# THE OBJECT AND THE NATURE OF SERVICE SPECIFICATIONS

Sofia Pinto[a] [1] and Robert Johnston[b]
Warwick Business School
University of Warwick, UK

[a] Warwick Business School, UK and Portuguese Catholic University, Portugal
[b] Warwick Business School, University of Warwick, UK

## ABSTRACT

Specifications are an instrument to make service operations reliable, consistent and replicable. In the service context little has been researched regarding the specification of the service experience, its nature and its effective control. This paper summarises the existent literature on service specifications and its control, and then presents the results of case research which explores the object and nature of service specifications in contexts of high intangibility and interaction. It analyses and discusses the empirical findings in face of the existent theory and it highlights some contributions to practitioners, and academics in the service management field.

## INTRODUCTION

Specifications are an instrument of looking for ways to make operations reliable, consistent, and replicable at a local or global level (Bitran and Pedrosa, 1998). Without specifications and standards customers might experience both good and poor service from one provider on different days, at the same or at a different location (Berkley and Gupta, 1995). As businesses expand domestically or internationally, reproducibility of the service concept becomes crucial (McLaughlin and Fitzsimmons, 1996) in order to get consistency and ensuring quality, and specifications enable this replicability of the processes.

One key role for service operations managers is to shape customer and market requirements into a service specification. The service specification not only creates a standard or target for quality control but also helps determine the operational resources needed and supports the planning and control of the delivery of the service. Despite its importance there is limited literature on the nature, development and use of the notion of a 'service specification', particularly in the contexts of high intangibility and interaction.

Take the example of the check in at the airport. Apparently the specifications are simple and explicit. All the information needed is already in the system. The employee just needs to check that information, to weight luggage and to label it, and to issue the boarding pass. But, the check in process is more than an action of processing luggage and passengers, it is also a service experience (Pine and Gilmore, 1998; Smith and Wheeler, 2002; Shaw and Ivens, 2002). Regarding the specific service experience several questions emerge. How is the employee supposed to interact with the passenger? What amount of talk is s/he supposed to do? How, and to what extent, is s/he supposed, in order to detect problems, to observe the passenger or ask him/her questions? How can s/he ask the passenger for ID, details of hand luggage, or other particularities of the journey? And in the case of any irregularity, what

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amount of detail is required and how is s/he supposed to tell to the passenger? Furthermore, and considering all these questions how can the service manager ensure that the right things are both done and said, consistently?

This paper presents a research of service specifications in the context of high intangibility and high interaction services. This research seeks to explore and describe the object and nature of service specifications with the aim of supporting service managers in their task of making the service processes more reliable, consistent and replicable.

The paper is structured in four sections. In the first one, a brief literature review on specifications and control is presented. In the second one, the methodology used in the study is outlined, and after, in the third, the empirical case of a Portuguese airline company is introduced and discussed. In the fourth section of the paper the main conclusions and further research are detailed.

## SERVICE SPECIFICATIONS AND CONTROL

### Service specifications

A specification is the standard for the characteristics of a product or service. It may consist of pictorial or graphical information (Slack, Chambers, and Johnston, 2001), a written description, a drawing, a photograph, a physical sample, an oral instruction or a hazy memory (Juran and Gryna, 1988). A product specification might consist of attributes of size, form, finish, taste, dimensions, tolerances, materials, operational characteristics, and safety features, whereas process specifications might include the types of equipment, tools and facilities to be used in production (Evans and Lindsay, 2002). A service specification might entail a process map (Kingman-Brundage, 1992) or a script (Tansik and Smith, 2000).

It would appear that the object of specifications can be the output (Evans and Lindsay, 2002) or the concept and its package (Slack *et al.*, 2001), as well as the process which delivers it (system and components) (Bitran and Pedrosa, 1998; Slack *et al.*, 2001; Evans and Lindsay, 2002). Specifications can assume the nature of written descriptions, drawings or any pictorial or graphical information, photographs, physical samplings or even oral instructions. Table 1 summarises the existent knowledge in the OM and SM field on specifications regarding the object, the detail and the nature of specifications.

Some authors argue that certain service characteristics create some difficulty in defining and measuring service specifications (Hill, 2000; Evans and Lindsay, 2002). These service characteristics are: (i) the customer presence in the service process; (ii) the simultaneity of the process; (iii) and the intangibility of the service itself.

Table 1 - The nature and object of specifications

| | | Object | Detail | Nature |
|---|---|---|---|---|
| Outcome | | Attributes of size, form, finish, taste, dimensions, tolerances, materials, operational characteristics, safety features (Evans and Lindsay, 2002) | Standard for the characteristics and tolerances allowed | Written description, drawing, photograph, physical sample, oral instruction, hazy memory (Juran and Gryna, 1988) |
| Process | Delivery system / equipment | Types of equipment, tools and facilities (Evans and Lindsay, 2002) | How to use facilities, equipment, materials. The flow of materials, people and information | |
| | Employees / managers | Uniforms and appearance Behaviour | Behaviour details | |

The customer presence in the service process requires attention to the physical surroundings of the service facility – the interface -, which is not so important in the manufacturing case. In the check in process, for example, the customer's perception of the service can be influenced by layout, noise, and space and decoration of the facilities. The presence in the interface area also enables passengers to play an active role in the process (Fitzsimmons and Fitzsimmons, 2001) (e.g. self check in). Therefore, it seems that the presence of the customer in the service delivery system can have implications on the number of issues that have to be specified (i.e. on the object of the specifications), but also on the nature of some of the elements that are specified (e.g., how the customers participate in the process, where and when).

Simultaneity means that production and consumption are coincident in the interface, the place where the customer is physically present. There is a moment, or a period of time, when the provider and the customer are coupled in the process (Chase and Tansik, 1983; Shostack, 1984; Hill, 2000). At that moment, interaction can take place between different elements, specifically: the service delivery process, the technology or the premises, the employees or the managers, and the other customers (Teboul, 1991). The interaction and simultaneity place two difficulties. One is the heterogeneity of the service offer (Fitzsimmons and Fitzsimmons, 2001) with implications on the output and on the process definition. And another difficulty is that the design of one component or element generally constraints the design of others (Bitran and Pedrosa, 1998). In our example of the check in process, the possible interaction between different customers and/or employees can influence their perception of the service and their participation in the service. What other passengers say, the noise they do, or just their appearance, or even the appearance or the interaction of the employees can shape the perception of the service. Therefore, simultaneity seems to have an influence on the objects, detail and nature of specifications.

The intangibility of services determines that its output, as it is difficult to demonstrate, is intrinsically less defined (Evans and Lindsay, 2002). The existence of attributes which are roughly defined and non numerical constitute another difficulty as trade-offs between variables are difficult to make (Bitran and Pedrosa, 1998). Thus, the degree of intangibility of the service offer can have an influence on the object, nature and control of specifications.

Service control

Control is the task of ensuring that activities produce the desired results. It includes the tasks of monitoring activities and its outcome, reviewing feedback information about that outcome, and when necessary taking the corrective action or providing the specific reward (Katz and Kahn, 1966; Reeves and Woodward, 1970). Control, in this general assertion, has a twofold implication: (i) control cannot be isolated from goals, and from the object of control; (ii) control is a process of monitoring and comparing an object to a pre-specified goal.

Control cannot be isolated from goals, i.e. from the setting of conditions which govern the form of control to be used. It is the specification of what can be observed, counted, measured or monitored. This prerequisite of control (the specification) specifies the reliability and validity with which the comparisons should be made (Ouchi, 1977). In addition, control refers to the process of evaluating and monitoring behaviour and outputs (Ouchi, 1977). This is the process of comparing it with the standard previously specified, and providing rewards and adjustments accordingly.

Specifications can relate to the inputs, to the process or to the outcome of a service delivery. Regarding inputs and behaviour or actions, it seems that specifications can be explicitly defined by managers or just implicitly delineated by the supervisors of the processes, with no implication in loss of control. Moreover, there may be a danger associated with explicitness and with quantification that is to emphasise what apparently is 'better controls' when in practice results in loss of control (Drucker, 1998).

The objects of control, as presented here, are not mutually exclusive. The use of output control at the organisational level does not sacrifices the use of behaviour control at the subunit level. Instead they complement each other in the information they provide to managers and designers of processes. In fact, the use of output measures usually results from the demand of quantifiable and simple measures, paradoxically in face of complex interdependence and lack of expertise, because they are transmitted along the hierarchy with little loss. As such, output control is more efficient to serve the control needs of the company as a whole (Ouchi and Maguire, 1975; Ouchi, 1978).

Behaviour control is responsive to the particular needs of the task and to the abilities of the individual manager (Ouchi and Maguire, 1975), focusing on the actions of the people and on the norms of the company (Merchant, 1998), and as such it is effective at the sub-unit or process level (Ouchi and Maguire, 1975). Behaviour control, enables the direction of the subordinates by the manager, but in a such subtle and subjective process that it is of no use for comparing performance between the many and diverse sub-units of a big company (Ouchi and Maguire, 1975), as it is determined by particular and local conditions, it shows no consistency along subunits and levels of the hierarchy (Ouchi, 1978).

In summary, it appears that in services control can be directed to behaviour or actions, to the outputs and to the inputs, and that any of those objects of control can be implicitly specified. Behaviour control is possible when there is some knowledge of the delivery process (e.g. in result of the routine nature of the tasks), and it tends to rely on close (direct) supervision, mutual adjustment and standardisation of skills. Output control is possible when there is some availability of output measures, and tends to depend on the standardisation of output and of skills. Input control tends to be exercised when output control and behaviour control are difficult to implement.

From the literature review on service specifications and its control, it can be summarised that:

- Specifications are something more or less explicit (formal), which defines the output, and/or the process, and/or the inputs. No detail was found regarding the specification of inputs (its detail and nature);
- The customer role in the process is mentioned as something needed to be specified, but no detail was found in the literature.
- Intangible elements are difficult to define and to control, because they are difficult to measure;
- The problem of measurability is related to the ambiguity of goals and to the absence/scarcity of knowledge about the impact of management interventions. As such some judgmental intervention (e.g. by hierarchy) can sometimes overcome the problem of measurability;
- The situation in which the high intangibility of the process determines the impossibility or undesirability to define specifications the control is done over the results (the outcome);
- Control can be either implicit or explicit over implicit or explicit specifications;
- The control possibilities depend on the measurability of the outcome, on the ambiguity of the goals, and on some organizational and process characteristics (e.g. size of the organization; routine nature of the process), and so appear to be related to the nature of the specifications;

Table 2 synthesises the existent knowledge on service specifications in the operations management, the service management and the organisational behaviour fields of knowledge.

Table 2 – The extant knowledge on service specifications

| | | Object | Detail | Nature |
|---|---|---|---|---|
| Input | | No details in the literature | | No details in the literature |
| Outcome | | Attributes of size, form, finish, taste, dimensions, tolerances, materials, operational characteristics, safety features (Evans and Lindsay, 2002) | Standard for the characteristics and tolerances allowed | Written description, drawing, photograph, physical sample, oral instruction, hazy memory (Juran and Gryna, 1988) |
| Process | Delivery system/ equipment | Types of equipment, tools and facilities (Evans and Lindsay, 2002) | How to use facilities, equipment, materials. The flow of materials, people and information | |
| | Employees/ managers | Uniforms and appearance Behaviour | Behaviour details | |
| | Customer | No details in the literature | The role of the customer in the process | No details in the literature |

## METHODOLOGY

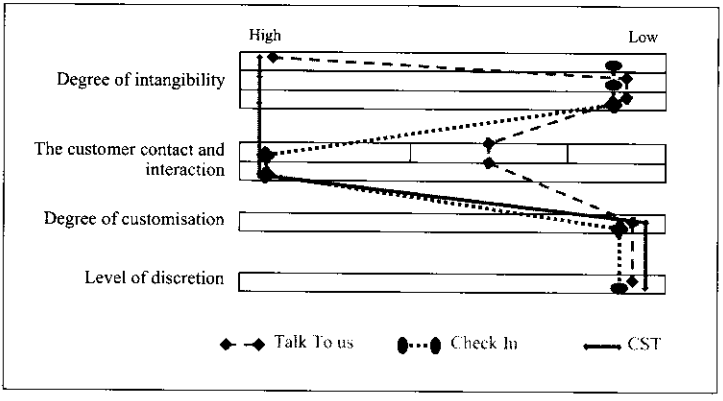
The study of service specifications in contexts of high intangibility and interaction progressed with a case study (Eisenhardt, 1989; Yin, 1994) aiming to explore the object and nature of service specifications grounded in empirical data (Glaser and Strauss, 1967). This research investigated multiple processes at a single case site, TAP Air Portugal.TAP Air Portugal is a Portuguese company operating in the airline industry since 1945. TAP is structured in three strategic business units: the ground handling business unit; the air transport business unit; and the engineering and maintenance business unit.

The aim of the study is to get a better understanding of the specification and control of processes where the customer interaction is strong, and so only passenger services of the ground handling business unit were analysed, specifically: the check in process, the customer service team and the TAP complaint service named 'talk to us'. Examples of other service processes rendered by the same business unit are: boarding and disembarking, special assistances (e.g. to unaccompanied minors or to wheelchair users), lost and found, navigator lounge and customer service.

Regarding each process data was collected from interviewing people in different hierarchical levels and functional areas, from analysing documents, and from observation. The collected data was then codified and reduced to new displays and diagrams, which were used to illustrate the descriptions of the processes (Miles and Huberman, 1994). A cross process analysis was carried out contrasting diagrams and displays from the three processes considering their specific characteristics and contexts.

Diagram 1 depicts the analysed processes in terms of their relative position regarding some service characteristics, namely: intangibility (Laroche *et al.*, 2001); customer contact and interaction (Chase, 1978; Wemmerlov, 1990; Silvestro *et al.*, 1992); customisation (Silvestro *et al.*, 1992); and discretion (Silvestro *et al.*, 1992; Collier and Meyer, 1998). Diagram 1 highlights that all the three processes analysed in the TAP case can be considered as having similar degrees of customisation and discretion, and that they contrast regarding the degrees of intangibility, and customer contact and interaction.

Diagram 1 – The processes characteristics



## RESULTS AND DISCUSSION

TAP processes use both explicit and implicit specifications. In some situations people perform actions as detailed in the manuals of procedures or in the training manuals (e.g. at the check in), whereas in other situations, as carrying out an investigation of a complaint, for example, people use the sequence of steps they believe it is best based on what is orally conveyed in weekly meetings and by team work (e.g. in the 'talk to us' process).

Explicit specifications appear to be monitored both with implicit and explicit forms of control. The data collected has shown that training, coaching, and direct supervision (through meetings, and recruitment and selection, for example) are used to control actions against specifications as traditional explicit evaluations were used to. The control exercised through training, coaching and direct supervision appears to be more implicit when compared to other OM traditional tools of control (as explicit measures or statistical process control).

Implicit specifications tend to be related to the definition of the employee behaviour during the process, and so can probably exist in all service processes with high customer/provider interaction. Implicit specifications are communicated through oral instructions, coaching, and selection criteria. Apparently the identification of these specifications is clear by analysing its control, as they can be defined and refined with control. For example, the customer service team is continuously learning with the team leader how to interact with the passenger and help solve his problems. And this is done through coaching. The team leader always takes one element of the CST with him when helping a customer. Therefore, these implicit specifications seem to be tacitly defined, and appear to be controlled through direct supervision, and standardisation of skills, both through selection and internal training.

We further observed that implicit specifications appear to be only implicitly controlled. It was frequently mentioned that the control of tacit specifications is made possible by experience on the job. By interacting with the passenger, you learn how to do it, and the experience of multiple situations of interaction, enables you to understand the detail and to see if others are doing it properly. So, it appears that cumulative practical knowledge facilitates the control of implicit specifications in what ends to be tacit control. Though experience was repeatedly indicated as important, it was most of the times considered along with the employee innate (e.g., naturally customer orientation, sympathy) or educated characteristics (e.g., education, posture). As such, experience appears to enhance the articulation of the tacit specifications, facilitating the use of implicit control and the definition of tacit service specifications. 'Implicit' in this use, seems to imply something that can be in several cases indirectly articulated through control (e.g. in the selection criteria).

Table 3 shows the rationale of control over the different implicit specifications. Tacit specifications appear to be controlled through direct supervision, which requires physical presence, or through selection and training which demand for the articulation of selection criteria or of the contents of training. This articulation is not necessary when all those activities (selection, training, execution, control) are carried out by the same person. Therefore, tacit specifications do not mean loose control, but the need of having small working teams, and good coordination among the diverse teams in the case of big process units.

Table 3 – The control of implicit specifications

| Tacit specification | Control |
|---|---|
| Oral instruction | Direct supervision (being there observing) |
| Selection criteria | Explicitly defining criteria |
| Coaching | Direct supervision (serve as model, be there along with) |
| Training | Explicitly choosing the examples and the methods |

Table 4 synthesises the findings of the TAP case regarding the categories resulted from the literature review. It is interesting to note that empirical data allowed the understanding of what was lacking in the literature review and the adding up of some details, specifically that:

Table 4 – The empirical knowledge on service specifications

| | Specifications | | |
|---|---|---|---|
| Object | Detail | Nature | Moment of control |
| Outcome | Standardisation of steps and/or outcome defined in the system (equipment) | Written | During and end of process |
| | Good interaction | Oral instruction; Direct supervision; Selection; Training; Tacit | Before beginning (inputs) or during the process |
| Process | The use of a specific equipment or sequence of steps | Written | During and end of process |
| | Behaviour | Oral instruction; Direct supervision Selection; Training; Tacit | Before and during the process |
| | Customer participation | No data available | No data available |
| Inputs | Selection criteria, training methods and agenda | Written, oral, tacit | Before beginning the process |

- the specification of the service outcome can include less tangible elements, such as 'a good interaction', 'a satisfied customer' or a 'successful experience';
- the specification of behaviour, either regarding the outcome or for the process, appears to assume the nature of oral instructions communicated through direct supervision, or during training, or even assured through selection;
- the specification of behaviour and interaction tends to be implicit;
- implicit specifications appear to assume the nature of oral instructions or selection criteria, controlled and specified by standardisation of skills and direct supervision;
- the control of implicit specifications tends to be exercised before the process begins, through the specification of inputs;
- the customer participation in service processes with high interaction continues to be kept out of the design of the process and of the control of the delivery.

## CONCLUSIONS

The preliminary findings of this research of service specifications in the contexts of high intangibility and interaction bring to light the nature of implicit specifications and of implicit

control, and the objects which tend to be implicitly specified. The study also clarifies the use and control of explicit specifications in service processes.

This research draws managers' attention to the importance of planning in advance the service delivery regarding its inputs, process details and outcome, and of deciding the control system accordingly. The design of the service delivery will include detail of the innate and educated employee characteristics suitable for the customer interaction, the training contents and agenda that fit the goals of the company, and the organisation structure that enables the appropriate learning and control of the process. The planning of the operational control system will necessarily be more intricate with human resources management, by the need of considering small working teams, specific selection criteria and adequate and frequent training programs.

These findings will impact as well on the teaching of service operations. It seems that the planning and control of service operations highly intangible and with high customer interaction, specifically in high volume deliveries, requires the inclusiveness of different approaches and tools, usually not considered in the traditional teaching of operations management.

The next stage of the research will replicate this study in another company providing the same services in the same context (country, location, to the same clients) in order to assess the present findings, and to explore the existence of variables left out of this study. The new case will provide a stronger empirical ground for this developing theory.

Further research is needed to explore and test the existence of a relationship between the nature of service specifications and the size of the organisation, particularly any difficulty in using and controlling some sort of specifications (e.g. behaviour specifications). Such a study can challenge the existent service classifications and typologies.

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