

EDITED BY

Gennaro Ferrara
Alfonso Morvillo



Training in Logistics and the Freight Transport Industry

The experience of the European
Project ADAPT-FIT

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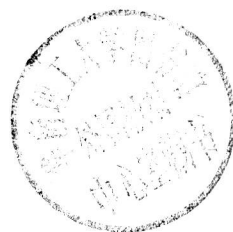
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TRAINING IN LOGISTICS AND THE FREIGHT TRANSPORT INDUSTRY

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Foreword

In this book we seek to illustrate the experience made in the past three years at the Institute for Service Industry Research (IRAT) of the National Research Council and University of Naples 'Parthenope', through an intensive training and research activity implemented within the Transnational Integrated Training Project (FIT-Formazione Integrata Transnazionale).

The FIT Project, funded by the European Programme ADAPT, is a joint action implemented by the academic, research and entrepreneurial world to boost the Transport and Logistic Industry in southern Italy. The aim of the project is to offer a solution to the rising needs of professionalism and flexibility in this sector through innovative, modular training.

This sector is undergoing innovative strategic, organisational and management processes, which are challenging the effectiveness of current skills from the decisional and operational standpoint. The extensive diffusion of Information and Communication Technology (ICT) has also introduced new factors of complexity. These new factors have a major impact on sectors with an entrepreneurial culture greatly affected by company size, by growing internationalisation and, in general, by the lack of stimuli from the external environment which drive the growth process.

The aims of this volume are:

- ◆ to illustrate the structural aspects of the logistics and transport industry in southern Italy with respect to increasing training needs;
- ◆ to illustrate an innovative methodological framework to manage training processes;
- ◆ to disseminate the outcome of the project in the logistics and transport industry, presenting its operational guidelines as 'best practices'.

The book consists of two parts. In the first part the structural features of the logistics and freight transport industry in Italy are illustrated and the resulting training needs are highlighted. In the second part training methodologies and process management are dealt with and FIT results are presented. The appendix includes a collection of Web-sites related to European training institutions performing in the reference sector.

In particular the first chapter illustrates the innovative elements which have characterised the sector in past years, with a specific focus on the Italian case. The ways in which the evolutionary dynamics of demand for logistics and transport services have affected supply structure and development strategies are highlighted. An analysis is also made of the impact generated by the supply of logistics and transport services on the value chain in manufacturing firms. At the end of this introductory chapter, the main implications for the training needs of the industry are outlined.

The second chapter focuses on the role of ICT on advanced logistics and supply chain management. The effects of these new technologies on the activities performed by logistics and transport service providers are also analysed with a specific view to the Italian case. In the final part some policy measures are suggested to train and

develop new professional skills. Using ICT has become a pre-requisite to perform effectively in the sector.

In the third chapter training services for the Italian industry are analysed. After outlining the recent main training strategies adopted by Italian public institutions, attention is focused on the new training provided to meet the present needs. An interesting and new scenario is outlined which shows how, despite the wide range of training services provided, additional efforts have to be made for constant adjustment to increasingly changing needs.

In the fourth chapter a detailed analysis is made of the logistics and transport service market in Italy – and specifically in southern Italy – aimed at understanding the specific context which is the target of the training activity. From the methodological standpoint, the analysis is based upon both bibliographic sources and an empirical survey conducted through administration of a questionnaire to a representative sample of firms.

The fifth chapter of the book, which concludes its first part, is focused on the relationships between cultural profiles of southern Italian entrepreneurs and dissemination of ICT in firms. A theoretical model is used which evaluates the impact of the various *cross-country*, *cross-industry* and *cross-firm* factors on ICT dissemination. The analysis highlights that the impact generated by cross-country and cross-firm factors is substantially higher than the impact generated by sector variables. This is an important result for the development of proper training policies as it highlights that their effectiveness is not substantially correlated to the sector involved.

In the sixth chapter, which opens the second part of the book, the basic guidelines of the training project are illustrated, highlighting its innovative elements, namely flexibility and personalisation of the individual training path.

Chapter 7 deals with the analysis of training needs, an analysis viewed both as a tool for labour and employment policies at European level and as a planning tool to support training operators. After illustrating the features of the different systems adopted in Europe to anticipate training needs, with specific reference to the Italian system, the chapter investigates the main approaches and tools being developed when designing a strategy to analyse training needs within the framework of a training project. Lastly the application of the training needs analysis, tested within the FIT Project, is suggested.

In chapter 8, mainly dealing with methodology, a theoretical analysis of the most widespread models for training evaluation is illustrated. This analysis sets out to identify the most suitable systemic model for the FIT characteristics. The tools of the identified model and the outcome of the evaluation process are then illustrated.

We feel several points are worth underlining. First, for reasons mainly of space, the subject matter has been somewhat restricted: the book should not be considered a manual on training in general or a global overview of training phases, given that the subject has already received extensive coverage in the literature. What we have sought to do is provide a significant contribution to elaborating a training approach for small and medium enterprises working in the logistics and freight transport sector, being fully aware that large players in the sector are able to assess their own training needs and choose the most suitable approaches.

We therefore overlooked some of the general aspects of training, and opted instead to cover aspects that are peculiar to training in the demand segment chosen. In effect,

this choice represents the book's innovation. In this respect, three distinct elements can be identified:

- ◆ application to the Transport and Logistics Industry of innovative methodology to analyse training needs, which also sets out the standard professional profiles of the industry (*Methodological innovation*);
- ◆ impact of research outcome on entrepreneurial culture and Information Technology diffusion in SMEs (*Knowledge*);
- ◆ guide to select Transport and Logistics Training Institutions through Web sites (*Working tool*).

The training-research initiative carried out within the target industry highlighted the profound differences existing in the sector in terms of culture, motivation to participate in training and training needs. This implies that training requires two different strategies: one strategy addressed to firms not yet aware of the importance of training (e.g. shipping agents, forwarders, etc.), and another strategy addressed to those firms which have already developed considerable interest and have already invested in training (shipping companies, road hauliers). The first strategy should aim to make operators aware of the strategic role played by training, providing them with 'information' rather than 'training'. The second strategy should aim to improve training methods and work on contents.

This book is mainly addressed to personnel managers in logistics and transport firms, and those working with European training and research institutions, as well as National and European Entrepreneur Associations. Our comments and analysis will be particularly relevant to trainers, training managers and all those involved with training in logistics and freight transport. This experience may be identified as an example of best practices in the training context, with significant elements concerning:

- ◆ strategies adopted to achieve objectives of employability, professionalism and partnership-building;
- ◆ the quality of in-house and external resources;
- ◆ Reproducibility and transferability of the project structure.

The aim of the project was to create proper conditions for job flexibility, in other words the capability of the labour force to perform different functions both within the same firm and in other firms of the logistics chain. Such an ambitious aim is of key importance given the far-reaching changes affecting the logistics and freight transport sector, especially in Italy where this process started later than in other countries.

To achieve this objective, we chose to adopt an adaptive project strategy, which consists in original ways to develop experience able to enhance the match between the professional skills supplied and the professional skills required. The strategy adopted is based on original approaches to training that aim to reconcile two contrasting needs: on the one hand, to fill the training gap emerging during the pre-training/orientation phase and, on the other, to allow for the low time availability on the part of participants who are generally employed in small firms. The adoption of a flexible modular system that allows personalisation of each training path is undoubtedly an innovative method, at least in the sector in question.

Implementation of the project strategy (research, orientation, training) was conceived in integrated fashion, thereby making the FIT project a 'research-intervention' programme rather than just a training course, with considerable impact on the context in question in terms of greater awareness of the importance of training in a sector where *learning by doing* remains the dominant approach for skills development.

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PART I

TRAINING IN LOGISTICS AND FREIGHT TRANSPORT: BACKGROUND

Chapter 1

Trends in Logistics and Freight Transport in Italy: Implications on Training Needs

Alfonso Morvillo

Introduction

The issues related to training in the transport industry should be supported by a thorough analysis of the strategic and innovative elements that have marked the evolution of freight transport. Since the demand for transport is of a derived type, structural modifications in the sector are influenced by significant changes which have affected the manufacturing and distribution processes.

The globalisation of sourcing and consumer markets, the decentralisation of production, the concentration of warehouses and distribution centres and just-in-time have made the economic system highly transport-intensive. Indeed, in the last few decades the role of transport in the context of production processes has grown considerably, above all in Western countries. More recently, in the light of innovations relating to the development of Information and Communication Technologies (ICT), the concept of transport has gone further in the widest sense of logistics.

Transport facilitates the flow of materials between diverse nodal points in the logistics cycle of the manufacturing firm, in three separate stages: inbound, internal and outbound. While on the one hand its economic importance is reduced because of lower costs and greater strategic weight is given to other logistics activities, on the other hand the impact of just-in-time has increased its importance.

Just-in-time forces companies to produce and deliver exclusively in 'response to demand', with the aim of reducing stocks and, hence, lead time along the entire logistics chain. To this end, timing in raw materials' supply for production purposes and the delivery of finished goods becomes fundamental. The time factor is crucial and, consequently, so is transport (de Langen, 1999). Reliability, flexibility and frequency are increasingly viewed as critical success factors in transport which, in turn, influences the quality of supply and production time, and also how the service is perceived by customers.

On the supply side, the transport system is becoming increasingly complex, with more and more agents and activities interacting to ensure the swift and efficient flow of freight. Within this context, what emerges is that the business philosophy adopted by firms on the demand side is also undergoing radical change. Traditionally, relations between supply and demand were steered by the concept of effectiveness,

and the objective of the transport operator was to manage freight handling according to the contractual terms (time delivery, costs, etc.). Today, there is greater complexity in the demand for transport, in the sense that logistics services other than transport are widely required. This has led to dramatic changes in the negotiations and contractual relations between shipper and carrier. Service efficiency, including all its components, is gaining ever-increasing significance.

The aim is therefore to offer a service which integrates the whole supply-production-distribution cycle by including support activities and managing the information flow, with a view to minimising costs in the logistics chain. Thus, the more complex the system becomes, the greater the need for transport operators who are professionally trained and are capable of understanding and managing the ever-changing demands of the market.

The Role of Logistics in the Transformation of Transport Business

The first logistics approaches were adopted by manufacturing and commercial firms of mass consumer goods, where logistics costs tended to have a high impact on total running costs. Subsequently, they were extended to other firms on the strength of the following factors (Ferrozzi *et al.*, 1985):

- ◆ a higher number of products and increased competition, leading to greater attention to consumer needs and the quality of service;
- ◆ globalisation of markets and decentralisation of production;
- ◆ stock reduction for just-in-time and gradual movement upstream of stocks, with a consequent increase in logistics problems;
- ◆ technological innovations in the field of ICT and transport which have lowered management costs of physical and information flows. Lower transport costs, together with stock reduction, have made the economic system progressively transport-intensive.

In the 1960s, as a result of the increased number of references and the fall in demand, company strategy focused on sales and on physical distribution. It was here that the conceptualisation of logistics began, though it was limited to the management of warehouses and deliveries to customers (outgoing transport). The crisis of the 1970s, which led to the rise in the cost of raw materials, highlighted the importance of procurements. Accordingly, the concept of logistics as a cross-function became increasingly significant in the search for efficiency, not only in distribution but also in procurements and production. The intense global competition of the 1980s forced companies to pursue the quality differential factor of products and services. In this respect, logistics moves from a tactical (cost optimisation) to a strategic role, adding value to products via service elements. Finally, from the 1990s onwards, the mission of companies has focused on the creation of value for the customers, giving rise to the need for the integration of logistics activities in a system designed to achieve both efficiency and effectiveness.

Logistics, therefore, has taken on a cross-functional role which, in making use of ICT, co-ordinates different company functions which until then were complementary