The Rehabilitation of Historic Schools in Portugal

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Changes in Cultural Values

By

Sofia Aleixo

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Dedicated to my family.

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PREFACE

Despite the general recognition of the importance to preserve the historic built environment for the benefit of present and future generations, there is a lack of knowledge on the effects of architectural rehabilitation decisions on the cultural significance of historic buildings. The architectural heritage conservation literature has focused almost exclusively on providing intervention principles and guidelines, describing applied methodologies, and discussing predicted impacts of design on material values. This thesis argues that a focus on the actual effects is needed if the socio-cultural sustainability of historic building significance is to be achieved. Supported by an extensive literature review and informed by personal insights from the researcher's everyday practice, an adapted model of the Theory of Change based on Weiss (1995) was designed, providing a tool for the Evaluation of Rehabilitation Effects on Cultural Significance (ERECS).

Using a selection of six recently rehabilitated historic secondary schools in Portugal (*liceus*), this research investigated architectural decisions and their effects on the cultural values of this building typology for education, focusing on three objectives, corresponding to three stages of interventions: understanding the cultural significance before interventions, identifying the rehabilitation design strategies applied, and assessing the short-term effects of design decisions on the pre-existing cultural values. Stressing the role of stakeholders in rehabilitation processes, data were collected from the buildings and architectural projects, the decision-makers in the conservation process, and the school community.

Although confirming that the evaluation of the effects of architectural decisions on cultural values is a complex task, the findings demonstrate that these *liceus* have historical, architectural, and socio-cultural values, and whilst rehabilitation strategies did not value social values, material cultural values were generally considered and preserved, contributing to the enhancement of immaterial values. The implications of this theory-based and evidence-based research highlight the importance of evaluating actual effects after interventions for cultural heritage theory, architectural conservation practice and heritage management policy.

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ACRONYMS AND A NOTE ON TERMINOLOGY

AML:	Lisbon Municipality Archive
BSF:	Building Schools for the Future
CoE:	Council of Europe
DGEMN:	General-Directorate for National Buildings and Monuments
DGPC:	General-Directorate of Cultural Heritage
EIB:	European Investment Bank
EH:	English Heritage
EIA:	Environmental Impact Assessment
GCI:	Getty Conservation Institute
ICOMOS:	International Council of Monuments and Sites
ICT:	Information and Communication Technologies
IGESPAR:	Management Institute of Architectural and Archaeological Heritage
IHRU:	Institute for Housing and Urban Rehabilitation
IPA:	Information on Architectural Heritage (Portugal)
IPPAR:	Portuguese Institute of Architectural and Archaeological Heritage (1992-2007)
JCETS-MOP:	Board for the Construction of Technical and Secondary Schools within the Public Works Ministry
MIP-JAEES:	Administrative Board of the Loan for Secondary Education within the Ministry of Public Instruction
OECD/CELE:	Org. for Economic Co-operation Development/Centre Effective Learning Environments
PE:	Parque Escolar, EPE, corporation governed by public law, in charge of the management of the SMP
SIPA:	Architectural Heritage Information System (Portugal)
SMP:	(Secondary) Schools Modernization Programme
UNESCO:	United Nations Educational, Scientific, and Cultural Organisation
UIA:	International Union of Architects
WHC:	World Heritage Convention

Note: Throughout the thesis italics are used to mark non-English words, such as *liceus*, *Lycée, escaiola,* etc., and published materials/sources, such as the *Venice Charter*. Quotation marks are used to indicate citations and concepts, such as "cultural significance".

CHAPTER ONE

INTRODUCTION

Figure 1.1 *Liceu* Passos Manuel, Lisbon: work in progress (January, 9th 2010). Credits: Victor Mestre

1.1 Introduction

The main topic of this thesis is the significance of architectural heritage and the effect that rehabilitation interventions may have on cultural values. The effects of rehabilitation design decisions have been of great concern for conservation professionals for a long time, perhaps only officially acknowledged with the international adoption of the seminal *Athens Charter for the Restoration of Historic Monuments* (CIAM 1931) at the First International Congress of Architects and Technicians of Historic Monuments. By recognising that conservation project evaluation aims "to prevent mistakes" (Resolution 2), these professionals were expressing their concern for the impacts that their own conservation decisions could have on monuments' "character and historical values". Moreover, as historic monuments greatly express civilisation, their protection through conservation

was considered to be "one that interests the community of the states, which are wardens of civilisation" (CIAM 1931). Therefore, not only are governments called on to protect and preserve the values of cultural heritage in the present, for the benefits of future generations, the *Charter* further stresses the importance of education with regard to monuments, as respect and attachment of the peoples themselves are "the best guarantee in the matter of the preservation of monuments and works of art" (Conclusion VIIb). The relevance of this apparently old document relies on its contemporaneity as today the sustainability of architectural heritage still relies on governments' management actions, and in people's esteem and relationships with historic architecture.

The passage of time has been justifying these ideas. Following a traditional approach, management guidelines have firstly been issued to provide criteria for the preservation of cultural material values in conservation interventions, and more recently emphasis has been given to the participation and acknowledgment of people's feelings for and perceptions of architectural heritage. The evaluation of conservation projects has also gained support through tools to assess the predicted impact of interventions on cultural heritage values (e.g., Randall 2002). However, at the beginning of the twenty-first century, the "prevention of mistakes" has not yet been followed by a post-conservation evaluation practice to assess if "mistakes" concerning the "character and historical values" have in effect been avoided.

This thesis will discuss the currently available evaluation tools for heritage conservation, demonstrate the lack of a tool that effectively addresses this problem, and then design such a tool and test it by evaluating the results of conservation practice design decisions on architecture cultural values. Therefore, this chapter firstly outlines the research rationale and background (section 1.2), followed by the research aim and objectives (section 1.3). A summary of the research design (section 1.4) is then followed by a discussion of the significance and justification of the research (section 1.5). Finally, section 1.6 outlines the remaining thesis structure.

1.2 The focus on School Architecture Values

School architecture has been identified as a building typology in the literature since the late nineteenth century (Burke and Grosvenor 2008, Markus 1993, Robson 1877), and has encompassed a varied educational curriculum showcasing diverse architectural expressions, styles, construction

techniques and materials, reflecting a range of design contexts and construction periods (Becker, Tostões, and Wang 1998, Pevsner 1976, Alegre 2009, Moniz 2004, Beja et al. 1990). Some of these buildings for education now form part of our architectural heritage due to their historic and aesthetic values (Mestre and Aleixo 2011b, Déom 2008, Barata and Botas 2003, Harwood 2010, Alegre 2012a, Burke and Grosvenor 2008). Their significance in terms of educational heritage, which is generally echoed in contemporary architectural conservation recommendations, calls for their careful preservation and safeguarding (ICOMOS 1964, ICOMOS New Zealand 1992, UNESCO 1972a, Council of Europe 1985a, 1991, 1994, UNESCO 2004). However, educational space and functional requirements have changed over time and are now in need of attention, requiring contemporary design to accommodate physical, functional and environmental changes in the design of new facilities (Gislason 2010, Lackney 2001, Nair and Fielding 2005, Building Futures 2004, Dudek 2000, Tanner and Lackney 2006) and/or in the design for the rehabilitation, reuse and extension of historic schools (21st Century School Fund 2001, Beaumont and Pianca 2002, Beaumont 2003, English Heritage and DfES 2005, CEFPI 2005).

The reason for such recent and widespread interest in school architecture arises from a diverse range of public reforms in the educational sector. Educational reforms introduced a new understanding of education at the beginning of the twenty-first century, particularly in secondary education. These reforms took place simultaneously worldwide, and a new education paradigm brought several challenges for existing educational facilities (Jamieson et al. 2000, CEFPI 2005, Lawson 2000, Building Futures 2004), such as for example, the raising of compulsory secondary education to the age of 18, which requires more and larger facilities. However, one of the most important drivers for change was a shift in the teaching-learning process, moving the focus away from the traditional classroom to the wider school environment, which requires changes to existing school spaces and equipment (Heitor 2009). Various motives underlie this shift, with the chief driver of this change appearing to be the speed with which technological innovation has been changing our way of life. Having access to virtual information and having access to it everywhere have made the physical school environment seem redundant because access to information is no longer limited to the school's physical space (Kennedy et al. 2009). As a result, schools are now required to provide stimulating environments, adequate equipment, environmentally-friendly atmospheres and new amenities that promote higher enrolment numbers and capture students' enthusiasm for learning (Dudek 2000, OECD 2006, Nair 2001).

The need to recognise schools as multi-purpose learning centres open to local communities, and the importance of sustainable school management with a view to expanding compulsory education to better prepare young people for twenty-first-century challenges, were emphasised by the *Modernising School Education* agenda of the European Union's Lisbon Summit (2000). Concurrently, rapidly advancing global warming and the need to provide sustainable environments with reduced greenhouse gas emissions emphasise the case for existing buildings to be adapted and their embodied energy preserved (United Nations 1992, CABE 2005, Wood 2006, Orbaşli 2008, Mansfield 2011).

These sustainability indicators prompted several government initiatives aiming to provide new learning environments in old school buildings, for example, in England, Australia, the USA, and Scotland (The Scottish Government 2007, Hylton 2007, Royal Australian Institute of Architects 2004, English Heritage 2010). The momentum arising from a shared international interest in the topic provided an opportunity to learn through exchanges of information and best practice. Several governments have adopted new legislation on education and the educational environment; independent institutions have been established; and education ministries have been leading national modernisation programmes to facilitate the management of schools' physical networks and of government investment programmes. Examples of secondary school building programmes arising from these measures are *Building Schools for the Future* (BSF) in England (2005-2010), overseen by Partnerships for Schools (PfS), and the *Portuguese Schools Modernization Programme* (SMP), under the responsibility of Parque Escolar EPE (2007, ongoing). Although BSF contained no particular guidance for the preservation of existing buildings, in the SMP it formed one of the requirements of the international investment programme, providing an opportunity for the commissioning of several rehabilitation projects. The conservation of historic buildings and the design of contemporary schools have been, for the first time in Portugal, considered simultaneously in architectural practice on a national scale.

Worldwide academic and professional interest in the rehabilitation of public school buildings gained momentum at the beginning of the twenty-first century, contributing to the traditional conceptualisation of schools as an architectural typology (Martin 1952, Seaborne and Lowe 1977, Dudek 2000, Burke and Grosvenor 2008, Robson 1972 (1874), Clark and Seabourne 1995, Harwood 2010, Barnard 1854) and creating a new conceptual approach, considering schools as learning environments, which affect users'

performance, namely students' academic achievements (OECD 2009, Clark 2002, Schneider 2002, Al, Odaci, and Sagsöz 2011, Higgins et al. 2005).

A large number of publications in education and architecture journals (Al, Odaci, and Sagsöz 2011, Chiles 2003, Clark 2002), architecture magazines, books and monographs have increased the dissemination of information on historic school adaptations to contemporary educational needs, drawing on examples of best practice (Harwood 2010, Hertzberger 2009, Mestre and Aleixo 2011a). Evidence of growing public awareness of these issues is found in newspaper articles referencing public opinion on the refurbishment of former schools in different national contexts. Simultaneously, a significant increase in the amount of grey literature (Lawrence et al. 2014) on the topic, such as reports, conference proceedings and official documents not published commercially or scholarly, has been produced by institutions, non-governmental organisations and governments in a number of countries, but especially within the UK (for e.g. CABE 2009, 2010, 2006, English Heritage 2010, 2005, 2007, 2011b, English Heritage and DfES 2005, MORI 2003, PricewaterhouseCoopers 2008, 4Ps and PfS 2007), providing a rich group of resources for public policy and practice engagement. However, a significant lack of research regarding the impact of rehabilitation processes on the recognised cultural and social values of historic school buildings was identified.

The need to conserve buildings, whether schools or other types of buildings, arises from a change in the physical fabric of a building and/or its usage requirements (Brand 1997). The heritage conservation literature corroborates that buildings are conserved for reasons beyond the physical condition, stressing the importance of cultural values, including the aesthetic, historic, scientific, social or spiritual aspects (Avrami, Mason, and de la Torre 2000, Orbaşli 2008, ICOMOS Australia 2013). Methodologically, a values-based approach to architectural conservation requires objectivity in the assessment of values (Orbaşli 2008, Mason 2002, UNESCO 1972a), which has led to a hegemony of expert assessments of such projects, with the shortcoming of producing subjective assessments with a disproportionate focus on physical aspects. However, this method of identifying the significance of historic buildings is currently undergoing a theoretical shift aimed at maintaining and transmitting value-specific characteristics of cultural heritage to future generations (Council of Europe 2005).

Considering that the aim of architecture, and inherently of architectural conservation, is to provide healthy, safe, and aesthetically pleasing environments, which are suitable for a specific use and which meet the

living standards of contemporary life, it is vital to know people's expectations, ambitions and needs in the process of architectural conservation. Furthermore, when such processes are to take place within a historic building, the aim of conservation is to retain the place's cultural significance "as reliable evidence of the past" (Article 2 in ICOMOS 2002). Heritage's cultural significance, considering its tangible values such as townscape, landscape and architectural values (UNESCO 1972a) and intangible values such as meanings and associations (UNESCO 2003), needs to be acknowledged so such significance can be preserved. Intangible values rely on meanings and associations established between individuals and places, making public participation essential. Therefore, a holistic establishment of values requires the involvement of users and other stakeholders, whether this is in the construction of a new building or in the adaptation of an existing one, particularly in the case of school buildings (Sanoff 2008, Walden 2009, Lackney 2011).

To date, community participation in Portugal has been scarce in architectural conservation practice. Evidence from practice, personal and observed, suggests that the decision-making process in conservation interventions still very much follows traditional pathways, whereby the architect plays the major role in assessing a place's significance, relying on an individual methodology and ethics, as no guidance is set out to conduct an assessment. This perception of the architect being left alone in the "evaluation of the importance of the elements involved" (Article 11 in ICOMOS 1964) in architectural conservation interventions points to a discrepancy between theory and practice.

The importance of this topic is further emphasised by the *Faro Framework Convention on the Value of Cultural Heritage for Society* (Council of Europe 2005) which "put[s] people and human values at the centre of an enlarged cross-disciplinary concept of cultural heritage", recognising that the holistic understanding of cultural values involved in changes of the historic environment is a non-negotiable requirement, if respect for the integrity of cultural heritage and its sustainable use are to be guaranteed. As a result, an understanding of the role of cultural values in architectural conservation processes and its outcomes requires an assessment of current practice.

As a practitioner-architect, the researcher-architect was influenced by her own experience in conservation practice for more than two decades. However, it was her participation in the Schools Modernization Programme (SMP) in Portugal that triggered the interest in conducting the present

research and sustained her motivation throughout the study. This programme aimed to modernise 332 secondary schools by 2015 (Heitor et al. 2009), out of a total of 477 schools built from the end of the nineteenth-century onwards (Heitor 2008a, 28), including *liceus* buildings – a typology designed until 1974 for secondary education (academy-type schools).

Portuguese educational architecture of the twentieth century has been recognised in architecture monographs (Ordem dos Arquitectos 2006, Tostões 1995, Becker, Tostões, and Wang 1998, Tostões 2004a). Besides the studies conducted on primary schools built until the 1970s (Beja et al. 1990, 1996), one of the most recent studies focused on the *liceu* building, built between 1882 and 1978 (Alegre 2012a), and previous to this research, historians of education had already investigated the development of *liceus* through the study of their history, archives and memories, focusing on those built in the first half of the twentieth century (Marques 2003, Manique da Silva 2002, Moniz, 2007, Nóvoa and Santa-Clara 2003). The importance of Portuguese historic *liceus* is therefore undeniable.

Consequently, receiving an invitation to rehabilitate the oldest *liceu* in the country was considered to be an honour as the client, the Ministry of Education, was publicly recognising the quality of our past work in architectural heritage conservation, particularly in listed buildings. However, it also felt like an enormous responsibility; firstly, towards present and future generations of students, staff and teachers, who aspire to a comfortable and pleasant environment; secondly, towards past generations, the architects who designed the buildings and those who commissioned and built them, and the thousands of users who have learned, supervised and taught there, the memories of whom are a cultural value to be preserved; and thirdly, considering urban, architecture, engineering and education history which the office was being ethically committed to respect and to give continuity in time and place. Finally, it was a responsibility towards the local community, for which the historic *liceu* was a feature symbolically standing for education, an esteemed value, and which demanded attention in terms of its observable physical conditions so that a prestigious image could be returned to the public realm.

After this invitation, my office was commissioned to rehabilitate another *liceu*, originally designed 40 years later, in which the historic value was officially not recognised by the government as no proposal for listing existed, presumably because it belonged to the dictatorship period (1933-1974) – a style well expressed in public buildings' architecture all over the country. However, the ethical commitment and the above-mentioned

responsibilities were felt to be equally important here as, regardless of the more recent historic values, it preserved the same socio-cultural values and was one in a small group of 13 *liceus* designed and built before 1950. Finally, the last commission was to intervene in a pavilion-type school built in the 1990s, where historic value was not an issue. The school belonged to a group of the pavilion building type, which stands for 77% of the secondary school building stock, all built after 1970 (Heitor 2008a, 28). Again, the ethical position was the same, with the same responsibility felt towards the socio-cultural values in place. However, and in summary, considering that the level of ethical consciousness is the same, architectural design strategies were established differently, according to each case. Reflecting on these issues, a question was raised: when establishing rehabilitation design strategies for the interventions in historic buildings, which design principles were most used: architectural school design or architectural conservation design principles? Or both? Which guidance was most used in the establishment of design strategies? Was there a socio-cultural values-based approach in rehabilitation design?

After this period of annual commissions, as the works were being finished, an appropriation by the users was taking place. It was then felt that if participation had been a real objective, as disseminated, two results could have been achieved: some "mistakes" (CIAM 1931) could have been avoided and the "heritage awareness" (idem) would have been increased. Nevertheless, questions remained. Were there "character and historical values" (idem) ascribed by school users that were lost? After all, what was most valued by the users in their historic work environment? What do they value now, after rehabilitation? What degree of heritage awareness did the users have of historic schools, as their working environment? These questions posed by a novice architect-researcher required reflective thinking not just on architectural research but within empirical social research – a new field of academic knowledge for the researcher, being aware of its importance in rehabilitation processes.

The practitioner's interest in understanding more about "reflective practice" led her to find Schön's Model (Schön 1983), as had already occurred with architects in the UK, at the RIBA Research Symposium (Short 2008). In this model, reflection on the knowledge gained by practice experience, for example in the SMP, is contrasted with theoretical ideas, in this case, disseminated in conservation guidance documents. What was happening was that practice demonstrated that theoretical assumptions, for example about users' participation, were not in place in the conservation processes, which followed a traditional approach towards establishing a diagnosis for

problems found, such as material anomalies, services' obsolescence, and functional-spatial inadequacy. However, it should be made clear that this thesis does not aim to report on a personal perspective but rather to establish and support an argument through comparing and contrasting methods applied to other cases.

Therefore, and considering that it is important for a practitioner to address theory, to learn from others' experiences, and to return the produced knowledge to theory and to practice, this research set out to develop an assessment tool that would account for the inherent effects of design strategies on the sustainability of historic buildings' significance.

This thesis expresses an author's view from an international context, as the decision was made to conduct the research in England, away from the cultural Portuguese context, in order to study the topic from an external perspective, especially as the previous experience (at the time the only one known) of rehabilitation of historic schools, the *Building Schools for the Future* (BSF) programme, was considered to be a good precedent by Parque Escolar EPE (PE), a corporation governed by public law, in charge of the management of the SMP. By then, design and assessment tools have been set out in the UK by English Heritage, CABE and PfS among others, which consider the historic and cultural significance of these places. Meanwhile, other countries were found to be conducting rehabilitation interventions in historic schools too, such as Canada, Australia, and the USA, and disseminating their design principles, guidelines and strategies. Access to this previous knowledge was considered to be an opportunity for the researcher to conduct this study from the perspective of an international context.

The study of recently occurring interventions in Portuguese secondary schools under the SMP was found to be very stimulating, promising and rewarding: stimulating because of the intensity and variety of the buildings and architects working simultaneously from North to South towards the same objective of enhancing past educational environments for the benefit of present and future generations; promising due to the researcher's personal interest in providing her daughters and descendants with an exciting new learning environment, adapted to twenty-first-century educational requirements; and finally, rewarding due to the opportunity to participate in this national initiative by intervening in historic buildings. This opportunity to make a difference to the lives of around 1,500 users of this facility per day, and the responsibility to preserve historic *liceus* for future generations,

made reflection an imperative; lessons needed to be learnt and the new knowledge acquired needed to be useful.

Returning to study for a research degree after finishing an architecture course two decades before, was a challenge surpassed by the belief that only at this point could questions be asked and participants' answers be better understood, and therefore a contribution to architectural conservation practice could be achieved. Only at this stage, with the professional knowledge developed, could one's own assumptions and those of others be accepted while learning new skills and enhancing the capacity of practising "reflective thinking" (Powell 2008, 161).

Consequently, the development of the evaluation tool was definitely influenced by the fact that the researcher is a practitioner. The interpretivist approach used in rehabilitation practice was initially brought to the research. This position believes that one cannot separate oneself from what one knows, and therefore, the researcher's values are inherent in all phases of the research process, using previous knowledge to generate new knowledge. The particular research context and time, i.e., the reality, are the result of specific cultural and social settings, constructed through the meanings and understandings developed socially and experientially, for which the researcher sought the experiences, understandings and perceptions of individuals. Naturalistic research methods, such as interviewing, observation and analysis of existing texts, were designed to understand the reality, while practical experience helped in identifying the most useful variables for practitioners. Therefore, the review of the literature in conjunction with previous practice changed the researcher/architect's previous perspective on heritage's cultural significance during the research process. By addressing past practice experience, which continued while conducting this research, the reader is provided with background information so that the setting, the participants, and particularly my perspective and interpretation (Creswell 2009) of the architectural conservation effects on historic *liceus*' cultural values can be better understood.

1.3 The Objectives of the Research

In this thesis it is argued that architectural rehabilitation may contribute to the sustainability of the cultural significance of architectural heritage by preserving and enhancing cultural values when updating historic settings, buildings and contents while responding to functional and spatial needs that make them fit for use in the twenty-first century. Subsequently, effects of

physical change may contribute to enhance a sense of place, of continuity and of a community, which are key for the sustainability of cultural values of architectural heritage. Therefore, the overall aim of the research is to study the contribution which architectural rehabilitation design has made towards sustaining and contributing to cultural significance, focusing on historic school buildings in Portugal. To meet this aim, the following research objectives have been established:

Research Objective 1. To establish a theoretical framework on the cultural significance of a place, rehabilitation design strategies and cultural significance change;

Research Objective 2. To design a tool for architectural heritage rehabilitation practice which evaluates design effects on cultural significance;

Research Objective 3. To test the tool in rehabilitated historic *liceus* in Portugal; and

Research Objective 4. To draw conclusions on the effectiveness of the tool in identifying rehabilitation short-term effects on cultural significance.

1.4 Research Design

The research designed to answer the established research objectives adopted the interconnection of the three research components of a qualitative approach: philosophical worldviews, strategies of inquiry, and research methods (Creswell 2009). The philosophical approach of the research is supported by two theories: constructivist and interpretivist. In a constructivist approach, the researcher aims "to rely as much as possible on the participant's views of the situation being studied" (Creswell 2009, 8), and is therefore interested in understanding their description of events and of the cultural settings. It is the researcher's intent to "make sense of (or interpret) the meanings others have about the world" (idem, 8), for which an interpretivist analysis assumes that individuals seek to understand the reality around them by attributing meanings to objects and things (idem, 5), and therefore, meanings are the result of the context of each individual's life. As social concepts that arise from interaction within a community (Creswell 2009), meanings and values are shaped by culture, history, and social issues and therefore, the context of participants must be understood by visiting the places and gathering personal information (idem).

This approach leads to a qualitative strategy of inquiry, supported by multiple case studies enabling the researcher to explore the topic of cultural values in depth (Creswell 2009, Walliman 2011, Yin 2009). A case study strategy (Yin 2009, Walliman 2005) was adopted in this research using purposive sampling (Groat and Wang 2002, Walliman 2005). Case studies are bounded by time and activity, for which a variety of data collection procedures can be applied over a period of time. Gathering data on cultural heritage values required data collection tools to include open-ended questions thus allowing participants to interpret and ascribe meanings to places and events, and subsequently enabling the researcher to conduct interpretive analysis to generate new meaning(s) from data collected in the field. Case study strategies, such as within-case data analysis and cross-case data analysis validated evidence gathered from different sources (Miles and Huberman 1994). For example, the "case study timeline" synthesised data on the origin and development of historic *liceus*, identifying the unique patterns of each case and enabling cross comparison. Cross-case analysis used two cases from each significant period to identify similarities and differences, and finally, a triangulation approach to the data enabled the correlation of results.

The case studies were selected to provide a national scope and a combination of sources was used to gather a variety of data from each of the six selected cases. The scope and variety of data are summarised in the table below, as well as the analysis methods applied, including the preliminary data analysis strategies used – the summary techniques "Contact Record Form" and "Case Summary Form" (Miles and Huberman 1994) (see Table 1.1).

Generally, the present study consisted of three phases: desk-based research based on documents analysis; empirical research conducted in six historic *liceus* in Portugal, which have recently and simultaneously been rehabilitated under the same educational objectives; and finally, desk-based analysis and reflection on the findings, on which the writing was finalised. The review of the literature identified key concepts, debates, problems, and gaps in knowledge regarding the understanding of the design strategies of architectural conservation and their effects on historic buildings' cultural significance. It further guided the development of a preliminary conceptual framework from which to address change in cultural significance as the result of architectural conservation (Weiss 1995).