounding area); road signs; opening time; accessibility (of rooms and exhibitions); hospitality and reception personnel competence; didactic (accompanying expert guide competence); scenography (exhibits and atmosphere); flora and fauna (diversity of the biological exhibitions); historical exhibits (wrecks reproductions); video contents (also within the multi-functional room); overall exhibition (thematic plot and sceneries); official web site contents; textual guide (the brochure of the carto-guided tour); hygiene and maintenance. Very bad and negative responses were summed and considered all together as negative values; sufficient and good responses were summed and considered as intermediate values.

The questionnaire ended with two questions. The first asked the respondent to communicate his satisfaction indicating how much the Aquarium visit could be suggested to other persons (for sure not, not, may be, yes, for sure yes). Negative responses were summed and considered all together (NO), such as for positive ones (YES), contrasting with uncertain responses.

The last question was opened to free comments and suggestions. In order to analyse free comments, they have been categorized into 8 typologies: 1) thanks, congratulations and greetings; 2) critics on living organisms (fauna); 3) requests for extra openings and publicity; 4) requests for extra fauna and aquaria; 5) requests for extra services, rooms and communication; 6) critics on road signs or administrative lacks; 7) critics on hospitality and hygiene; 8) suggestions about the introduction of an entrance ticket.

The data provided by the answers to all questions were subjected to descriptive statistical analysis (frequencies and percentages), considering the whole sample or contrasting categories: students, teachers, other. The aim was to analyse different "publics" satisfaction and to give a response suggesting strategies to improve effectiveness of the cultural and services offer.

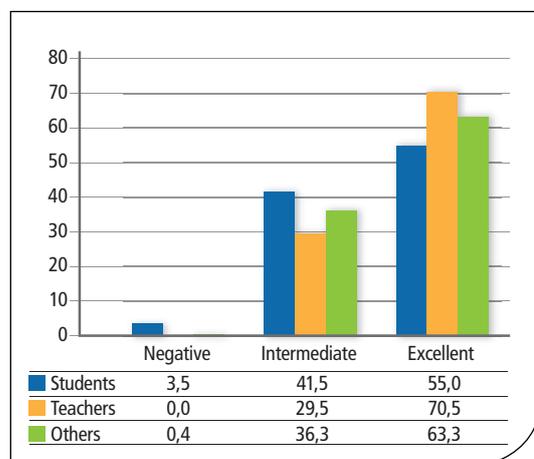


Fig. 1. General satisfaction percentages.

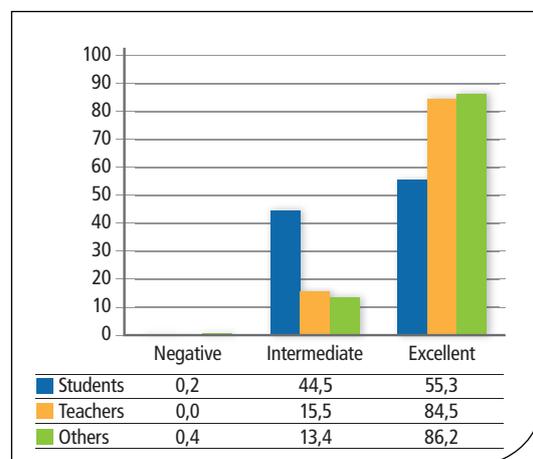


Fig. 2. Availability percentages to recommend the visit.

RESULTS

Personal profile of visitors

A total of 877 respondents provided data for the results. They were students (50.2%), teachers (18.2%), tourist operators (0.8%), tourists, individual visitors, groups of varying composition (30.8%). Aged from 11 to 88 years old, they were mainly Italians (99.53%) coming from Apulia (85.63%), rest of Italy (13.90%) (other Countries, 0.47%).

The 74% of interviewees had a scholar education level, having concluded primary school (20.3%), middle school (32.4%) or high school (21.4%). The remnant 26% was composed by visitors with higher education level: bachelor's degree (3.6%), master's degree (20.3%) and Ph.D. (2.0%).

General characteristics of the visit

The interviewees filled in the questionnaire after autonomous visits (8.6%), or after guided visits carried out on the basis of a text guide (26.3%), or with an expert (accompanying guide, 65.1%). In such a last case, the accompanying lasted between half and one hour. The guided visits also comprised a virtual tour available on the official web site (0.2% of the total questionnaires).

The most part of visitors was for the first time at the Aquarium (94.5%), other visitors already knew the Aquarium (5.5%).

About the publicity to encourage the visit, "word of mouth" (26.8%) and other not specified channels (48.8%) were the most selected options, followed by press (6.4%), official web site (4.5%), tour operator (3.7%), road signs (3.0%), publicity brochures

(2.2%), social networks (2.1%), professional tourist guides (1.6%), and hotels (0.9%).

An expert guide of the Aquarium was often available for visitors, so the visit duration was in many cases (85.7%) between 30 min (33.3% - short guided tours) and 60 min (52.4% - complete guided tours).

The 60.0% of interviewees considered the visit as an excellent experience. Other evaluations on the general satisfaction were sufficient or good, here considered intermediate values (37.7%), or negatives (1.8%), or no comment (0.5%). Discriminating on the different kinds of visitors which gave a response, we can confirm very good results about general satisfaction (fig. 1): 3.5% negative, 41.5% intermediate, 55.0% excellent according to students; 0.0% negative, 29.5% intermediate, 70.5% excellent according to teachers; 0.4% negative, 36.3% intermediate, 63.3% excellent according to other visitors.

Satisfaction details

Positive results about the general satisfaction of visitors come from their declaration to suggest the visit experience to other persons (fig. 2), and from their evaluation of specific characteristics of their visit (fig. 3).

Free comments and suggestions have been analysed according to three different kind of visitor: students, teachers and others (fig. 4).

Many interviewees (294) filled in a free comment: 39.1% writing thanks, congratulations and greetings; 3.4% critics on fauna; 9.2% requested for extra openings and publicity; 15.0% requested for a higher number of fauna and aquaria; 27.5% requested for extra services and/or rooms; 3.1% criticized the lacking

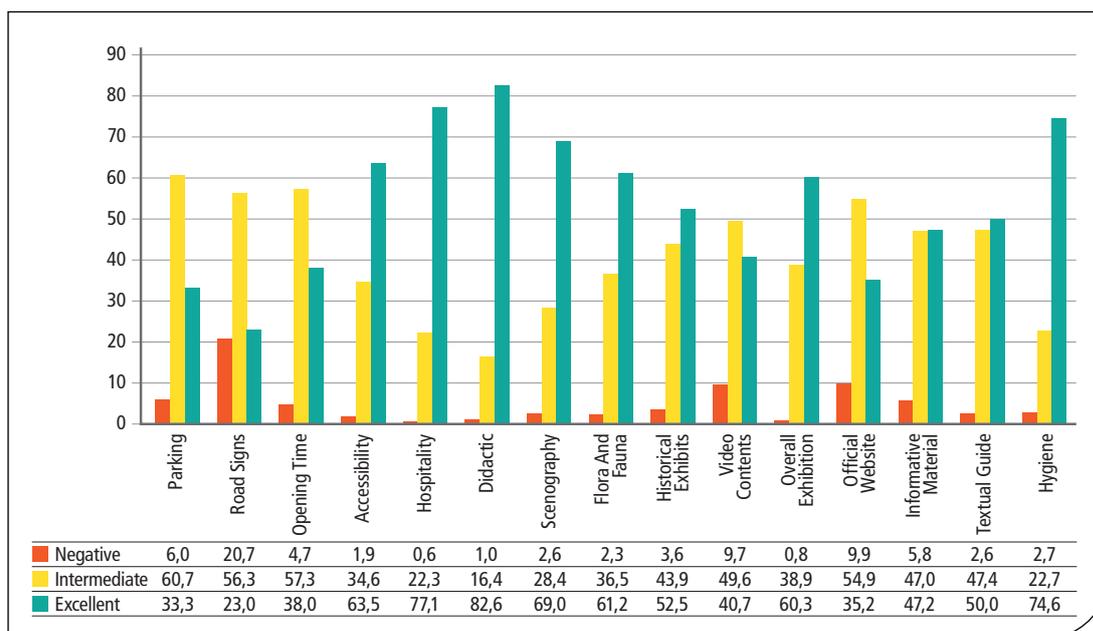


Fig. 3. Detailed satisfaction percentages.

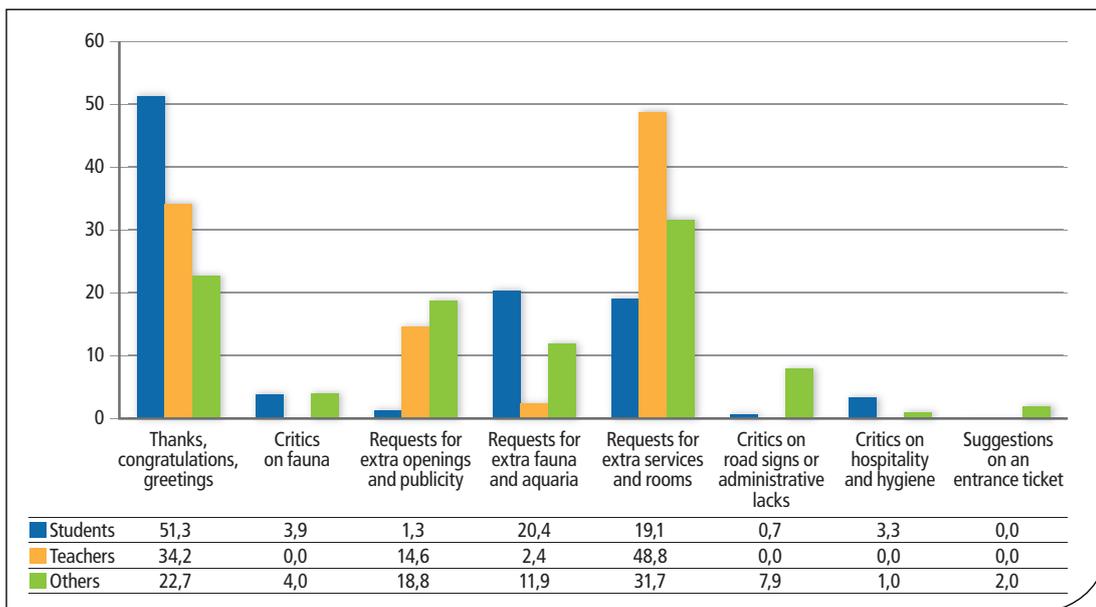


Fig. 4. Free comments percentages.

of road signs or those on the municipality web site; 2.0% critics on hospitality and hygiene; 0.7% suggestions about the introduction of an entrance ticket.

DISCUSSION AND CONCLUSIONS

Relating to the personal profile of interviewees it has been possible to underline different points of view and sensibilities among students, teachers and other visitors. Differences related to satisfaction of different types of public have been useful to support the main goals of the Aquarium. The multidisciplinary approach of the education agency Salento Aquarium came from a "front-end evaluation" performed to support curators choices about the exhibits and to contribute to the management of a useful cultural product, clear and attractive for visitors, aiming to boost social cohesion and to support the economic local growth, also creating new job opportunities (Posi et al., 2015). The managing and didactic finalities of such a preliminary evaluation seems to be confirmed by the "excellent" satisfaction result (fig. 1) coming from the summative survey, although with an apparent difference between teachers (70.5%) and others (heterogeneous groups, 63.3%, and students, 55.0%). In effect, most teachers (84.5%) and other visitors (86.2%) declared to be certain suggesting the visit to other persons, while students are more uncertain (fig. 2). This result interestingly suggests that the visit was stimulating for teachers thus possibly affecting their role in the school, and the mission of the same Aquarium appeared as devoted to capture their attention on marine biology topic, hopefully for their deepening in each classroom. Half of the students, on the other part, appeared as a passive public.

Among free comments (fig. 4), students (probably only the enthusiastic part) wrote greetings and congratulations (51.3%) or asked for extra fauna (20.4%) and for rooms or services (19.1%), thus generally for an enlargement of the Aquarium space. Teachers, on the other hand, paid attention to extra openings (i.e. an enlargement of Aquarium time), other than to publicity. We think that students could undervalue the opening time of the Aquarium, because they were not involved in the planning of the visit, while teachers (being involved in the organisation of the cultural trips) point their attention also on these aspects.

Thanks to the results of the present survey, opening time was gradually improved through the efforts of: Municipality of Nardò, University of Salento, Marine Protected Area "Porto Cesareo" and the no-profit Centre of Submarine Speleology "Apogon". At the same time, to improve satisfaction among students, curators produced and proposed new underwater videos, temporary exhibitions (marine photographs, speleological technologies, and tropical freshwater aquaria), informative materials, conferences, a marine culinary laboratory, fauna reintroduction events, theatre storytelling during visits, live video recordings of the species inside amphorae, "school-work" training internships (fig. 5). The hypothesis suggested by the non enthusiastic answer of the students, in fact, was that they represent a sort of "obliged" public, so they need to be somehow hit by multiple stimuli to obtain their future independent return.

The general characteristics of the visit allowed to focus on the importance of guided tours to underline the interdisciplinary message of the Aquarium, which is a mirror of the cultural-territorial heritage shared by the local community. Guided tours influ-

enced the visit duration, which was between 30 and 60 minutes, while autonomous visits were about 15 minutes. These data confirm that the involvement of the visitor by a professional guide can be decisive to increase the time spent during a visit and to improve communication and didactic in small structures linked to the socio-economic promotion of the territory, as the Salento Aquarium is.

According to the available funds of the managing public bodies and to the carrying capacity of the building, during about the 13 months of the present survey the Aquarium registered about 15,000 visits, suggesting a possible economic sustainability through the payment of a ticket. Even if the payment of a ticket can negatively affect the number of visitors, we have to consider that during summer 2015 (June to September) the opening time was limited to three days a week for 4 hours a day (5 hours on Saturday), while during the scholar period (October 2015 to May 2016) and the following summer (August to September 2016) the opening was limited to 6 days a week for 4 hours a day. This opening time was a limiting factor for visits, hence an economic plan based on a ticket and on a longer opening time could manage a very high number of visitors. The University of Salento elaborated and proposed to the Municipality of Nardò a management plan based on the results of the present survey and on the comparison with other experiences of similar public Aquaria, suggesting tickets for different didactic and cultural programs, but also a strong and integrated partnership among public bodies, tour operators and no-profit associations.

About the publicity vehicle which lead to the visit, "word of mouth" (26.8%) and "not specified channels" (48.7%) represented an evident message of the interest of the public but, contemporaneously, showed the small role of other communication channels (press, official website, road signs, brochures, social networks, tourist agencies and hotels). This evidenced some work to be done in the next future, as regarding the absence of road signs or the insertion of the aquarium in the official web site of the municipality. In all the other cases, the result suggests the necessity to institute a true communication office/staff to enhance the presence of the Salento Aquarium also out of the small geographic area of Lecce Province.

The spontaneous communication vehicle by visitors, however, is interpreted not only as the mirror of their appreciation, but also derives by the unicity of the Aquarium proposal (the only one exclusively devoted to sea life and history in the Region).

Visitor's satisfaction (fig. 1), based on the cultural offer, should remain the goal to be pursued, to enlarge the number of visits and to improve social cohesion (Miglietta et al., 2014, Pop & Borza, 2016).

According to these results, the aquarium tanks haven't been the only striking thing for visitors, who considered the Salento Aquarium a welcoming, informative and useful place in relation to many different aspects, as for instance didactic and accessibility.

The curators of the Aquarium, also in consequence of the public suggestions, proposed to the Municipality of Nardò a project for an extension of the reception area, and of the didactic laboratory area (within the



Fig. 5. A pictures collage of exhibits and activities.

garden zone) to give space to new tanks and exhibition within the already existing building.

In conclusion, the public showed appreciation for the Salento Aquarium. The negative aspects (absence of road signs, poor efficacy of the web site, the limited space within the structure) are easily solvable by the Municipality through an inexpensive investment.

The present summative evaluation, performed during the first opening period of the Salento Aquarium, asked to real visitors how to improve the quality of their visits. The positive response of the public is somehow justified by the fact that the educational agency was based on a former front-end investigation (Posi et al., 2015).

Within the Italian framework, some territorial public bodies which manage museums and other Educational Agencies conduct satisfaction surveys as control reports, or to optimize costs and to give a response to the public requests. Some of the questions asked to the Salento Aquarium visitors are common to other customer satisfaction analyses. Comparing the results with other evaluations as, for example, of the University Museum of Chieti and of the Natural History Museum of Livorno (Fazio et al., 2013; Lischi & Leone 2013-2014) we can find similarities on the effectiveness of "word of mouth" publicity and on the requests for extra services and rooms. The museum cultural offer has been divided into its constituent elements (Bollo, 2013) (accessibility, hospitality, different kind of visit, didactic, scenography, etc.) and each of them has become the object of specific consideration to evaluate the effectiveness of the project. Thus, the success of the Aquarium represents a consequence of a narrow interaction between an Educational Agency and its Public. This is for sure a way to interpret and represent the local social and cultural Heritage as a brick of the sustainable tourism.

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