

INFORMATION AND COMMUNICATION TECHNOLOGIES AND CULTURAL TOURISM: APPRECIATING THE ART OF TINSMITHING

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**ABSTRACT**

The art of tinsmithing is one of the expressions of craftsmanship that was been around for several centuries, although with the industrial procedures and with the advent of new and cheaper materials became almost obsolete as a means of producing every day tools and objects. Nowadays its expressions relies in some specific art forms that may catch just the glimpse of its initial propose and vast use. This paper promotes debate on the work and legacy of tinsmiths as an expression of cultural heritage and form of integration as a piece of cultural and educational tourism. Since most tin workshops have disappeared or remain in specialised and industrialised form, there are fewer and fewer places where one can see this art form in progress, as a form of producing daily use tools and not as a form of producing some kind of art-oriented objects. The use of information and communication technologies (ICT) is an extraordinary tool for disseminating knowledge and expertise, making it a strategic vector in the field of cultural tourism nowadays. This paper presents an example where ICTs are used as a tool to keep this tradition alive, which is deeply rooted in the history of Tomar, a small town in central Portugal. ICTs play an important role in providing visitors with a more interactive experience while promoting access to information by the visually impaired and foreign visitors. The ICT tools available such as audio and video information included in websites, QR codes, apps for mobile devices, among others, will be explored as means for dissemination of integrated and inclusive cultural tourism.

**Key Words:** Information and communication technologies (ICT), cultural tourism, tinsmithing, craftsmanship

## INTRODUCTION

The regressive trends observed in many territorial areas have raised growing concern among authorities leading to the adoption of innovative models in order to maximise the endogenous potential and actively involve local actors in the development process. This notion is shared among several institutions and bodies, both at community, local and national levels and even at scientific level (Cristóvão, 1999; Ribeiro e Marques, 2000). Today, territories are faced with the challenges resulting from the restructuring of traditional economic activities. These challenges have promoted new local development policies sustaining the exploitation of local resources and the diversification of craft activities. The present paper deals with the preservation of memory and local culture craft arts, particularly tinsmithing, allowing the development of well-being generating activities that are attractive to tourism and affirming local culture and know-how as distinguishing factors of a given territory. This is the context in which we recognise the importance of using information and communication technologies and cultural tourism in the valorisation of the art of tinsmithing. We have demonstrated that importance by submitting a proposal to create a website for the *Museu de Latoaria Américo Migalhas* (Américo Migalhas Tinsmithing Museum) as well as the use of QR codes and audio guides.

### **The art of tinsmithing: a piece of cultural and educational tourism**

Public intervention with a view to regulate traditional arts related activities has been growing in Portugal over the last decades as a result of their increasing recognition as having patrimonial interest, as well as social, cultural, symbolic and economic potential. In Portugal, specific concerns about traditional arts produced in different contexts and with different materials have evolved and encountered the first institutional constraint in the very concept of traditional arts and crafts (Antunes 1999: 18). The change of the values of use and representation of tourism-related goods has enabled to re-establish the identity of objects. This is closely related with the cultural commodification process (of traditional arts and crafts), which causes alterations in shape and materials during the manufacturing processes. Pratts analysis (1997) on "cultural commodification processes" suggests that the assignment of values to certain manifestations of the past by social actors from different settings and driven by different interests relies on "distinct powers" to ensure that recognition is granted, and this can be applied to cultural tourism.

Many people view tourism as a key sector for the development of the territories by establishing a set of actions that aim to maximise local resources. The promotion of a set of activities that qualify and identify the tourist offer, particularly in terms of traditional arts/crafts and local products, has generated a growing concern with the protection and recovery of cultural heritage. Traditional arts/crafts are an important aspect in the attractiveness of a tourist destination (Richards & Wilson, 2007) contributing to the maintenance of cultural identity and the survival of traditions at risk of being lost. This becomes even more relevant when new trends point to greater readiness for tourism consumption, for experimentation and strong emotions, for "sensing and valuing authenticity" (Lopes 2012: 296). In this context, the art of tinsmithing is of highest importance in the sphere of cultural tourism. As highlighted by Nield (2004), in future the competitiveness of a place as a tourist destination will strongly depend on the sustainability of its cultural, historical and traditional resources. The benefits generated by the close relationship between the art of tinsmithing and tourism are conveyed by local cultural identity. Moesch (2002) argues that tourism is a complex combination of interrelationships between production and services favouring the socio-cultural dynamics and exchange of intercultural information. This way, appropriate actions for cultural intervention adjusted to the realities of each region can minimise the undermining of territorial identity.

Cultural tourism can become an excellent vehicle for the transmission and dissemination of the art of tinsmithing. Its interaction with tourism is crucial for the attractiveness of destinations. All the more so as modern globalisation poses particular challenges to this sort of art such as the demand for peculiar tourist destinations where the existence of distinctive heritage from local communities encourage its "authentic appropriation" (Lopes 2014). Information and communication technologies are a key means for the dissemination and promotion of information and know-how related with the art of tinsmithing as they allow direct, attractive and user-friendly forms of communication or, in other words, the democratisation of knowledge.

Therefore, this art is of great importance in the context of cultural tourism in which information and communication technologies have a particularly proeminent role to play in its dissemination and fruition.

### **The use of information and communication technologies to promote cultural tourism**

Information and communication technologies are powerful instruments in the promotion of cultural tourism as well as in the consolidation of strategies and operations of the tourism industry (Buhalis, 2004). There are more and more websites and mobile applications in this sector and technologies such as QR codes, audio guides, digital guides and augmented reality are becoming increasingly important.

The QR (Quick Response) code is a free-of-charge two-dimensional code created by the Japanese company Denso-Wave, which has a storage capacity far superior to conventional bar codes. A QR code can store more than 7000 characters and accepts numeric and alphabetic characters, Kanji, Kana, Hiragana, symbols, binary digits and control codes (Denso-Wave, 2012). This code was initially applied in the automotive industry, but quickly expanded to a wide range of industries, including tourism.

A QR code can be created in seconds using online tools such as *QR Stuff* (<http://www.qrstuff.com>), *QR Code Generator* (<http://goqr.me>) or *The QR Code Generator* (<https://www.the-qr-code-generator.com/>). No specific equipment is required to read it, just free applications for mobile devices such as smartphones or tablets.



Figure 1. QR code in the city of Lisbon (source: <http://tinyurl.com/qhu2g9a>)

QR codes can be found in various locations and in several sizes. The first QR code in *calçada portuguesa* (Portuguese traditional pavement) can be found in the area of Chiado, in Lisbon, and provides tourist information about the area (Figure 1).

Also in Rio de Janeiro, the competent authority for tourism is using QR codes in sidewalk pavements to help tourists to get to know the city better, including the beaches and historic sites. In Manchester, the Manchester Art Gallery and Julian Tomlin launched the Decoding Art project that aims to disseminate 20 artworks located in several points of the city making use of QR codes (Grimes, 2011).

This technology is already used in numerous museums such as the Chicago Field Museum (Figure 2), the Amsterdam Museum, the Australian Museum, the Brooklyn Museum, the Cleveland Museum of Art, the Derby Museum, the Grant Museum of Zoology, the Museo Civico Archeologico di Bologna, Museo Civico del Risorgimento, the National Museum of Scotland, the National Naval Aviation Museum, the Powerhouse Museum, the Santa Cruz Museum of Art & History, the Smithsonian Natural History Museum and the Virginia Museum of Fine Arts. In Portugal we can find this technology in the Museu Nacional do Traje (National Costume Museum) in Lisbon.



Figure 2. QR code at the Chicago Field Museum (source: <http://tinyurl.com/nwz4o9w>)

Audio guides are generally sound files in MP3 format that can be downloaded from the Internet or specific hotspots using wireless technologies such as bluetooth and Wi-Fi. There are also mobile devices that already have the audio guides incorporated.

Audio guide machines can be turned on by the user or activated by GPS. When the mobile device with GPS is on a specific location an audio file with detailed information about the place is automatically reproduced.

In Portugal the village of Monsanto was the first location to use an audio guide system activated by satellite technology. Today audio guides can be found in most tourist sites and are often provided free of charge. For example, the website of the municipality of Tavira offers audio guides in several languages that allow visitors to take several tours around the town. The municipality of Ansião also provides audio tours of the town.

As regards museums, the free platform Audite has been gaining some importance allowing the visitors to download free guides for over two dozens of museums including the Museu do Brinquedo, the Museu de Lamego, the Museu

Nacional de Etnologia, the Museu Militar de Lisboa, the Museu do Oriente and the Museu dos Transportes e Comunicações. The use of audio guides, not only allows most enriching experiences, but also improves museum accessibility (Grandson, 2010).



Figure 3. Audite platform (source: <http://tinyurl.com/nq6wyz4>)

In addition to audio guides, tour guides on mobile devices and applications allowing tourists to create their own itinerary are becoming increasingly common. The scope and level of detail of the information contained are diverse. There are tour guides of villages, towns, cities, regions and even countries, as is the case of *Argentina Travel Guide* and *Amazing Thailand*.

If you travel to Brazil from the Porto or Lisbon airports you can download the application Brazil Mobile in the boarding areas via a bluetooth connection. This digital guide has information about a range of cities such as Belo Horizonte, Brasília, Florianópolis, Fortaleza, Manaus, Porto Alegre, Recife, Rio de Janeiro, Salvador and São Paulo.

In Portugal there are also good examples such as the YouGo guides, Braga Digital (Braga), the Caldas da Rainha City Guide (Caldas da Rainha), Just-in-Time Tourist (Castelo Branco), Mobitour Guimarães (Guimarães), oPORTOnity City (Porto), VisitAlgarve (Algarve) and Vive Chaves (Chaves).

The use of augmented reality services for mobile devices allows to provide additional information. Among the most popular applications with augmented reality services for mobile devices is Wikitude. But there are many more platforms such as DroidAR, DWARF, Layar, IN2AR, FLARManager, PanicAR, SudaRA and FLARToolKit (Kounavis, Kasimati & Zamani, 2012).

According to a report presented by Buhalis and Yovcheva (2014), augmented reality can be used for a wide range of purposes: an enhanced booking experience; museum interactivity, AR browsers in the destination, responsive experience through gaming, services in the restaurant, re-living historic life and events, the hotel experience, transportation, accessibility and translation and participative destination management.



Figure 4. Augmented reality in a museum (Source: <http://tinyurl.com/nmfkmdr>)

The use of augmented reality adds an extra view of reality increasing the interest of tourists in visiting certain locations, helping them choose what to see and making it easier to create their own itineraries (Jesus & Silva, 2009).

## PROJECT DESCRIPTION

With the aim of promoting the dissemination of Tomar's art of tinsmithing, we launched a project in 2015 consisting on the creation of a website for the Museu da Latoaria Américo Migalhas and the use of QR codes and audio guides. The project aims to bring international recognition to this century-old art, to show some of the emblematic pieces of the cultural heritage of Tomar and to publicise the workshop run by Otília Marques (daughter of Américo Migalhas) who is trying to keep the art alive.



Figure 5. Website of the Museu da Latoaria Américo Migalhas - Tomar

The development of the website relies on the collaboration of the students Ana Cascão and Joana Valentim as part of the final project work of Information Society: Tourism and Culture - a course of the bachelor's degree in Tourism and Culture Management offered by the business school within Instituto Politécnico de Tomar. The website makes use of free software and will be adapted for mobile devices and translated into several languages.

QR codes with detailed information will be created for the pieces on display and, in some cases, also videos that will enable the visitors watch the manufacturing of the pieces, which enhances the art even more (figure 6).



Figure 6. Pan used to bake the Fatias de Tomar, a traditional local delicacy (<http://tinyurl.com/no6agvw>)

The aim is also to create an audio guide to be downloaded at the museum to the visitors mobile devices via bluetooth as well as to integrate the Museu de Latoaria Américo Migalhas into the tour of museums proposed by Marques and Santos (2012).

The tour of Tomar museums, as initially proposed, includes the João de Castilho Municipal Museum with its three sections: Ancient Art, Naturalistic Art and Contemporary Art; the Museu Hebraico Abraão Zacuto (Abraão Zacuto Jewish Museum) and the Museu dos Fósforos (Matches Museum) (Figure 7).

## **Conclusions**

The new tourist culture seeks to influence tourist motivations, forcing destination locations to preserve their differences (local culture, traditions, architectural and environmental values, traditional arts and crafts, etc.) and, therefore, information and communication technologies are crucial tools for the promotion of cultural tourism. This paper confirms cultural tourism as a vehicle of cultural assertion. The concern to maintain some local/regional identity is an undeniable reality led by the art of tinsmithing. Cultural tourism is one way of preserving the art. The increased demand for tin objects within the cultural tourism sector can open up new perspectives for development of tourist and cultural activities, emerging as an aspect of local culture.



Figure 7. Tour of Tomar museums (Marques & Santos, 2012)

We further conclude that the dynamics of demand could stimulate the development and marketing of objects relating to Tomar's tangible and intangible cultural heritage, converting them into tourist products and, therefore, the creation of a website for the Museu da Latoaria will contribute to the valorisation, dissemination and preservation of patrimonial aspects involved in this art. Once again we stress that information and communication technologies play a crucial role in the internal management of organisations and in the articulation between all actors involved in the tourism industry. Real access to tin objects is not just a matter of taste and fruition. True enjoyment is in understanding their context and consequently in perceiving them as a vehicle of knowledge transferral. Thus, information and communication technologies become a key means of promoting knowledge via cultural tourism, disseminating and democratising it in a more direct, attractive and appealing way. Finally, we conclude that the creation of the Museum's website, the use of QR codes and the creation of audio guides is a real challenge for the dissemination and understanding of the art of tinsmithing and at the same time becomes an essential support for the creation and transferral of expertise.

## REFERENCES

- Antunes, L. (1999), 'Das artes e ofícios tradicionais: contributos para um enquadramento normativo legal', *Observatório das Actividades Culturais*, 6, pp: 17-22. Retrieved from [http://www.oac.pt/pdfs/OBS\\_6\\_Das%20Artes%20e%20Of%20C3%ADcios%20Tradicionais.pdf](http://www.oac.pt/pdfs/OBS_6_Das%20Artes%20e%20Of%20C3%ADcios%20Tradicionais.pdf) at December, 30, 2014.
- Buhalis, D. (2004), 'eTourism: Strategic and tactical impacts of information communication technologies for tourism', *Revista de Turismo e Desenvolvimento*, 1 (1), pp. 57-66.
- Buhalis, D., & Yovcheva, Z. (2014), Augmented reality in tourism: 10 best practices. Retrieved from <http://thinkdigital.travel/best-practice/augmented-reality-in-tourism> at December, 30, 2014.
- Cristóvão, A. F. (1999), 'Ambiente e desenvolvimento de áreas marginais: o caminho tortuoso para uma relação potencialmente frutuosa'. *Actas do 1º Encontro Galiza-Portugal*. Bragança.
- Denso-Wave (2012), High Capacity Encoding of Data. What is a QR Code? *QR Code.com*. Retrieved from <http://www.qrcode.com/en/about> at October, 30, 2012.
- Grimes, M. (2011), *Decoding Art: Delivering interpretation about public artworks to mobiles*. Retrieved from <http://blogs.ukoln.ac.uk/cultural-heritage/category/qr-codes> at May 14, 2012.
- Jesus, C., & Silva, L. (2009), 'Potencialidades dos serviços móveis de Realidade Aumentada aplicados ao Turismo'. *Actas do 8º Congresso LUSOCOM* (pp. 2296-2314).
- Kozak, M., & Nield, K., (2004), The role of quality and eco-labelling systems in destination benchmarking, *Journal Sustainable Tourism*, Clevedon, 12 (2), pp. 138-148.
- Kounavis, C. D., Kasimati, A. E., & Zamani, E. D. (2012), Enhancing the Tourism Experience through Mobile Augmented Reality: Challenges and Prospects. *International Journal of Engineering Business Management*, 2012 (4), pp. 1-6.
- Lopes, E. R. (2012), The museum of sacred art and ethnology as a tourist attraction (Fátima, Portugal). *Revista Turismo & Sociedade*, 5 (1), pp. 295-309.
- Lopes, E. R. (2014), Objetos etnográficos, diversidade criativa e turismo. *Seminário de Investigação Internacional – Processos de Musealização*. Porto, Faculdade de Letras da Universidade do Porto, Departamento de Ciências e Técnicas do Património.
- Marques, C. G. C., & Santos, H. (2012), 'Promover a aprendizagem do património cultural da cidade de Tomar através de dispositivos móveis'. In A. A. A. Carvalho, T. Pessoa, S. Cruz, A. Moura & C. G. Marques (Orgs.), *Atas do Encontro sobre Jogos e Mobile Learning* (pp. 175-185), Coimbra: Centro de Investigação em Educação.
- Moersch, M. A. (2000). *Produção do saber turístico*. São Paulo: Contexto.
- Neto, M. (2010), *Os audioguias na acessibilidade aos museus: a sua aplicação ao Museu da Ciência da Universidade de Coimbra*. Coimbra: Universidade de Coimbra.
- Prats, L. (1997), *Antropología e patrimonio*. Ariel: Barcelona.

Ribeiro, M., & Marques, C. (2000), 'Tourism and the development of less favoured areas between rhetoric and practise, in *Tourism Sustainability and Territorial Organization*', *APDR* (pp. 531-544). Coimbra.

Richards, G., & Wilson, J., (2007), 'Tourism development trajectories: from culture to creativity?'. In G. Richards & J. Wilson, (Eds.). *Tourism, creativity and development*. London: Routledge.