

EXPLORATORY STUDY OF SATISFACTION AND PERCEIVED QUALITY APPLIED TO E-LEARNING

SUMMARY

An exploratory empirical survey was taken to identify the quality aspects perceived to be the most important in the evaluation of e-learning.

One of the principal contributions of this exploratory study is the comparison of the results to the dimensions developed by Parasuraman, Zeithaml and Berry (1988) in their scale for measuring consumer perception of service quality. Our results show that these dimensions of the perceived service quality can also be applied to e-learning.

The various elements on which are based the expectations of e-learning students are also those on which satisfaction is based, except for the relational and human aspects which appear only at the time of formation of satisfaction.

Keywords: online learning; satisfaction and perceived quality; e-learning students

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SATISFACTION AND PERCEIVED QUALITY IN APPLICATION TO E-LEARNING: AN EXPLORATORY STUDY

INTRODUCTION

Distance learning is a significant field that upsets the traditional designs of training process at the time when the problems of quality become extensive within the framework of teaching. There is a real consensus today on the importance of quality assurance in training, even if in practice, certain disparities remain. Indeed, the traditional design wants that, the problems of quality, be discussed between the pupils and the teachers or tutors, but the increasing number of pupils makes this task difficult and involves the need for a greater formalization of the procedures of quality assurance. That is all the more necessary within the framework of distance learning where there are less direct contacts between learners and tutors. More and more, school fees are being paid by the pupils themselves or their employers who are considered as "customers". Under this pressure, educational systems want to know the aspects on which learners base their evaluation of the service offered and their attitudes towards the training. That is why they allocate much more time and resources to measure and improve quality of their offer of formation. Indeed, the perceived quality and satisfaction studies offer chains of positive consequences validated by various theoretical and empirical researches: this is the case within the achievement of commercial objectives (development of consumer loyalty) and also financial objectives (profitability) (Rust and Al, 1995; Anderson and Al., 1994).

I THEORETICAL FRAMEWORK

I.1 E-learning definition

E-learning is a mode of learning which draws benefits from the use of information and communication technologies on all levels of training activities. It particularly shows a method of training whose principal objectives can be autonomy of training, distance learning, individualization of training options and development of pedagogic relations on line.

Its basic principles relate to the organization of pedagogic contents for modularity, allowing for the personalization and the construction of the various options of learning adapted to the various methods of comprehension and acquisition by learners.

The basic differences from a traditional system of learning are the organization of working time, the organization of the pedagogic options, the organization of the contents, the importance of group and the mechanisms of learning.

I.2 Definition of quality

Quality can be objective or subjective. Objective quality is an approach based on offer and can be controlled, within a company by experts. However, perceived quality is based on customers, and it offers chains of positive consequences validated in various theoretical and empirical researches in marketing.

Our analysis framework is built around the definition of perceived quality, its various dimensions and the relation between perceived quality and satisfaction.

Perceived quality and satisfaction

Perceived quality is a total judgement of evaluation with respect to a product or a service bearing on the relative superiority of this product/service (Rust and Oliver, 1994; Taylor and Bakker, 1994; Bitner and Hubert, 1994). It is a confrontation of the quality returned by an offer, of a product/service, with the earlier expectations of the consumer. If the returned quality exceeds expectations, perceived quality is high, if the returned quality is lower than expectations, perceived quality is low. This definition of perceived quality is almost equivalent to that of satisfaction, and explains why these two concepts are very often confused (Ngobo, 1997). Quality is distinguished from satisfaction in that the latter is assumed to involve specific transaction. But opinions are divided. In Nordic literature perceived quality is an antecedent of satisfaction, whereas in American literature perceived quality is a consequence of satisfaction.

There is a well developed literature on quality of service. Several conceptualizations of quality of service coexist, but one can notice the absence of a consensus on the number of dimensions and the interrelationship among these dimensions. Parazuraman, Zeithaml and Berry (1985, 1988) proposed five dimensions of service which are: reliability, responsiveness, empathy, assurance and tangibility. They defined perceived service quality as the degree and direction of discrepancy between a consumer's perceptions and expectations. These dimensions were criticized in a lot of literature because of the difficulty in their generalization with various contexts (Cronin and Taylor, 1992), and they also pose problems when defining and measuring expectations (Teas, 1993). Grönroos (1984) proposed two dimensions: technical quality which measures the result of the service, and functional quality which measures the manner the service is delivered. Rust and Oliver (1994) added a third dimension which is the environment in which the service is rendered. However the dimensions proposed by Parazuraman, Zeithaml, and Berry are the most used.

II EMPIRICAL RESEARCH

From our theoretical reflections, we wanted, through an exploratory study, to determine the various elements which are significant to the measuring of the quality of a distance learning offer. This exploratory study aims to better understand the mechanisms of evaluation of distance learning and to generate the different items which can be used to measure perceived quality of service. The results of the study will enable us build a scale of measurement adapted to e-learning and which could be generalized and used for the evaluation and the improvement of various distance learning pedagogic programmes.

As of now, we carried out ten interviews (semi-directed) with students, tutors and administrators of the distance learning programmes of University Nancy2. The first programme uses the CANEGE network and the other is on the PHEDRE network. The interviews were centred on a needs/expectations basis and also on a perceived performance basis.

II.1 Descriptive analysis

A descriptive analysis of the various topics discussed enabled us to better determine the motivations, the expectations and the criteria of evaluations of e-learning. Other topics addressed within the framework of these interviews, and their analysis will be presented later.

Professional and personal motivation

In addition to the advantages offered by e-learning in terms of the organization of learning time and the organisation of the pedagogic programme, e-learners have a double motivation: professional and personal.

At the professional level, the required objective is often competitiveness: companies are very competitive; young employees are increasingly graduates and control certain rudiments of the profession better. This is why it becomes important for older employees to go back to school in order to improve their knowledge and acquire new competencies to be able to follow the evolution of the labour world. Moreover, these employees seek professional evolution in terms of promotion and responsibility. Finally the will to change professional orientation is an additional motivation to resuming studies by means of e-learning.

At the personal level, sometimes students fear to follow a formation in the presence of younger students considering the differences which separate the two categories of people "I am 40 years old and it will be difficult to sit close to young students in a classroom". Some people had short studies and would like to go back to school, so they still have the desire to exploit their capacities without stopping their work. For others, e-learning is a means to having the necessary bases to be able to follow a normal cycle of studies in initial or continuing education system. So it helps to prepare and get them into the habit of studying, to start a new formation after a long stop. Interesting programs of courses are also an additional element of motivation to those who will like "to discover a new world"

Expectations of learners

Various formulated expectations relate to the courses, diffusion support of courses, follow-up by the teachers and expected results of the formation.

On courses: taking into consideration the charged schedules of learners, it is more appropriate to have synthesized and precise courses. These courses can contain references of articles and books, links to websites for better understanding or getting them to the standard expected. These references enable different students to have various means of learning and to overcome the disadvantages of loneliness and distance. The diffusion of the courses on several supports (text, audio/video) is also a plus.

On transmission supports: it is important to have an adequate reception support for the student to avoid technical problems. There is then the need to have well developed platforms of transmission for functional and easy use.

Follow-up seems to be the most important element for distance learning students. Given the diversity of students and levels, distance and limited time, it is through follow-up that each student can better learn. According to the interviews, one can think that exchanges determine the perception of courses. The more exchange there is, the better the course "is understood", the less there is, the less the course "is grasped". Teachers or tutors must be very present to explain in details the courses and homework to learners. They should follow them throughout their learning period to advise them, and give them practical examples and cases. Clear and adapted answers to questions enable a better learning. Continuous evaluations are much appreciated and enable learners to work regularly and spend enough time on their formation.

On the expected results: the various formations presented must end with the obtainment of a certificate. It is very important that learners are able to, at the end of their courses, to obtain their certificate. This element is an additional source of motivation that implies the acquisition of knowledge and new competences.

Evaluation criteria: pedagogy, human and relational, professional

Pedagogy: in accordance with expectations, the determining dimensions of satisfaction are the quality of courses, the quality of course supports and, the quality of follow-up and evaluation of courses.

Human aspect: this aspect is not revealed when learners explain their expectations, but we have noticed that this element is shown as important in the formation of satisfaction. The contacts which could have been created with teachers or learners and which allow for the exchange and the acquisition of new knowledge are considered as important human and relational aspects that influence perceived satisfaction.

Professional criteria: as initially expected, the certificate and the acquisition of new competences for a professional evolution are significant in the determination of perceived quality and satisfaction. The formation should bring to the learner a better adaptation and learning capacity to work within the company.

II.2 Analysis of the different items listed: comparison with the dimensions of Parasuraman, Zeithaml and Berry (1988).

One of the principal contributions of this exploratory study is the comparison of the results to the dimensions developed by Parasuraman, Zeithaml and Berry (1988) in their perceived quality of service scale.

Tangibility

The contacts between tutors, teachers and learners are established through computer equipment, apart from rare physical meetings. It thus appears important to have platforms which function well and which are visually attractive. The importance of this dimension is revealed through the expectations for a high level of quality of the transmission support for the courses, and also of the quality of e-learning platforms. The importance attached to conformity between the animations of platforms (text, power point, sounds, fast interface, functional) and its contents reinforce this idea. It should however be noted that a difference in perception can exist according to the personal characteristics such as age.

Reliability

This dimension concerns the respect of promise. Learners expect to receive the formation which was promised and the accompanying certificate should be recognized and of good quality. For the university it means the respect of its programs and the follow-up of learners in their training for examples. Learners must be reassured and motivated when they encounter problems, they must be able to trust their teachers and tutors to achieve the goals which they target.

Responsiveness

The reaction of the supplier must be prompt. Within the framework of our interviews, there are certain expectations of learners on the speed of response to their worries and questions and the speed of the computer interface (loading of pages and download of documents). This dimension is all the more significant as learners do not have time to follow their formation, since they have a job and sometimes family obligations. The management of time is very important and demands increased sensitivity to delays.

Assurance

The major concern of this dimension is the possession of the knowledge necessary to answer the questions learners pose. For learners, it is important to have reliable and exhaustive answers which are adapted to the questions they asked. Formation platforms are also means of access to other sources of information. It is essential that learners trust their teachers and tutors. Assurance relates also to the need to have on the website formal rules of confidentiality and respect of private information as recognized by the ISO (International Standard Organization).

Empathy

Human and relational aspects in the perception of quality are essential for learners and they corroborate the central place of this dimension. Distance learning contrary to courses in classroom, has no physical contact, but the various means of communication such as electronic mail service and forum make exchanges and contacts with other people possible. It makes the formation lively and creates bonds which facilitate the training and increases the comfort of e-learning.

CONCLUSION

This study enabled us to identify the important aspects of learning in e-learning. We also showed that the various perceived quality of services dimensions developed by Parasuraman, Zeithaml and Berry (1988) also apply to e-learning. Thought we have noticed that personal characteristics of the interviewees can influence the dimensions. For instance, the animations of platforms and its contents can be perceived differently due to differences in age. The students were interviewed after an examination period, one should be careful as these results may have been influenced by their performance at the examination. A confirmatory empirical study on the basis of a questionnaire is necessary to validate our proposals. It should be noted that one of the difficulties of evaluating teaching is the “blocking” which the traditional design of teaching can bring.

It would also be interesting to conduct studies within diversified publics and on different platforms to ensure the generalization of the results obtained.

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