

REPRESENTATIONS AND PERCEPTIONS OF INDUSTRIAL HERITAGE IN THE HIGHER TECHNOLOGICAL EDUCATION INSTITUTE IN GREECE: AN EMPIRICAL STUDY

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Abstract

The purpose of this paper is to present the results of a primary data survey conducted in Greece among the students of a higher technological education institute studying tourism business in order to empirically verify the degree of their awareness of and sensitization to the protection of the cultural and industrial heritage. As the graduates of this specific academic Department are going to work later in public and private organizations in the field of tourism, their attitude towards the industrial heritage of the country is crucial. The extent to which students accept it or disdain it will determine whether industrial heritage tourism could be possibly incorporated in the future in the promotion of the cultural product of the country, as a form of Special Interest Tourism (SIT). This paper is seeking on the one hand, to examine what students regard as industrial heritage, if they visit industrial/technical monuments/museums in Greece, what their views are on the possible new uses of industrial resources and their importance to local communities; on the other hand, it is trying to identify whether young people today accept or reject, consciously or unconsciously, industrial heritage as being part of the cultural assets of a country.

Key words: industrial heritage, cultural heritage, tourism

ΠΕΡΙΛΗΨΗ

Στη μελέτη αυτή παρουσιάζονται τα αποτελέσματα πρωτογενούς έρευνας που διεξήχθη στους φοιτητές του Τμήματος Τουριστικών Επιχειρήσεων του Τ.Ε.Ι. Πειραιά, με σκοπό την εξακρίβωση του βαθμού κατανόησης και ευαισθητοποίησης στην προστασία της πολιτιστικής και βιομηχανικής κληρονομιάς. Καθώς οι απόφοιτοι του Τμήματος θα απασχοληθούν σε φορείς του δημόσιου και του ιδιωτικού τομέα του τουρισμού κρίνεται σημαντική η διαπίστωση των στάσεων τους για τη βιομηχανική κληρονομιά της χώρας. Η διαπίστωση της αποδοχής ή μη της βιομηχανικής κληρονομιάς θα προσδιορίσει το αν ο τουρισμός της βιομηχανικής κληρονομιάς μπορεί να ενσωματωθεί στο μέλλον στην προώθηση του πολιτιστικού προϊόντος της χώρας, ως ειδική μορφή τουρισμού. Επίσης η μελέτη αποσκοπεί στο να διαπιστώσει τι θεωρούν οι φοιτητές ως βιομηχανική κληρονομιά, αν έχουν επισκεφθεί βιομηχανικά/τεχνικά μουσεία και μνημεία στην Ελλάδα, ποια είναι η άποψή τους για τη μελλοντική χρήση / αξιοποίηση των βιομηχανικών πόρων και τη σημασία τους για τις τοπικές κοινωνίες. Τέλος, αποσκοπεί στην διερεύνηση του βαθμού αποδοχής ή απόρριψης, συνειδητά ή ασυνείδητα, της βιομηχανικής κληρονομιάς ως μέρος των πολιτιστικών πόρων της χώρας.

Λέξεις κλειδιά: βιομηχανική κληρονομιά, πολιτιστική κληρονομιά, τουρισμός

1. Introduction

Culture consists of a wide range of tangible and intangible resources. These include among others historic resources, ethnic tangible and intangible features, natural features, ambient qualities, visible activities, physical factors and intangibles (Jamieson, 1994). Tomlinson (1991: 4) points out that there are hundreds of definitions of culture, which means either there is a confusion or the concept of 'culture' is so wide that it includes all those definitions (Richards, 2005: 22). "Culture is what makes us

what we are today. It's how we live, learn and play. It's what forms – and transforms us, excites, touches, changes and brings meaning to our lives.” (City of Bradford Metropolitan District Council, 2003:1).

Thus, cultural assets are all the important aspects of history, not those which are associated with the ‘culture of beauty’ and the prevalent aesthetic choices but those which are associated with the ‘culture of usefulness’; not only those which belong to the distant past but also those belonging to a past which is still inside us. Cultural heritage includes not only objects for conservation and museification but also historical routes within which act solid systems of values (Kalogri et al., 1986). ‘Noting that the cultural heritage and the natural heritage are increasingly threatened with destruction not only by the traditional causes of decay, but also by changing social and economic conditions which aggravate the situation with even more formidable phenomena of damage or destruction [and] [c]onsidering that deterioration or disappearance of any item of the cultural or natural heritage¹ renders the heritage of all the nations of the world devastatingly poorer, the international community adopted in Paris on 16 November 1972 the Convention Concerning the Protection of the World Cultural and Natural Heritage. According to the Convention, the following are considered as “cultural heritage”: monuments, groups of buildings, sites, urban complexes, cultural landscapes, industrial monuments and works of art (Mylonopoulos, 2007).

Heritage is composed of what we inherit from the previous generations and implies a wealth which can be of intellectual, cultural or material nature. As far as industrial heritage is concerned, the emphasis is on a legacy which is not of artistic or ethnological importance at first sight. This fact creates some problems regarding the methods and the content of this scientific field as well as its spatiotemporal limits. In the first place, industrial heritage concerns the three last centuries over which industrialization emerged and spread, originally in Europe and then to the rest of the world. Thus we are talking about the legacy of the industrial societies from the 18th century onwards (Dorrel-Ferré, 1998).

Industrial heritage is an integral part of cultural heritage, which in turn is the prime element for the sustainable development of a society (Mitzalis, 2007). According to the Nizhny Tagil Charter for the Industrial Heritage adopted by TICCIH (The International Committee for the Conservation of Industrial Heritage) in July 2003, “[i]ndustrial heritage consists of the remains of industrial culture which are of historical, technological, social, architectural or scientific value. These remains consist of buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted and used, transport and all its infrastructure, as well as places used for social activities related to industry such as housing, religious worship or education.” McKercher & du Cros (2002: 77-78) claim that “[c]ontemporary society uses the past [...] as a commodity (particularly in tourism); to control, confirm, or confront present beliefs; for leisure, education and profit; and for articulating national pride or group identity”, producing ‘national pasts’.

Industrial heritage tourism is placed in the wider movement of postmodernity. One of the main characteristics of the latter is that “[t]he disappearance of traditional divisions between the realms of production and consumption and between the cultural and the economic are examples of what MacCannell (1993) has identified as the collapse of the distinction between means and production.” (Richards, 1996: 263) This is made clear by a general tendency worldwide over at least thirty years to convert former industrial sites (brown fields) such as mines, quarries and factories (places of production) into museums and tourist attractions (places of consumption or green fields).

According to some scholars, the number of the sites of artisan and industrial production which are accessible to the public has increased dramatically over the last twenty years and industrial visits and tours are from now on part of the holidays for many tourists, who visit a place either for leisure or for business. There are several factors which contributed to the popularity of industrial heritage tourism. Some of them are: “the massive and accelerated deindustrialization of our so-called advanced societies, the loss of contact with the traditional procedures of transformation and manufacturing as well as the knowledge and the know-how associated with them” (Beaudet et Lundgren, 1996: 3). The exploration of industrial heritage started in England on the eve of the Second World War. Until then, the architectural and technological production of the 19th and 20th century were faced with a pejorative and condescending attitude (Beaudet, 1996: 9). This vivid interest of tourists in the recent industrial past and the labour of the others may be inscribed in an attempt to recuperate the lost *homo faber* (Laplante, 1996: 6). The exploration of industrial heritage from tourists aims at bridging the gap of our collective memory and at reuniting us with the tradition and the skill of the human movements (Allen, 2003; Laplante, 1996).

2. INDUSTRIAL/TECHNICAL MUSEUMS/MONUMENTS IN GREECE

Greece is a country where there was late industrialization dating back to the second half of the 19th century while the Industrial Revolution had already taken place a century before in England. Therefore Greece cannot boast of industrial/technical monuments and sites of great importance while those which exist are relatively small in size and scale compared with the vast industrial areas with huge plants and heavy industries found in Germany, the UK, Belgium or the Netherlands. Moreover, they are scattered throughout Greece thus it is hard to propose an industrial heritage route to visitors. In addition to this, although the more modern industrial/technical museums have incorporated new technologies in the presentation of their displays and exhibits, most of them are not attractive for family days out and to keep children busy throughout the day proposing interactive or educational activities. The guided tours last for a maximum of two hours and some of them have a boutique/gift shop and a café but do not provide visitors with entertainment. Most often visitors have to leave the site at the end of the tour and have to spend their day somewhere else. Finally, there is no critical mass from tourists abroad so that these sites/monuments/museums can be converted into primary or secondary cultural attractions and the villages or towns in which they are located do not greatly benefit economically from these visits apart from some local restaurants and hotels/hostels. More often they

are tertiary cultural attractions and are visited by accidental tourists who have not planned their visit there before they arrive at their destination.

Despite this situation, some museums especially the open-air ones have seen their visits increase dramatically over the last years. For example, the Open-air Water Power Museum at Dimitsana in Peloponnesus, a two-hour drive from Athens, receives about 46,000 visitors every year. People mostly go there at weekends or on day trips and the area has developed significantly since the opening of the museum in 1997. Another characteristic of the industrial/technical museums in Greece is the fact that the ownership and the management are not uniform but may vary. The owners can be either the state, the municipalities, private businesses, corporations, or individuals while the management either stays with the owner or is conceded, usually by the state and the municipalities, to private businesses, financial groups, individuals within the framework of short or long-term programming agreements which aim at maximizing profits on the one hand through an efficient marketing plan and assuring the conservation and the funding of the museum/monument on the other hand. Some of the most important industrial/technical monuments/museums in Greece are briefly presented below.



Picture 1: Map of Greece with the most important industrial/technical monuments/museums

Processed by Polyxeni Moira

LAVRION TECHNOLOGICAL AND CULTURAL PARK, ATTICA

The Lavrion Technological and Cultural Park (LTCP) was founded at the site of the Compagnie Française des Mines du Laurium in 1992, by the National Technical University of Athens. The buildings of the LTCP constitute a unique monument of industrial archaeology and architecture, due to their monumental scale and the fact that nearly all the facilities and most of their mechanical equipment have been preserved. The industrial facilities of Lavrion played an important role in the prominence and development of the area. During approximately 120 years of activity, the French Company contributed greatly to local production, technological advancement, research and education. Today, its renovated premises continue to support research, education and technology.ⁱⁱ

MARITIME TRADITION MUSEUM, PIRAEUS

The Museum collection, under the title "Sea & Art" is related to the historical connection between Greece and the sea from antiquity till present. It includes maritime art, cartography, engravings, ship models and plans, scientific and navigational instruments, time-keeping and astronomy, byzantine maritime art, traditional art, sea warfare items etc.

TSALAPATAS ROOFTILE AND BRICKWORKS MUSEUM, VOLOS

The plant was founded in 1926 by the brothers Nicoletos and Spyridon Tsalapatas. It occupies 22,000 sq. m, of which 7,500 sq. m. is roofed over. In its heyday it had a horsepower of 300 hp and a staff of 200-250 workers. It produced various types of bricks and roof tiles. In 1975 the plant stopped its operation, because of rising competition and accumulated financial obligations. In 1995 it was designated a monument worth preserving by the Greek Ministry of Culture. The Museum belongs to the thematic Museums Network created by the Piraeus Bank Group Cultural Foundation and was opened to the public in December 2006. It aims at presenting not only the history of this particular brickworks but also the development of brick-making both in Greece and abroad in relation to the industrial history of Volos.ⁱⁱⁱ

INDUSTRIAL MUSEUM OF ERMOUPOLIS, SYROS

Behind the copious cranes and warehouses of the Neorion Shipyard at the southern end of the port, there is the Industrial Museum of Ermoupolis, which opened in 2000. This museum consists of three buildings housed in the Technical Cultural Centre which stands in the middle of the industrial zone of Ermoupolis. These buildings belong to the Municipality and are: the Katsimantis paint works, the Aneroussis lead factory and the Kornilakis tannery, and exhibit collections of old machines and tools of the textile industries, machine-shops, tannery, shipbuilding, food processing industries, etc. They are great testimony of the industrial supremacy of Syros during the 19th century and retrace the industrial history of the island.^{iv}

MUSEUM OF THE OLIVE AND GREEK OLIVE OIL, SPARTA

The Museum of the Olive and Greek Olive Oil opened to the public in the end of 2002. The museum is located in a building that once housed the Sparta Electric Company, a typical Greek

industrial building of the interwar period, which belongs to the Municipality of Sparta and has been conceded to PIOP. Its extremely bad state required a radical renovation: only the northern side was preserved and included in the modern construction, which pertains to industrial buildings and creates visual escapes to the surrounding area, the neighbouring olive grove and Mt Taygetus. The imaginative architectural shell was adapted to the museological requirements of a pioneering museum. The Museum of the Olive and Greek Olive Oil in Sparta aims to highlight the culture and technology of the olive and olive production, which is inextricably linked with the Greek and Mediterranean identity. Unique in Greece, it is located in the heart of Laconia, one of the main olive producing locations in Greece.

In the upper floor the first testimonies about the olive in Greece, its contribution to the economy from prehistoric times to the 20th century, its role in nutrition, body care (cosmetic, pharmaceutical uses), lighting, while special mention is made of its symbolic dimension in religion, mythology, customs and mores. The unit concludes with a brief presentation of the olive's position in art.v



Picture 2: An aspect of the interior of the Museum of the Olive and Greek Olive Oil in Sparta

Photo ©: Polyxeni Moira 2007

MUSEUM OF INDUSTRIAL OLIVE-OIL PRODUCTION, LESVOS

It is located on the island of Lesbos. It has been founded and designed by the Piraeus Bank Group Cultural Foundation (PIOP), which is also responsible for its operation. The Museum, which was inaugurated on 15 September 2006, is actually housed at the old communal olive-pressing complex at Agia Paraskevi on Lesbos which has been converted into a multi-functional museum. It is refurbished in order to articulate a museum of itself, where the olive-pressing installations are displayed under the best museological standards and the olive-oil production process is clearly presented. One can witness the development of the various machines, while special emphasis is given to the changes the

introduction of mechanical power brought into the process of oil-production. In the main building the three basic steps of the oil-production process (crushing the olives, pressing the olive-pulp, separating oil from water) are shown, while reference is made to the auxiliary operation of the flour-mill. The museum aims at presenting the industrial heritage of the island, not only in the oil-production section but also in the wider field of technological development, as well as projecting it against its architectural, social and cultural background.^{vi}

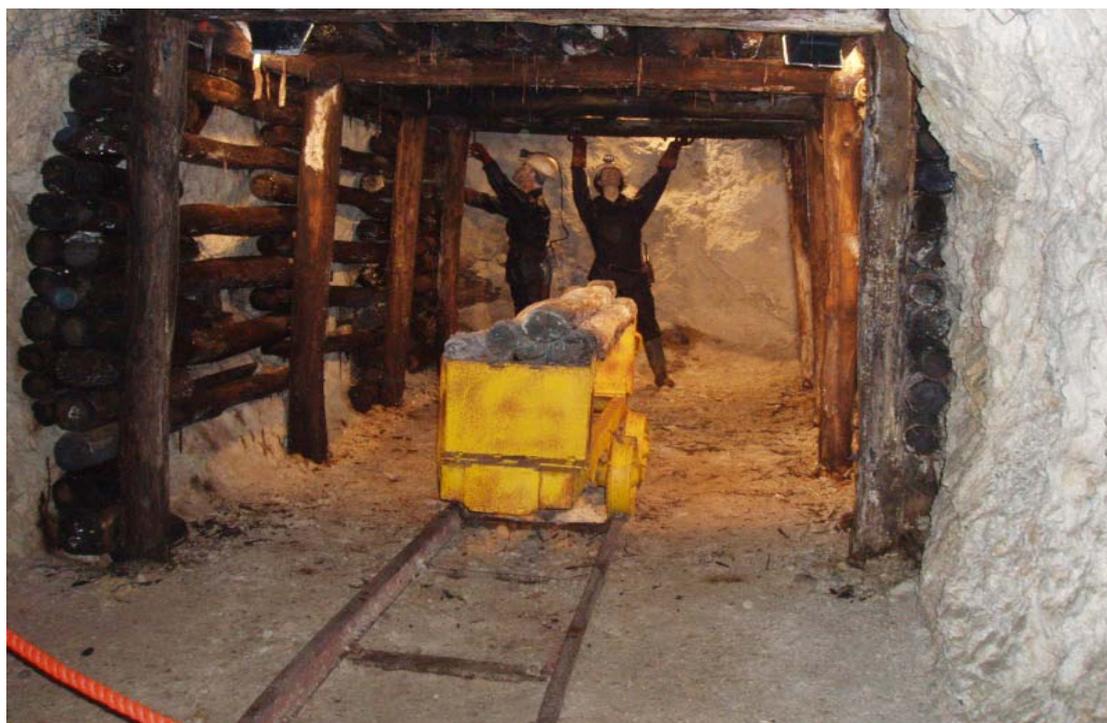
OPEN-AIR WATER POWER MUSEUM, DIMITSANA

The Open-Air Water Power Museum opened to the public in the summer of 1997. Research in the environs of the River Lousios has identified more than 100 water-powered installations, providing evidence of the technology used by the traditional communities to cover their basic needs since the 16th century. The workshops were left to fall into ruins during the 20th century, as the area was gradually abandoned. The Open-Air Water Power Museum is visited by many people, especially school groups, and has received the Europa Nostra award. In 2003 it was included in the European Commission booklet of the 27 most successful projects in Greece, co-financed by the European Union.^{vii}

The Open-air Water Power Museum in Dimitsana is a thematic museum which enhances the importance of water-power in traditional societies, by presenting the basic pre-industrial techniques that use water as the main source of power for the production of various products. On a site 1,000 sq. m. in area, in the midst of dense vegetation and abundant running water, installations and water-powered equipment have been restored to meet the operational requirements of the museum. Each of the restored traditional workshop buildings houses a permanent exhibition whose theme is relevant to the workshop's original use.

THE FOKIS MINING PARK (VAGONETTO)

Vagonetto, the Fokis Mining Park is a Theme Park, unique in Greece, allowing the visitor to get to know the bauxite extraction process step by step. The idea for this project came from the people who worked in the mines and wanted to safeguard and share the memories of the place – now inextricably wound up with the bauxite mining process. The purpose of the Fokis Mining Park is not merely to present the different areas and operations of the mine, but also to inform and educate-in an entertaining manner- the younger generations in the history of bauxite exploitation and of all those who worked in it. Construction started in 1998 by S&B Industrial Minerals S.A. (previously Silver and Barite Ores Mining Co. S.A.), in the Company's bauxite mining operations, at the 51st km of the Lamia – Amfissa National Road, in Fokis and has been in operation since September 2003. Acquaintance with bauxite starts in the obsolete underground mine “850” and continues in the Exhibition Hall of Mining History to be rounded up in the Open air Machinery Exhibition.



Picture 3 : Effigies of workers working in the underground mine galleries of the Fokis Mining Park and a mine-wagon. Photo © : Maria Andritsou (2007)

A visit to Vagonetto is a multifaceted educational, entertaining experience, for children, young people, teachers and families. It is a living lab in the heart of a region full of archeological monuments, museums and historical sites. At the dawn of the new century, the Fokis Mining Park is “something different” in Greece, integrated in the socio-geographic environment of the area and contributing to its cultural identity, as it is not merely an old mine, but part and parcel of the life and history of the area.^{viii}

THE SILK MUSEUM, SOUFLI

The Silk Museum in Soufli presents all the phases and stages in the pre-industrial process of silkworm rearing (sericulture) and silk-making, in the socio-economic framework which made Soufli, a small town in north-eastern Greece, and its environs a major silk producing centre in Greece (late 19th – mid 20th c.) The exhibition comprises four thematic units and 46 exhibition units with two-dimensional explanatory material (texts, photographs, drawings, maps) and items that are traditionally associated with sericulture and silk weaving.

The Museum has been operating since 1990 and is housed in the Kourtidis Mansion, an architecturally beautiful mansion, which belonged to the physician, scholar and politician K. Kourtidis. The building was constructed in 1883. The ground floor was used as a cocoonery, while the family was housed on the first floor. A second single-storey building on the same plot of land also served as a house. The mansion has survived in good condition, because of the quality of the materials and its solid construction. Conservation and restoration work took place during the period 1978-1985, following the donation of the building by Mrs M. Kourtidou-Pastra to the Hellenic Bank of Industrial Development (ETBA) in 1976.^{ix}

3. The survey

A survey was conducted in the Higher Technological Education in order to explore the degrees of awareness and sensitization among students as far as industrial heritage is concerned. A structured questionnaire consisting of 25 closed questions was distributed to a sample of 100 students at the Department of Tourism Business Administration of the Technological Education Institute of Piraeus, whose headquarters are on Spetses, a small island in the Saronic Gulf, opposite the Peloponnesian coast of Ermionida. The island is known for its maritime tradition and history (Moiras, 2005: 52). The active students at the Department amount to a total of 203, which breaks down to 63 men (31%) and 140 women (69%).^x

After the drafting of the questionnaire, a pilot test was conducted among 10 individuals who had the features of the final sample of the survey. This preliminary research led us to identify problematic questions and reformulate them as well as to pinpoint and correct any mistakes and omissions. The main goal set was to ascertain whether students had heard about industrial heritage during their studies while at school or later on. Moreover, through a battery of questions we attempted to identify the students' attitudes towards industrial heritage, their views about possible uses of industrial resources, the importance of industrial heritage in a region, the degree of protection of industrial heritage in Greece and finally, the degree of their sensitization regarding the conservation and the protection of industrial heritage. The collection of data took place between 15 and 30 June 2007 during the first exam period, when the majority of the active students sit for an examination.

3.1 Statistical Descriptive Analysis of the Results

The students were first asked to provide some information on a number of sociodemographic characteristics. 66% of those surveyed were women while 83% of them were aged between 19 and 21 years old. The majority of the students (64%) stated that they originated from Athens and Piraeus (56% and 8% respectively). 11 students were of foreign origin: 5 students from Albania, 1 from Bulgaria, 2 from Russia, 1 from Sweden, 1 from Cyprus and 1 from Tunisia.

3.1.1 Teaching of Industrial Heritage^{xi}

Two questions were asked about whether students had ever been taught in a course about cultural and industrial heritage. If they replied affirmatively in either or both questions, they were asked to specify in which education level(s) this teaching had taken place. 35 students (35%) answered that they only had been taught about cultural heritage, 22 students replied that they had been taught about both cultural and industrial heritage, one student answered that she had only been taught about industrial heritage while 42 students replied that they had never been taught about either of the above. In total, it was found out that 57% of the students had been taught about cultural heritage while 23% of them had been taught about industrial heritage at some time while at school and later. What is surprising is that 43% of the students were never taught about cultural heritage or did not remember having been taught while a startling 77% was never taught about industrial heritage. The break down of the results is shown in Table 1.

Table 1. Teaching about cultural and industrial heritage

	CULTURAL HERITAGE				INDUSTRIAL HERITAGE			
	YES		NO		YES		NO	
	frequency	%	frequency	%	frequency	%	frequency	%
Primary School	14	24.6	43	75.4	1	4.4	22	95.6
Middle/ Secondary School	30	52.6	27	47.4	7	30.4	16	69.6
High School	40	70.2	17	29.8	17	73.9	6	26.1
Tertiary education (TEI)	30	52.6	27	47.4	5	21.7	18	78.3

3.1.2 Definition and content of industrial heritage

To the question about what the industrial heritage of a region or a country is and what it includes, 14 options were proposed, based on the legislative framework in force about industrial heritage and the existing theoretical approaches on it. More than one answer was possible. The responses can be seen in Table 2 and were highly interesting. Almost two thirds of the respondents (67%) mentioned that ‘factories’ and ‘industrial buildings’ are included in industrial heritage, more than half of the respondents (57%) mentioned the ‘mines’, 60% of them replied that ‘traditional wagons and train engines’ can be listed as such, almost half of them (52%) mentioned the ‘traditional windmills’ while fewer than half of the respondents (42%) replied that industrial heritage includes ‘machinery’. On the other hand, almost one third of those surveyed (30%) answered that ‘traditional bridges’ are regarded as industrial heritage while only 9% of the respondents mentioned the ‘workers’ residences’. Furthermore, what is revealing is the fact that a considerable number of respondents did not know whether any activity or installation belonged to industrial heritage (e.g. 63% of those surveyed did not know whether ‘workers’ complex residences’ were listed as industrial heritage while the respective percentages for ‘traditional professions’ and ‘the way of living and labour of the past’ were 48% and 49% respectively.

TABLE 2. What does industrial heritage include?

	INDUSTRIAL HERITAGE	%		
		YES	NO	DON'T KNOW
a.	Factories/industrial buildings	67	14	19
b.	Machinery/machines	42	23	35
c.	Mines/Quarries	57	14	29
d.	Warehouses	18	34	48
e.	Traditional windmills, watermills	52	15	33
f.	Traditional bridges	30	27	43
g.	Traditional wagons/train engines	60	14	26
h.	Traditional buildings of passenger and cargo railway stations	59	11	30
i.	Traditional boats/shipyards	47	21	32
j.	Traditional professions/specializations	37	15	48

k.	Traditional techniques and methods of production	53	5	42
l.	The way of living and labour of the past	34	17	49
m.	Workers' complex residences	9	28	63
n.	Other	3	4	93

To the question whether industrial buildings only acquire a value when not used in the production line, almost a quarter of the respondents replied positively while 56% of those surveyed considers that they have an inherent value while being used.

TABLE 3. Value of industrial buildings

VALUE	FREQUENCY	%
YES	24	24
NO	56	56
DON'T KNOW	20	20
TOTAL	100	100

3.1.3 The management of industrial heritage

To the question about what managing the industrial heritage involves, 6 options, cited in Alfrey & Putnam (1992: 1) were proposed. More than one answer was possible. The majority of the respondents (64%) mentioned option B (protecting and caring for buildings, sites and machinery), 45% of those surveyed mentioned option A, (piecing together the remnants of long-lost industry) while almost one third of them (38%) mentioned option E (recording the knowledge, skill and experience of industrial populations).

TABLE 4. What does managing the industrial heritage involve?

	Management of the industrial heritage	Frequency and %	
		YES	NO
A.	Piecing together the remnants of long-lost industry	45	55
B.	Protecting and caring for buildings, sites and machinery	64	36
C.	Finding new uses for redundant but irreplaceable elements of the industrial landscape	33	67
D.	Restoring disused machinery and working practices to use	34	66
E.	Recording the knowledge, skill and experience of industrial populations	38	62
F.	Don't know	12	88

Students were then asked to indicate the possible new uses of industrial resources. From the responses given, it is concluded that the possible new uses refer mainly to what has a direct connection with culture such as a museum (73%), a cultural centre (70%) and to a lesser extent, a theme park (43%). On the contrary, the percentages were significantly lower for other uses, not directly related to culture, such as hotels (26%), offices (13%), restaurants and bars (16%) and residences (16%).

TABLE 5. Possible new uses of industrial resources (buildings, monuments, venues or sites)

	Uses	YES	NO	M/V
a.	Mall/Shopping centre	29	70	1
b.	Offices	13	87	-
c.	Restaurant/Bar	16	84	-
d.	Cultural centre	70	30	-
e.	Theme park	43	57	-
f.	Residences	16	83	1

g.	Hotel	26	74	-
h.	Museum	73	27	-
i.	Other	4	96	-
j.	Don't know	12	88	-

To the question regarding the importance of industrial heritage development and exploitation in a declined area, a set of 6 options were proposed while more than one answer was possible. Almost two thirds of the respondents (64%) said that industrial heritage development can lead to the economic regeneration of the area, followed by a 63% who replied that it can contribute to the deep comprehension of history and the character of the area. Almost half of the students (47%) answered that it can help conserve collective memory while almost one third of them (30%) mentioned that it can contribute to the diversification of the local economy. Only 2% of those surveyed replied that it does not contribute to any of the above.

3.1.4 The protection of industrial heritage

The responses given to questions regarding the protection of industrial heritage in Greece were revealing. 42% of the students think that industrial heritage resources are not protected in Greece while only 7% thinks the contrary. In addition to this, almost half of the respondents (51%) did not know whether related regulations and an institutional framework are in force in Greece. Those students (42) who answered that there is no protection of industrial heritage in Greece were asked to justify this lack. Almost two thirds of them (62.3%) attribute it to the state's indifference. The rest can be seen in Table 6.

TABLE 6. Reasons for lack of protection of the industrial heritage

REASONS	YES		NO	
	frequency	%	frequency	%
A. inadequate institutional framework	19	45.2	23	54.8
B. lack of single planning	9	21.4	33	78.6
C. owners' reluctance for industrial sites exploitation	18	42.9	24	57.1
D. high cost of works of conservation	19	45.2	23	54.8
E. the state's indifference	27	62.3	15	37.7
F. the local communities' indifference	17	40.5	25	59.5
G. lack of state subsidy	13	30.9	29	70.1
H. other	1	2.4	41	97.6

Students were also asked to determine the agency or body responsible for the protection of industrial heritage among a set of 7 options where multiple answers were acceptable. 81% of the students replied that this is the state's responsibility, 70% of those surveyed answered that responsibility lies with the local government, 60% of the respondents said that it is the inhabitants' responsibility while almost half of them think that the responsibility lies within the local cultural societies and associations. A very small percentage (11%) answered that it is the responsibility of the private businesses and agencies, 7% of the students replied that NGOs are responsible for this, while just 5% think that it is the responsibility of the higher educational institutions.

Students were then asked to indicate to what degree they agree with the following statement: “Citizens in Greece are sensitized to the conservation of industrial heritage”. The Likert scale was proposed from 1= ‘totally agree’ to 5= ‘totally disagree’. From the responses given, there was not total agreement with the statement. Just 5% of the students agreed, almost half of them (48%) were neutral, 38% of the respondents disagreed while 9% of those surveyed totally disagreed.

TABLE 7. Greek citizens’ sensitization to industrial heritage

Degree of agreement	Frequency	%
Totally agree	0	0.0
Agree	5	5.0
Neither agree nor disagree	48	48.0
Disagree	38	38.0
Totally disagree	9	9.0
TOTAL	100	100

3.1.5 Visits to the monuments of industrial heritage

Students were asked whether they had visited monuments of industrial heritage in Greece. 11 options were given and more than one answer was possible. The Maritime Tradition Museum of Piraeus was mostly visited (31%) followed by the Lavrion Technological–Cultural Park (24%), both in the prefecture of Attica. These results are probably explained by the fact that 77.4% of the visitors to the Maritime Tradition Museum of Piraeus said that they came from Athens and Piraeus. The rest of the museums were less frequently visited; 12% of the students visited The Open-Air Water Power Museum at Dimitsana, the Museum of the Olive and Greek Olive-Oil in Sparta and the Industrial Museum of Ermoupolis on the island of Syros (Aegean Sea), 4% of the students visited the Museum of Industrial Olive-oil Production on the island of Lesbos (Aegean Sea), while just 2 students visited the Museum of Silk at Soufli, Evros and the Tsalapatas Brickwork and Rooftiles in Volos, Thessaly. No one had visited the Fokis Mining Park or Vagonetto although it has been open to the public since September 2003 and a three-hour drive from Athens. What is interesting is the fact that 44% of the respondents had never visited any of the museums above while of those who visited the aforementioned monuments 57.1% (i.e. 32 students) said that this was an educational visit while 41.1% of them said it was a private visit.

On the island of Spetses there is a luxury hotel called ‘NISSIA’^{xii} [ISLANDS]. The students were asked first whether they knew the hotel, which is located on the road connecting the port with the premises of the Technological Education Institute. 99% of the responses were affirmative. Then they were asked to write down the former use(s) of the building before it was converted into a hotel. The goal was to examine whether students knew at least one of its former uses and of course if they showed an interest in finding out. Out of 99 students who knew the hotel, less than a quarter of them (22.2%) identified one of its former uses while the remaining 77 (77.8%) did not know. Moreover, students were asked whether cultural tourism includes tours to industrial heritage monuments. 79% of the respondents answered affirmatively.

3.1.6 The importance of archeological and industrial monuments

Students were also asked to express their opinion on the following statement: “The archeological monuments of our country are, if compared to the industrial monuments:” from ‘most important’ to ‘not at all important’ on a scale of importance. The majority of the respondents (55%) answered ‘most important’ and ‘very important’ (i.e. 39% and 16% respectively), which shows the particular importance the Greeks ascribe as a nation to the heritage of antiquity and that the modern cultural creations are often neglected. A considerable 41% of those surveyed answered that archeological monuments are equally important as industrial monuments while only 4% replied that they are less important.

TABLE 8. Rate the importance of archeological monuments vs. industrial monuments

Degree of importance	Frequency	%
Most important	39	39
Very important	16	16
Equally important	41	41
Less important	4	4
Not at all important	-	-
TOTAL	100	100

Finally, students were asked if they are used to visiting industrial heritage monuments or sites during their holidays. One third of the respondents (33%) answered that they actually do so.

4. Conclusions

From the preceding analysis, it seems that the students’ awareness and sensitization on the question of industrial heritage is not satisfactory. It is proved that this is due to the weaknesses of the educational systems at all its levels. Moreover, it turns out that similar problems exist concerning the knowledge and the comprehension of the concept of industrial heritage, which comes as a logical consequence of the fact that there is no teaching of industrial heritage in schools.

Furthermore, as for the content of the term ‘industrial heritage’, the students’ responses prove that students have a ‘narrow’ framework of perception of the concept of industrial heritage as it seems that they only perceive tangible cultural assets as being part of it and not the intangible cultural assets (e.g. way of living and labour of the past, traditional techniques and methods etc.). It is surprising that they do not acknowledge workers’ complex residences, means of communication and transport, machines-tools etc. as being part of industrial heritage. Moreover, what results from this survey is that students acknowledge that exploiting industrial heritage can contribute to the economic regeneration of an area (64%) as well as to the comprehension of the history and the character of an area (63%); however, they value less or do not seem to comprehend the contribution of industrial heritage to the conservation of collective memory and to the diversification of the local economy (30%).

As for the protection of industrial heritage in Greece, although 81% of the respondents thinks that this is the responsibility of the state and 70% of them consider that it is the responsibility of local

government, a large percentage (51%) ignores the existence or lack of regulations of protection while 42% of those surveyed think that there is no institutional framework of protection in effect and attributes this fact mainly to the indifference of the state machine (62.3%).

The students do not seem to have visited museums of industrial heritage in Greece although the number of museums and sites of artisan and industrial heritage has increased significantly over the last twenty years while accessibility to them has improved at the same time. The recorded visits are mainly connected with an educational visit (57.1%). Additionally, students do not seem to show an interest in industrial heritage even if industrial monuments are found at their place of studies. Finally, they value the archeological monuments of Greece as more important (55%) than the monuments of industrial heritage.

The conclusions mentioned above confirm the belief that “industrial heritage is not familiar and accepted by young people. This is probably due to the fact that the required interpretation of the technical culture did not take place and the transfusion of the messages of the monuments of labour and technical inspiration to those people of the younger generations who did not have the chance to live this world of labour was not attained.” (Traganou-Deligianni, 2001: 6)

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ⁱ UNESCO World Heritage Convention, Preamble. Source: <http://whc.unesco.org/en/conventionext/>

ⁱⁱ Source: <http://www.lavrio-conferenceculturalpark.gr/52/article/english/52/43/index.html>

ⁱⁱⁱ The information comes from the brochure of the Museum which is distributed to visitors.

^{iv} Source: <http://www.greeka.com/cyclades/syros/syros-museums.htm>

^v Source: <http://www.piop.gr/%2817FD8648B04027D077BEB999A1B995163CECB1EBD04C9D1A%29/PiopMuseum.asp?id=283&nt=18&Lang=2&MuseumID=277>

^{vi} Source: <http://www.oliveoilmuseums.gr/ecportal.asp?id=57&nt=18&lang=2>

^{vii} Source: <http://www.piop.gr/%2817FD8648B04027D077BEB999A1B995163CECB1EBD04C9D1A%29/PiopMuseum.asp?id=340&nt=18&Lang=2&MuseumID=274>

^{viii} Source: http://www.vagonetto.gr/english/index_eng.html

^{ix} Source: <http://www.piop.gr/%2817FD8648B04027D077BEB999A1B995163CECB1EBD04C9D1A%29/PiopMuseum.asp?id=342&nt=18&Lang=2&MuseumID=268>

^x Statistical data of the Department of Tourism Business Administration for the academic year 2006-2007. The data concern students who renewed their enrollment in the Department at the beginning of the academic year.

^{xi} The Greek Educational System consists of three successive levels: Primary, Secondary and Tertiary education level. Primary education level can be divided into Pre-school Education which is offered by kindergartens and Compulsory Primary Education which is offered by Primary schools. Secondary education level is available in two cycles: Compulsory Lower Level Secondary Education offered at Gymnasiums and Post-compulsory, Upper Secondary Education which is offered by the Unified Lyceums and Technical Vocational Educational Institutes. Tertiary education is divided into University education available from Universities and non-university education, which is offered by Higher Technological Educational Institutes and Higher Education Institutes. Postgraduate courses are also available at Tertiary education level. Source: National Center for Vocational Orientation, Available at <http://www.ekep.gr/english/education/main.asp> (accessed on 16 December 2007).

^{xii} The hotel started operating in 1996. The central building of the hotel was built in 1921 and was firstly used as a textile factory which stopped operating after the Second World War. Then it was used as a power plant until 1950 when it was converted into an ice factory up to 1960. The façade of the building was listed in 1985 as a monument of the industrial and architectural Greek tradition by the Greek Ministry of Culture.