

Identification of Research Areas Within Reverse Logistics A Focus Group Technique Application

Isabel Fernández
University of Oviedo – Spain

■ ABSTRACT

Reverse Logistics may be considered as a relatively recent sub-field (most of references are dated from the 90's) within the more ample one, the Logistics. Focus group technique has been recognized as a suitable research technique when little is known. Using this technique two different meetings were organized with a two-fold purpose: on one hand, to serve as a counterpoint of the preceding literature review; on the other hand, to gather information about the most important emerging areas of Reverse Logistics. Participants were also different: one group consisted of researchers with academic background in general Logistics and from different European countries (Finland, Denmark, Sweden, United Kingdom, Germany and Spain). In the second one, the participants were managers with strong Reverse Logistics responsibility within the local Finnish enterprises where they work.

Ideas from both groups were intended to be confronted, given the different nature of source from where they stemmed, and to serve as initial point for future and larger research efforts.

Descriptors: Logistics, Research, Focus group

■ INTRODUCTION

Already in 1995, Mentzer & Kahn put forward that qualitative research did not seem very well accepted in the fields of logistics, operations research and material management. However, in recent years we have witnessed an increasing prominent role (or at least, a bigger demand of it) of research methods based on field study, in spite of the fact that these methods may, in some circles, still be contemplated with certain degree of suspicion. This is because some weaknesses have been unfairly imputed to them, such as the lack of both scientific rigor and objectivity, along with insufficient precision, perhaps given the small number of samples, nonreplicable efforts, etc. (Goodyear, 1990).

However, the growing demand for qualitative research does not respond to any whim but to an imposing reality, which can no longer be ignored. This reality is characterized, as pointed out by Lewis (1998), by the great number of changes which also both management methods and technology go through. On the other hand, these changes are taking place more and more often and at a higher speed. The reaction of the research community with the increasing interest in this kind of methods is nothing but the necessary answer from theoretical world to the ever-changing reality. The working information about this reality was about to be outdated in certain cases. It was urgent to collect new information, in order to update the old to fit the new circumstances, reducing the abyss between the theoretical and the practical world (Ellram, 1996). This was all the more the case since in the academic world the prior (theory) is supposed to explain the latter (praxis) and, therefore, both to develop in parallel.

Qualitative research plays an important role in accessing and generating discussions with key decision makers in organizations and with industry experts (Wright, 1996). That is the reason why this methodology serves at bringing closer theoreticians with practitioners, helping to create a body of knowledge based on empirical observations.

In line with McCutcheon & Meredith (1993, pp. 239) and Glaser & Strauss (1999), and against some research currents, we

agree that empirical field-based research is one of the main means of developing well-grounded theories and that it is a truly scientific research. One fact that backs this perspective is that the validity of field research has been made evident, during a long period of time, by being used both in social field applications (history, economics, etc.) and in other more practice-oriented fields (urban planning, management, etc.). On the other hand, the fact of being utilized as a valid and accepted research methodology in quite a number of theses, along with the strategy considerations in our actual situation, offer in our view enough guarantees to be considered as a instrument to be used in the present work.

Reverse logistics is a relatively new field. As Zeller & Carmines (1980) stated, when little is known about a particular problem (and this fully applies to reverse logistics), the focus group may be the appropriate research design to provide a basis for formulating research question and hypothesis. Quite many authors have pointed out the need for further research in this emerging field (Pohlen & Farris, 1992; Guide, Srivastava & Spencer, 1997; Johnson & Wang, 1995; Gungor & Gupta, 1999; among others). The focus group technique plays an important role in this kind of new investigation fields and that is the reason why it was chosen in this work.

The remaining of this paper is structured as follows: next section is devoted to give an introductory insight about the Focus Group methodology; then, how the technique was adapted to the special purposes of this research is explained; the results obtained from it are put forward followed, finally, by the conclusions drawn from the analysis.

■ FOCUS GROUP TECHNIQUE

Marketing arena seems to have been the natural field in which focus groups found most of its applications. Focus groups have appeared either as the topic of a great deal of marketing-practical oriented research articles (e.g. Cox, Higgenbotham & Burton, 1976; Welch, 1985; Morganosky & Cude, 2000), or the topic of a number of publications in journals of marketing nature (Calder, 1977; Fern, 1982; Goldman, 1962; Wells, 1974), as a method of gathering qualitative data. However, it has been virtually ignored in areas other than marketing (Byers & Wilcox, 1991). Only recently have researchers started to recognize and endorse the research potential of this method.

The focus group has the potential of providing a methodology of exploration, which allows participants to express their concerns within a context that is useful to the scientific community (Zeller & Carmines, 1980).

Three different approaches can be adopted when working with focus group, as listed by Calder (1977): the exploratory, the clinical and the phenomenological approach. The exploratory option may be used to identify and structure new research questions raised by the group as important points to be covered and even to derive a guideline for future research (Angell & Klassen, 1999). This approach is the one chosen in this work, as it is the intention of the author to expand the research in the reverse logistics field starting from the hints obtained from the Focus group. As Morgan (1997) has stated, the focus group interview can be part of an on-going, multi-method study when used in conjunction with individual interviews, surveys, experiments, or participant observations. Morgan & Spanish (1984, pp. 253) suggested that focus groups “can add to other qualitative or quantitative data collection strategies”.

■ FOCUS GROUP APPLICATION

The reason for using the Focus Group technique was to use it for orientating the research in the next stages, which could be conducted according to other methodologies, such as case study methodology, survey, etc. That choice would be made afterwards. Given that within reverse logistics the scope of aspects susceptible of deeper research are numerous, we tried to focus the attention, to obtain valid hints on the points of bigger interest, but also hints that were the outcome of knowledge and expertise of people with different perspectives and backgrounds. “Without a research focus, it is easy to become overwhelmed by the volume of data” (Eisenhardt, 1989, pp. 536.); there is an ever-present danger of “death by data asphyxiation” (Pettigrew, 1988). This need for concentrating efforts in one direction was what induced us to adopt, as a preliminary and necessary step, the organization of a focus group.

Two different focus groups were intended, being guided by a holistic aspiration. The traditional way of handling the organization of a focus group within the reverse logistics field should have been to gather a group of people, intimately related with the particular and specific topic. They could come from several areas: they could teach it in their Faculties or education centres, they could devote their research time to the topic, their working life could directly demand from them to take decisions and responsibilities within the companies where they perform their professional activity, etc.

However, sometimes the membership, for a major or minor period of time, to a certain field may limit or constraint our capacity to objectively judge a specific issue. Sometimes a strong specialization restrains the ability to analyse an issue from a broaden point of view.

Therefore, our idea was to complement the traditional way of composition of the group, with also gathering information from another, different cluster of people, who although may not be so deeply related to the reverse logistics in particular, were strongly involved in other Logistics fields, with which the reverse logistics is related, is influenced and influences irremediably and necessarily. For instance, how could the return of products take place from the point of consumption to the point of origin otherwise than by using transport means? Counting on highly qualified people in transportation (qualification objectively recognised according to their professional carrier in transport field) would entail the chance of qualitatively extending the possibilities of obtaining different views, which could enrich and expand the perspective of the results.

Once this decision was made, the practical composition of the groups had to be worked out. We thought of two different ideal types:

- On one hand, scholars, people typically from Universities and devoted to research. Their particular field, although it should be within Logistics field, could or could not coincide with the more specific one of the reverse logistics due to the newness of the field.
- On the other hand, we chose to listen to practitioners, people not linked with theoretical views but with the problems that they faced day after day, forcing them to take decisions. In this case, a more direct and deep relation to the reverse logistics was required.

At the same time, we thought that an international connection (e.g. within the European Union) was desirable, as the participants will be carriers of first hand local information, which doubtlessly will enrich the views of the other participants and thus, the outcome of the group. Therefore, the scholar group was given a pan-European nature, whereas the practitioners group was set to be local (some prior personal contact on the part of the University would simplify the access to the sites and people). In the tables 1 and 2, a brief description about the components of each group is given.

In both groups the monitor (a person external to the chosen group members) disposed of a guideline prepared in advance, where some key questions to be proposed for discussion were included, while the author acted as the observer and secretary. However, after putting the talks in motion, his attitude was intended to be unobtrusive, so that the group would develop the topic autonomously.

Only two participants were unable to attend to the meetings. The basic questions were then sent by e-mail with the request of having them answered for the Focus Group meeting, so that their opinion could be debated for the rest of the members. Another consideration to be made was the time limitations for the Focus Group (one day) to touch a broader range of topics. In spite of the limitations, valuable insight was obtained.

Table 1. Descriptive profile of the first group participants.

	Position	Country of research	Area of interest
Participant #1	Professor of Industrial Management	Finland	Quality Management, Product Development
Participant #2	Professor of Logistics	Germany	Production
Participant #3	Professor of Production Operations	Sweden	Business Processes, Logistics, Performance Measurement
Participant #4	Professor of Physical Distribution	Denmark	Logistics and Freight Transport
Participant #5	Professor of Engineering Logistics	United Kingdom	Engineering Logistics and Industrial Process Design
Participant #6	Assistant Professor of Operation Management and Logistics	Spain	Reverse Logistics, Costs
Participant #7	Professor of Industrial Management	Finland	Production Operations, Layout

Table 2. Descriptive profile of the second group participants.

	Position	Industry
Participant #1	Transport, LSCM and Commodity Manager	Electronic
Participant #2	Logistics Manager Assistant	Customer-made yachts
Participant #3	Materials and Logistics Manager	Chemical
Participant #4	Logistics Manager	Furniture and House Equipment
Participant #5	Logistics Director	Electronic
Participant #6	Distribution Manager	Food
Participant #7	Materials Manager	Pulp and Paper
Participant #8	Logistics and Distribution Manager	Beverage

Comment on the first focus group

In spite of the goodness inherent to the idea of joining experts from other logistics fields different to the specific one of the reverse logistics, the results drawn in this particular occasion were not too encouraging in the traditional sense of results expected from a Focus Group.

Although the evident willingness of the group was to actively contribute to this study, few of the professors had even previ-

ously heard about the term “reverse logistics” (probably because the specialization in their own research fields and areas of interest) and far less knew exactly what was implied.

One participant identified the meaning of the term with plain Recycling. When the meaning of the term was explained and the activities within its scope listed by the author (Repairing, remanufacturing, refurbishing, recycling, etc.), another participant, referring specifically to Repairing stated that such activity has been done for aeons and, therefore, he did not understand what was special now for dedicating such attention nowadays.

The positive result that stemmed from this experience was, from the author’s standpoint, to verify the fact that reverse logistics, in spite of the increasing attention received during the last decade, is a still an unknown term in many circles, not a familiar term, not even among closely related professionals.

Comment on the second focus group

Components of the second focus group were all involved with reverse logistics activities in their respective companies.

In the following the main results are commented:

Firstly, the focus group members were asked to rank a list of five aspects according to the perspective they thought their customers might have. Quality of service surfaced as the facet, which according to the participants’ opinion, customers would rate highest out of the whole list. This first feature was immediately followed (in this order of importance) by “speed of delivery” (which could be considered as an aspect within quality service, therefore a degree of consistency can be drawn from these two assessments), “variety of products”, “price” and finally, “the return policies”.

If we take into account that many clients could consider the policies implemented by the company regarding returns as an additional feature of the customer service, the abovementioned results pointed to the fact that companies have not yet internalised the advantages they can themselves get from an effective reverse logistics implementation. Some companies still seem to ignore that return policies might result in substantive means of improving the service they offer to their clients, getting in return bigger impact in customer loyalty and, consequently, in sales. By making it easier for customers to deal with returns, there is often more willingness to complete the initial sale (Daugherty, Myers & Richey, 2002; pp. 86). This link between the implemented return policies and benefits from customers’ performance would be enhanced, the more so when a liberal¹ and efficient return policy is backed by good capability of tracking the returned products. This, so-called “visibility” enables for accurate information at any time (e.g. Amazon.com’s “where’s my stuff” web-based tracking service). If customers may feel deceived for having got a commodity that must be returned, it will be advisable to avoid deteriorating the relationship even more by not providing good information about the status of the product.

A research attempt, in this case, could be devoted to confront the perceptions companies have about what consumers may expect, with the expectations from these consumers. The aim will be to detect misunderstandings between the parts involved in the service (the provider and the receiver). As a consequence of it, companies could more efficiently assign resources to the places that better please their customers.

In spite of the little importance given to the return policies in this first question (compared to the other four options), most of the practitioners in the meeting described the return policy in their companies as liberal. (Liberal policy means that the company has not set a lot of constraints for the returns to be send back.)

Secondly, they were asked for the attitude of companies regarding reverse logistics. In their view, there is a sort of inertia in the corporations. Even if they are nowadays engaged with reverse logistics operations, this is admitted mainly to be as a consequence of a reactive stance. Environmental legislations passed in recent years have shifted the responsibility on producers for taking back their products, putting pressure on them. Therefore, they have implemented reverse logistics procedures in order to adhere to the legal obligations rather than to adopt a proactive performance. Some other drivers were mentioned in the meeting, such as “customer requirement” or “to recapture value”, although these reasons were not as common among the

participants as the legislation was.

In the same vein, the lack of a specific resource allocation within the companies for reverse logistics purposes (except for one of the companies represented) was mentioned. This fact is another symptom of the passiveness stated in the previous paragraph. The fact of the responsibility of reverse logistics matters being spread out over several departments within the companies (purchasing, forward logistics group, after sales service, production department, etc.) enforces the same idea. It is probably important to say that the Logistics responsibility was also typically shared out among purchasing, import/export, shipping/receiving, operations, etc. Therefore it was not a wonder if reverse logistics was divided too.

The claimed lack of high corporate priority in this arena is another sign of indifferent attitude; in fact, not having specific resources devoted to reverse logistics activities enforces this lack of priority. This result is in line with the results obtained from a survey to 311 logistics managers by the reverse logistics Executive Council (Bayles, 2000:261) in which, the 14% of the managers interviewed considered the topic of “relative unimportance”, refusing therefore to reckon any important priority to it. They do not concede credit for reverse logistics efforts to translate into reduction of costs, increase in profitability or enhancement of relationships with other channel members (Daugherty *et al.*, 2002).

Another future research direction that rose from this Focus Group could investigate the reasons why there is this lack in corporate self-motivation or emphasis when it comes to face return products management. Possible hypothetical reasons include lack of information, lack of perceived or achievable economical advantages, high costs, organizational barriers, cultural constraints, sector of business, etc. The predominant view seems to be that reverse logistics poses a burden on the organization, generating moreover additional costs from the specific operations needed (collection, sorting, storage, etc.).

The question of costs was tackled next. A noticeable unanimity was observed regarding the lack of accurate information about reverse logistics costs. Koster, Vendel & de Brito (2001) detected the lack of attention paid in literature on financial matters regarding reverse logistics. Some participants underlined the fuzziness regarding the concept of reverse logistics itself and therefore the difficulty to assign costs to the right reverse activities. Some others drew the attention to the lack of a responsible-of-returns person, under whose authority the tasks, and so, the costs, could be concentrated or referred to. In Meyer’s article (1999), the president of one of the most important third-party providers of reverse logistics states how often in organizations everybody is involved in returns but nobody is in charge. The same idea holds in some more recent pieces of work (Richardson, 2001). Among the experts gathered in the Focus Group, the majority agreed that this assessment still reflected the actual situation, regardless of the sector.

Finally, in line with the assessment made by Goldsby & Closs (2000), some members agreed with the mystery in which remains about the true cost of reverse logistics, although this fact could maybe also be extended to other parts of the firms. Suffice it to say, that, of the companies represented by the managers taking part in the Focus Group, five did not use any cost accounting system for keeping track of costs generated by the reverse logistics activities, while the remaining three companies used an “approximate” method. None of them was recognized to be utilising, for instance, ABC.

Connected to the costs information was also the decision about whether to undertake the reverse logistics processes in-house or to outsource them. It is difficult to adopt any sound solution without being able to evaluate third party or in-house options for reverse logistics management on a costs information basis.

Consequently, it seems critical to find out what are the main obstacles for the companies to implement costing methods, which would enable managers to adopt different operational and even strategic decisions. Also the potential benefits derived from them influence the decisions. These benefits should also be categorized and analysed in further research. Only after knowing the financial implications of each activity, process, or decision, the company will be able to focus effectively on reducing costs and trying to increase benefits.

Information about tracking the items, their status, their value, their final point of consumption, etc. was considered another strong constraint in returns management. Although lack of control on these issues may pose a company with serious risks, most of the representatives confessed not to be using any technology (software or hardware) to assist in the returns handling

-only EDI and bar codes were used by two companies. On the other hand, there is not yet commercial software specific for reverse logistics available. The software some of the respondents had heard of was a proprietary software system, tailored for each of a very few companies that were having it in use.

Returns information is valuable both for the supply chain members and for their customers. It may help to reduce abuse from customers when companies adopt a more liberal return policy. Historical databases also allow for easy analyses on defects coming from the same suppliers, periods of the year in which returns take place more frequently (information that also helps to reduce forecast errors and it is also necessary for reducing uncertainty in inventory management) and so on. From the customer point of view, ICT produce more accurate order status knowledge at any time, considered by some as an additional customer service feature. Internet was a tool thought to be poorly utilized according to the experts, who manifested their trust on future increase of applications. Without this computerized information is difficult to get reliable indicators by means of which to detect easily which variables stand out and why. Another drawback pointed out was the use that could be given to this information for evaluating reverse logistics performance, so that measures could be taken against detected inefficiencies. No evaluation was made in most of the companies represented in the meeting, and the reduction in raw materials was the sole indicator followed in those where any evaluation attempt was made.

Generally it seems that software programming geared to tackle the returns should be encouraged as an important future issue. On the other hand, other technologies already available should also be promoted so that information flows could support reverse activities in a reliable way.

Although most of the representatives dealt with long return processing cycle times, only one thought shortening the entire life cycle of the product as a sound reason for being involved in reverse logistics practices.

Life Cycle Analysis is a powerful tool, which is also receiving increasing importance as a consequence of environmental concerns. However, its use is not yet largely spread. More research needs to be conducted to specifically address this issue in different sectors and industries.

Finally, when major challenges in performing reverse logistics activities were tackled, two main problems were mentioned: the difficulty in achieving economies of scale and forecasting the right quantities of returns and periods of time in which the returns will take place. Literature has already been sensitive to both problems (Guide, Jayaraman, Srivastava & Benton, 2000; Koster *et al.*, 2001).

Although the percentage of returns has been estimated in some studies (e.g. Rogers & Tibben-Lembke, 1999), on average, as 5% on the sales figure (their estimate "may be as high as 25-30% in some business segments, even up to 50 % in magazine publication"), companies represented in the Focus Group agreed in general upon far smaller rate. Therefore volumes may be insignificant for some businesses to reach economies of scale, although still a possible area where to cut costs down.

Some companies impose fees on customers, which may be a deterrent to get customers involved in returning products so that increased volumes could be reached. This situation did not apply to any of the companies that intervened in the group though. The quest for not achieving economies of scale should be imputed to other sources (possibly positive ones: i.e. good quality of products). All the same, the attention was driven to means by which economies of scale could be reached. Fostering collaboration among different partners in the chain was the straightforward option. Partnerships among firms within the same industry (as it already happens within the beverage industry in Finland, or Duales System Deutschland in Germany) or among firms whose products could be compatible of being managed together were some of the hints given. Centralized Return Centres run by several partners are an example of this collaboration.

Third party logistics providers are expected to more easily reach economies of scale as they may aggregate returns from several customers and gain superior expertise and information, which all may translate into lower costs (Razzaque & Sheng, 1998).

■ CONCLUSIONS

By means of the Focus Group technique, some experts explored the future research areas within the new field of reverse logistics. Although its growing importance is remarkable, its role does not yet seem to be fully recognized in certain circles. As a consequence, further research should be devoted to explore what is impeding reverse logistics knowledge and what are the mechanisms by means of which the technology spread could be accomplished most efficiently.

Involvement with reverse logistics practices also needs to be fostered and some relevant obstacles have also been revealed in this line. The urgency for methods, which provide with accurate costs information is evident, given the critical role that costs play when it comes to take decisions within companies. In spite of a lack of these methods, a strong feeling exists that reverse processes are costly, discouraging a proactive stance. Thus, it is necessary to find solutions that would ease the calculation of these costs (or, alternatively, ways to increase the revenues to offset the costs), allowing to reduce and to manage them. Neither do measures devoted to evaluate reverse logistics performance seem to be largely used. Generally, what is not measured, cannot be improved. Other shortcomings, as the lack of computer programming support or the life cycle analysis utilization, were made evident. Specific reverse logistics software or IT solutions would be valuable in understanding this cost information, although it would not be the only benefit. Eventually, it would also facilitate both the use of the LCA (making the follow-up of products and the forecasts of returns easier) and the increase in customer service (providing more accurate information).

Each of the points considered were posed along with proposals for future research areas, so that companies could be helped to overcome challenges of this emerging discipline.

■ REFERENCES

- Angell, L.C., & Klassen, R.D. (1999). Integrating environmental issues into the mainstream: an agenda for research in operations management. *Journal of Operations Management*, 17, 575-598.
- Axelrod, M. (1975). 10 essentials for good qualitative research. *Marketing News*, 8, 10-11.
- Byers, P.Y., & Wilcox, J.R. (1991). Focus group: A qualitative opportunity for researchers. *The Journal of Business Communication*, 28, 1, 63-78.
- Calder, B.J. (1977). Focus group and the nature of qualitative marketing research. *Journal of Marketing Research*, XIV, 353-364.
- Cox, K.K., Higgenbotham, J.B., & Burton, J. (1976). Applications of focus group interviews in marketing. *Journal of Marketing*, 40, 77-80.
- Daugherty, P.J., Myers, M.B., & Richey, R.G. (2002). Information support for reverse logistics: the influence of relationship commitment. *Journal of Business Logistics*, 23, 1, 85-106
- Eisenhardt, K.M. (1989). Building theories from Case Study Research. *Academy of Management Review*, 14, 4, 532-550.
- Ellram, L.M. (1996). The use of the case study method in logistics research. *Journal of Business Logistics*, 17, 2, 93-138.
- Fern, E.F. (1982). The use of focus groups for idea generation: The effects of group size, acquaintanceship, and moderator on response quantity and quality. *Journal of Marketing Research*, 19, 1-3.
- Goldman, A.E. (1962). The group depth interview. *Journal of Marketing*, 26, 61-68.
- Goldsby, T.J., & Closs, D.J. (2000). Using activity based costing to reengineer the reverse logistics channel. *International Journal of Physical Distribution and Logistics Management*, 30, 6, 500-514.
- Goodyear, M. (1990). Qualitative research. In Birn, R., Hague, P.; Valgelder, P. (Ed.). *A handbook of market research*, Kogan Page, London.
- Guide, D., Srivastava, R., & Spencer, M.S. (1997). An evaluation of capacity planning techniques in a remanufacturing environment. *International Journal of Production Research*, 35, 1, 67-82.
- Guide, D., Jayaraman, V., Srivastava, R., & Benton, W. (2000). Supply-chain management for recoverable manufacturing systems. *Interfaces*, 30, 3, 125-142.
- Gungor, A., & Gupta, S.M. (1999). Issues in environmentally conscious manufacturing and product recovery: A survey. *Computers & Industrial Engineering*, 36, 811-853.
- Johnson, M.R., & Wang, M.H. (1995). Planning product disassembly for material recovery opportunities. *International Journal*

- of Production Research, 33, 1, 3119-3142.
- Koster, R.B.M., Vendel, M., & de Brito, M.P. (2001). How to organise return handling: an exploratory study with nine retailer warehouses. ERIM report series Research in Management.
- Lederman, L.C. (1989). Assessing educational effectiveness: the focus group interview as a technique for data collection, Speech Communication Association, San Francisco, CA.
- Lewis, D. (1998). Iterative triangulations: A theory development process using case studies. Journal of Operations Management, 16, 455-469.
- McCutcheon, D.M., & Meredith, J.R. (1993). Conducting case study research in operations management. Journal of Operations Management, 11, 239-256.
- Mentzer, J.T., & Kahn, K.B. (1995). A framework of logistics research. Journal of Business Logistics, 16, 1, 231-250.
- Meyer H. (1999). Many happy returns. The Journal of Business Strategy, 20, 4, 27-31.
- Morgan, D.L. (1988). Focus group as a qualitative research. Beverly Hills: Sage Publications, Inc.
- Morgan, D.L., & Spanish, M.T. (1984). Focus groups: a new tool for qualitative research. Qualitative Sociology, 3, 253-270.
- Morganosky, M.A., & Cude, B.J. (2000). Large format retailing in the US: a consumer experience perspective. Journal of Retailing and Consumer Services, 7, 4, 215-222.
- Pettigrew, A. (1988). Longitudinal field research on change: Theory and practice. National Science Foundation Conference on Logitudinal Research. Methods in Organizations. Austin.
- Pohlen, T.L., & Farris II, M.T. (1992). Reverse logistics in plastics recycling. International Journal of Physical Distribution & Logistics Management, 22, 7, 35-47.
- Richardson, H.L. (2001). Logistics in reverse. Industry Week/IW, 250, 6, 37-39.
- Rogers, D.S., & Tibben-Lembke, R.S. (1999). Going backwards: reverse logistics trends and practices. Reverse Logistics Executive Council, Pittsburgh, P.A.
- Welch, J.L. (1985). Researching marketing problems and opportunities with focus groups. Industrial Marketing Management, 14, 4, 245-253.
- Wells, W.D. (1974). Group Interviewing. Handbook of Marketing Research. McGrawHill Book Co. Inc.
- Wright, L. (1996). Exploring the in-depth interview as a qualitative research technique with American and Japanese Firms. Marketing Intelligence & Planning, 14, 6, 59-65.
- Zeller, R.A., & Carmines, E. (1980). Measurement in the Social Sciences: The Link Between Theory and Data. Cambridge: Cambridge University.

■ BIOGRAPHICAL SKETCH

Isabel Fernández has been working for the University of Oviedo (Spain), Department of Business Administration, since 1997 up to now, mainly teaching Logistics and Production Organization, except for over one year, time when she worked as a Senior Lecturer in the Faculty of Management in the University of Vaasa (Finland), giving courses on the same topics. She is MBA and her PhD is on Reverse Logistics, field in which she is actually devoting her current research, along with other areas of interests, such as, Supply Chain Management or Costs Analysis. During her academic life she has also participated in several projects focused on Logistics and Quality, and has attended over 50 national and international conferences. Apart from her academic life, she has working experience in the Basque Government, private company and other teaching institutions, both in Spain and England.