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Model to evaluate the effectiveness of the IFAM Internship Program

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Abstract

The internship aims to improve the student's abilities through practical activities, where one can apply the lessons learned in school/university. In this sense, the IFAM Internship Program/Center should provide quality services to the community, fulfilling their goals effectively. However, in 2011, it was noted the absence of a system to evaluate the effectiveness of the program. The main objective of this research is to develop a model for evaluating the effectiveness of the IFAM Internship Program/Center from the perspective of the student, to improve the services provided by the program. To collect data, a questionnaire was designed with closed and open questions, based on the SERVQUAL model developed by Parasuraman et al. (1985). The research sample was 99 students of technical courses, full-time courses as well as PROEJA (Adult courses). The study showed that all dimensions of service quality of the IFAM Internship Program/Center have negative gap, thus revealing the need for re-planning actions by the managers of the program, including interventions of teachers, to clarify the main questions of the students about the internship; planning meetings with new trainees, providing practical situations in the IFAM laboratories where the student can learn and experience the challenges of laboring world. In this sense, it is recommended studies be made to hear the opinion of the companies which use the services of IFAM Internship Program /Center for admitting the students.

Keywords: Internship Program; SERVQUAL;

1. Introduction

In Brazil, the Federal Institute of Education, Science, and Technology of Amazonas (IFAM) is part of the Federal Network of Professional, Scientific and Technological Education, originating from the 19 schools of artisan apprentices established by a presidential decree of 1909, signed by Nilo Peçanha (SILVA, 2009).

Federal Institutes should cover all levels and modalities of vocational and technological education to qualify citizens in various sectors of the economy. IFAM's organizational structure consists of one Rectorate and five Pro-Rectories. The Directorate of Business and Community Relations (Direc) is part of the Pro-Rectory of Extension (Proex), subdivided into two Coordinations: Coordination of Courses and Professional Qualification (CCQP) and Coordination of Integration School Company (CIE-E), The

latter will be the object of study of this research.

The concern with this theme came from the observation that IFAM students need to adapt to the demands of the competitive market, adopting a dynamic and proactive behavior regarding the internship. Based on this principle, investments in professional education, research, as well as the implementation of more internships are extremely important. It is also well known that between school and the job market there is a fundamental path for those who want to qualify-this is the internship. This new stage of learning represents the transition and complementarity between education and the business world (MONTE, 2009).

The internship is the period of pre-professional exercise provided for in the school curriculum, in which the student remains in direct contact with the internal and external environment of the educational institution, developing professional activities, scheduled and evaluable, with constant duration and supervision, supported by laws, and standards (OSTROSKI, 2008).

The relationship between knowledge, which promotes critical thinking, and practical activity must be done by the internship. Thus, under the supervision of a professional in the field together with that of a teacher, the student can make the relationship between knowing and doing. The internship is, therefore, training for the student to experience what learned in theory. Through the internship, students can perceive the differences in the organizational world and exercise their adaptation to the business environment, develop their critical spirit in the areas of technical and scientific knowledge, develop their professional attitude and expand the information of reflective content (OLETO, 2008).

The preparation of the professionals of the future begins at school, but their full training is increasingly taking place within organizations. The insertion of the student in the labor market, through the completion of the internship, while still receiving the direct influence of the activities developed in the laboratories, in the classrooms, and by the teachers, is an innovative factor of economic and social development (GANDOLFO AND KOVALESKI, 2004). Given the above, it is clear how much the internship is the most appropriate way for students to be inserted into professional life and to ensure the best prospects for growth and achievement.

1.1 Objectives

The overall objective is to develop a model to evaluate the effectiveness of the IFAM Campus Manaus Centro Internship Program from the student's point of view, to improve the services provided by that program.

The specific objectives are:

a) research existing quality performance evaluation models and tools that may be used in the services provided by the IFAM/Centro Internship Program;

b) develop and test the data collection instrument together with the student interns enrolled in the IFAM Campus Centro Internship Program;

c) propose the model and make suggestions for improvements to the managers of the IFAM/Centro Internship Program.

2. Theoretical Referential

2.1 IFAM Campus Centro Internship Program as a Service Provider

The role of the IFAM Campus Manaus Centro Internship Program is to enable, within the possibilities of the program, the placement of students of the Institute in the job market through the internship. One of the major concerns of the program is to make learners aware of the main objective of the internship - to relate theoretical learning with practical knowledge - whether in business, other public administration bodies or even within the educational institution.

Vacancies available at the IFAM Campus Center Internship Program are posted on the institution's designated bulletin boards and locations, as well as taken to educational management to inform teachers and educators about internship offerings.

Then, interested students and those with the requested profile send their resumes to the company's e-mail address or request at the Internship Coordination (CIE-E) the referral letter to participate in the interview. This criterion that defines is the granting unit.

The IFAM/Centro Internship Program also has a curriculum database, created to enable the demand of companies seeking interns from various technical and technological areas.

The consolidation of the internship is characterized by agreements signed between the granting units, interested in participating in the IFAM Campus Manaus Centro internship program, and the educational institution. Besides, the Internship Law No. 11.788/2008 requires as a requirement in its art. 3 rd item II - the signing of an agreement between the student, the granting party of the internship and the educational institution.

The IFAM/Centro Internship Program also follows the guidelines of Resolution No. 18 approved by CONDIR/CEFET-AM of August 31, 2007, all these legal requirements are fundamental and must be followed for the legal business to be valid and efficiency.

2.2 Quality Concepts

Quality is a concept of utmost importance to organizations in general. Continuous quality improvement is one of the biggest challenges facing companies, especially those wishing to win new markets or new customers (SILVA, 2010).

Customers shape their perception of an organization based on the diversity of impressions they receive from their contacts with people, products and services. Everyone in the organization does something to satisfy customer requirements and therefore influences customer satisfaction, starting, of course, with senior management. She particularly has a responsibility to make everyone aware of the importance of answering the requirements and ensuring that everyone understands how work contributes to customer satisfaction.

For Crosby (1984), quality is the product meeting its specifications. Needs must be specified and quality becomes possible if these specifications are met without defects occurring. Quality means compliance, there is neither high nor low quality. Either an item meets the requirements (quality) or is not (not quality). Quality is not only free but also profitable. Every penny not spent repeating something wrong or using alternatives becomes a penny earned. The author also emphasizes the importance of education for

all individuals of the company as a means of achieving quality improvement.

For Campos (2004), quality means when a product or service perfectly, reliably, affordably, safely and at the right time meets customer needs. In other words, it can be said: perfect design, no defects, low cost, customer safety, delivery on time, at the right place and in the right quantity.

For Deming (1993), quality comes to be everything that, from the customer's point of view, improves the product. Quality is associated with customer impressions, so it is not static. Deming's (1993) approach to quality is focused on the use of statistics in processes, focusing on the problems of variability and their causes.

Another very striking contribution in the area of quality was Feigenbaum (1994), where he conceptualizes quality as a set of characteristics incorporated into the product through design and manufacture that determines the degree of customer satisfaction. Feigenbaum's contribution refers to the concept of "Total Quality Control" as an efficient system for integrating quality development, quality maintenance and quality improvement efforts at all economic levels and across the enterprise.

2.3 Quality in Services

Today, there is no more space for organizations that do not stand out against their competitors. Customers have been increasingly demanding about the services received and, because of this, organizations must pay attention to the expectations and perceptions of customers regarding the services offered (FRÓES, 2009).

Unlike a product, which has predefined specifications such as weight, size, color, ingredients, etc., a service may have discrete or qualitative specifications. Thus, measuring the quality of service can be a very difficult exercise. Besides, customer expectations for a particular service may vary considerably based on factors such as experience and personal needs. This can widen the gaps between a customer's expectations and perceptions (AKHLAGHI et al, 2012).

The quality of the services provided is one of the main factors of competitiveness and is being the delimiting mark of the client/company relationship (STEFANO et al, 2008). Although much addressed in scientific research, the theme "quality in services" is still the subject of much discussion and questioning among researchers, managers, and administrators. In essence, this question arises from the involvement of two not so trivial objects of understanding: quality and service (FREITAS, 2005).

According to Gianesi and Corrêa (1994), quality in services can be defined as the degree to which customer experiences are met by their perception of the service provided.

For Albrecht (2000), the quality of services is in the details, in individualized points of contact between the service provider and the customer. Quality of service is the ability of experience or any other factor to satisfy a need, solve a problem or provide benefits to someone. In other words, quality service is one that can provide satisfaction.

Importantly, the quality of service should not be confused with customer satisfaction. For Bateson and Hoffman (2003), satisfaction is a transient, transaction-specific assessment, while service quality is an attitude formed by a long-term global assessment.

Clients evaluate their satisfaction or dissatisfaction levels after each meeting and use this information to update their perceptions of service quality (DETTMER et al, 2002).

Thus, before the customer buys a service, he already expects its quality. After purchasing a service, he compares the expected quality with what he received.

Zeithaml and Bitner (2003) attribute to the quality of services, the discrepancy that exists between the expectations and the perceptions (perceived quality) of the customer regarding the experienced service.

Following the same authors' idea, when it comes to services, the quality will be the key element in customer evaluation, they state that customer evaluations of quality are influenced by multi-factor perceptions, and suggest that customers take into consideration five dimensions when analyzing the quality of service:

Reliability: ability to deliver what was promised on the agreed date, reliably and accurately;

Promptness: willingness to understand customer problems and difficulties and respond quickly;

Assurance: employee knowledge and ability to respond to customer needs;

Empathy: the willingness of the company employee to serve the customer with attention and care.

Tangibility: Physical elements of the organization, such as furniture, employee physical appearance, equipment, etc.

The customer's service evaluation is made by comparing what the customer expected and what he perceived from the service provided. Figure 1 shows how the customer evaluates a service based on their expectations and perceptions (MOURA and ALLIPRANDINI, 2004).

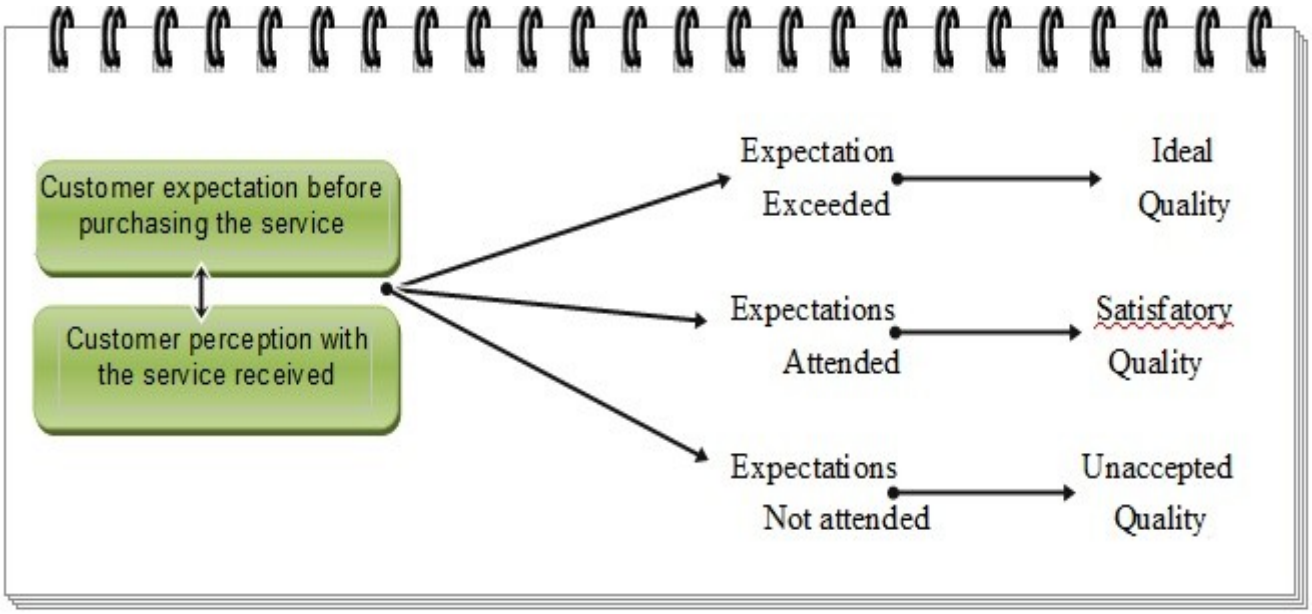

Figure 1 – Quality of Service Assessment
Source: Gianesi and Corrêa (1994)

Customers have different expectations about the execution of the service. One way to differentiate is to exceed your customers' expectations. This concept for service marketers implies that they must have complete knowledge of how their customers evaluate the quality of their services so that they can develop the best strategies for their actions (FRÓES, 2009).

2.4 Effectiveness as a Performance Indicator

The world is in a rapid process of change in economic, social and political aspects. Competition has gone global and has made consumers more demanding about the quality of products and services. Technologies and tools have emerged to directly aggregate and modify organizations and people's private lives (ROJAS et al, 2010).

People who excel in this environment of frequent change have characteristics and behaviors that are different from others, that is, they are easy to adapt to these changes.

However, the differential goes beyond adaptation, it is necessary to position itself properly, that is, be in constant search for alternative solutions, understand the existence of risk and know how to live with it.

In the pursuit of an organization where everyone is prepared, mature and well rounded to act and think globally, performance indicators become a central element and are at the heart of operations management. Because of this, managers around the world today devote much of their time to developing and refining measurement, reporting and progress systems for their action plans.

Thus, a good operational diagnostic system must include indicators that validate the goals, standards, and specifications that drive the system where it was intended to take it.

It is a retrospective look at the performance, choice, and monitoring of indicators that reveal whether the system is fulfilling the mission for which it was created; if the competitive position achieved is sustainable; whether the economic profitability of shareholders is attractive relative to other investment possibilities; if the organizational climate produces an environment of permanence and development of the teams (COSTA; GARDIM, 2010).

According to these authors, effectiveness translates the idea of doing the thing that has to be done. It seeks to measure whether it is worthwhile to have quality in everyday life, being effective, efficient, productive, profitable and competitive.

Among the management activities, one, in particular, is of particular importance when seeking effectiveness for the customer and the business: after-sales follow-up. That is, effectiveness is the success of the long-term venture.

3. Methodology

The methodological approach adopted in this research was of the case study type, and its general objective was exploratory.

The study was of quantitative and qualitative nature, that is, a combined approach, in which the variables related to the study were measured and interpreted.

According to Miguel (2010), the quantitative approach corresponds to the act of measuring what he is talking about and expressing it in numbers.

On the other hand, the qualitative approach is concerned with obtaining information about the perspective of individuals, as well as interpreting the environment in which the problem occurs.

To achieve the research objectives, eight steps were followed, as shown in Chart 1.

STEPS	START	END
Bibliographic Survey	December 20, 2011	May 30, 2012
Research Planning	May 31, 2012	July 31, 2012
Data collect	December 13, 2012	February 15, 2013
Data Calculation and Typing	February 16, 2013	March 04, 2013
Analysis and Discussion of Results	March 05, 2013	May 10, 2013
Model Proposal	May 11, 2013	May 20, 2013
Final Considerations	May 21, 2013	May 31, 2013
Dissertation Preparation and Review	June 01, 2013	June 21, 2013
Dissertation Presentation	August 05, 2013	August 05, 2013
Improvements from Review Board Considerations	August 06, 2013	August 28, 2013

Chart 1: Research Steps

Source: Author

3.1 Research Planning

The target audience of the research was the trainee students of all technical education courses (mechanics, electrotechnics, chemistry, environment, buildings, informatics and work safety) of the following teaching modalities: subsequent, integrated and projected, which registered between January 2 and March 30, 2012, in the IFAM/Centro Internship Program.

During this period, 160 students were enrolled in the IFAM/Centro Internship Program, representing the research universe. Of these, 61 students were excluded from the research, of which: 10 were from distance learning; 17 of higher education; 10 who participated in course completion projects (PCC); 03 who participated in scientific initiation (PIBIC); 19 who already worked for a significant time in the area of technical training, characterized as employees; 01 owner of a company with a specific field of activity, characterized as an entrepreneur and 01 service provider, characterized as self-employed.

Therefore, the remainder of this total, which represents the sample of this research, was 99 students of the technical courses and teaching modality mentioned above that were effectively interning in the stipulated period. To evaluate the effectiveness of the IFAM/Centro Internship Program from their perspective, that is, students who had direct and constant involvement with the researched problem.

For data collection, a questionnaire with open and closed questions was developed, which was developed from the reading of the bibliographic collection (Examples: PARASURAMAN et al 1985; COSTA, 2007) about methodologies to evaluate services.

The proposed collection instrument was based on the parameters used in the IEL Internship Prize (IEL, 2011), considered the tool that came closest to the objective of the study, as it presented more complete evaluation criteria, judging fundamental points for an Internship program can be considered excellent under the view of the student interns.

The first 44 closed questions of the questionnaire were divided into two parts:

The first 22 questions aimed at assessing respondents' expectations about the ideal state of service delivery of an Internship Program, while the second part of the questionnaire also has 22 other questions aimed at investigating the actual state of service delivery felt by interns.

Once the items and questions were defined, three Likert Scale were chosen: first) to assess the level of relevance of the services of an Internship Program: (1-2 = Not relevant; 3-4 = Bit relevant; 5-6 = Fair; 7-8 = Relevant; 9-10 = Very Relevant); second) to evaluate the level of satisfaction of the investigated students regarding the services provided by the IFAM Campus Manaus Centro Internship Program: (1-2 = Poor; 3-4 = Bit Satisfactory; 5-6 = Fair; 7-8 = Satisfactory ; 9-10 = Very Satisfactory); third) to assess the fulfillment of the objectives of the IFAM Campus Manaus Internship Program: (1-2 = Not Answered; 3-4 = Partially Answered; 5-6 = Regularly Answered; 7-8 = Satisfactorily Answered; 9-10 = Answered with Excellence)

4. Results

After calculating and entering the data, figures were elaborated to better understand the case study, from March 5 to May 10, 2013. In the analysis of the answers of the 99 students, the general average, the deviation of standard and the coefficient of variance of the results.

For better understanding, the research analysis was made in the following order:

4.1 The profile of student interns:

Addresses gender, age, courses, type of education and place of internship;

4.2 Evaluation of Relevance Level of Internship Program Services:

This analysis identifies the expectations of the student interns regarding the effectiveness of an Internship Program so that it can be considered excellent;

4.3 Student Satisfaction Rating:

This analysis aims to identify the perceptions of student interns regarding the services provided by the IFAM Campus Manaus Centro Internship Program;

4.4 Comparison between Relevance and Student Satisfaction (Gaps):

Compares the means and standard deviations of each dimension, both the expectations and perceptions of the student interns;

4.5 Analysis of the objectives of the IFAM/Centro Internship Program:

Identifies if students throughout their internship met the objectives of the Internship Program;

4.6 Impact of internship on student hiring:

This analysis points to the effectiveness of students regarding hiring after the internship period;

4.7 Intern's Performance and Contract:

Identifies students who have interned in their field of technical education.

4.1 Profile of Intern Students

Regarding the gender of the participants, it was found that 51% are female, while 49% are male.

Regarding the age group of the students participating in the research, the majority (44%) were between 16 and 20 years old, while 29% between 21 and 25 years old, 22% between 26 and 30 years old, 4% between 31 and 35 years old, and 1% above 36 years of age.

The distribution of trainee students by technical courses was as follows: 26 students of the technical course in buildings; 20 students of the technical course in chemistry; 15 students of the technical course

in mechanics; 12 students of the technical course in computer science; 11 students of the technical course in electrical engineering; 10 students of the technical course in occupational safety; and 5 environmental technical students.

Between January and March 2012, 99 students were enrolled in the IFAM Campus Center Internship Program:

a) 65 (65.65%) students in various companies, such as construction companies, engineering companies, beverage companies, architecture and urbanism companies, two-wheeler companies and others located in the Manaus industrial center;

b) 25 (25.25%) students were interned at IFAM/Centro, allocated by the Educational Managements, the Library, the Information Technology Department, the Engineering Department, and the various Teaching Laboratories;

c) 09 (9.1%) students in public institutions also accredited, such as Secretariat of Environment, Secretariat of Education, National Institute of Amazonian Research, Regional Engineering Council and Regional Electoral Court.

4.2 Relevance Level Assessment (RL)

It was observed that all proposed dimensions were considered relevant for the Internship Program to be considered excellent. In order, the following stand out:

Tangibility ($\overline{X}$ = 8.75; S = 1.39);

Assurance ($\overline{X}$ = 8.58; S = 1.40);

Promptness ($\overline{X}$ = 8.39; S = 1.55);

Empathy ($\overline{X}$ = 8.35; S = 1.65), and

Reliability ($\overline{X}$ = 8.23; S = 1.53).

Then, the analysis was made using the mean, standard deviation, and coefficient of variation (CV).

The results of Table 1 show that the five items considered most relevant for the Internship Program to be excellent were:

First) Must have an efficient communication system between the interns and the Internship Coordination;

Second) It must have an easily accessible internship opportunities bulletin board;

Third) Needs to check if supervisors are trained in the trainee's area of expertise;

Fourth) Must have qualified staff to resolve trainee complaints;

Fifth) Must have clear procedures for trainee enrollment.

On the other hand, the least relevant were:

Twenty-second) Must have individual service hours;

Twenty-first) Should plan supervisory teacher visits to internship locations;

Twentieth) Need to evaluate the trainees' spirit of cooperation;

Nineteenth) It needs to stimulate the creativity of the trainees;

Eighteenth) Need to evaluate during the internship the trainee's interest in the work.

Even being considered with lower relevance, the average found was between 8.07 and 7.62, considered relevant in the adopted Likert scale.

Table 1: Relevance Level (RL) of Items in Descending Order of $\bar{X}$ (RL)

Dimensions	Ranking and Items	$\bar{X}$ RL	S	CV
Empathy	1o) Have an efficient communication system between the interns and the Internship Coordination.	9.05	1.27	14.03%
Tangibility	2o) Have an easily accessible internship promotion wall.	9.03	1.26	13.95%
Promptness	3o) Check if supervisors have training in the intern's area of expertise.	8.86	1.34	15.12%
Assurance	4o) Have qualified employees to resolve trainee complaints.	8.78	1.35	15.38%
Assurance	5o) Have clear procedures for trainee applications	8.75	1.27	14.51%
Promptness	6o) Verify that internship supervisors accompany their interns.	8.72	1.38	15.83%
Reliability	7o) Monitor the attendance of interns.	8.62	1.34	15.55%
Reliability	8o) Ensure the timeliness of your services	8.53	1.37	16.06%
Tangibility	9o) Have an adequate physical environment to attend the interns.	8.46	1.51	17.85%
Empathy	10o) Continuously assess the satisfaction level of the trainees.	8.45	1.55	18.34%
Assurance	11o) Have employees who know how to meet the demands of interns.	8.41	1.39	16.53%
Promptness	12o) Develop actions that improve cooperation between supervisors and supervisory trainee teachers.	8.39	1.57	18.71%
Assurance	13o) Have an ombudsman system to provide clarifications to the parties involved.	8.38	1.58	18.85%
Promptness	14o) Have an updated manual for trainees.	8.31	1.54	18.53%
Empathy	15o) Have a schedule of meetings with new trainees for clarification on the internship law.	8.26	1.72	20.82%
Promptness	16o) Evaluate whether supervising teachers promptly assist trainees.	8.20	1.59	19.39%
Reliability	17o) Evaluate the ease of learning of trainees.	8.15	1.49	18.28%
Reliability	18o) Evaluate during the internship the trainee's interest in the work.	8.07	1.56	19.33%
Reliability	19o) Stimulate the creativity of trainees.	8.05	1.71	21.24%
Reliability	20o) Evaluate the trainees' spirit of cooperation.	7.96	1.68	21.11%
Promptness	21o) Plan supervisory teacher visits to internship locations.	7.85	1.88	23.95%
Empathy	22o) Have individual service hours.	7.62	2.07	27.17%

Source: Author

4.3 Satisfaction Level Assessment (SL)

Analyzing the level of satisfaction of the respondents (Table 2), it was observed that 45% of the 22 items analyzed had performance equal or above satisfactory.

The results of Table 2 show that in view of the services provided, the five strengths of the Internship Program are:

First) Have an adequate physical environment to attend the interns;

Second) Have an easily accessible internship promotion wall;

Third) Has clear procedures for trainee applications;

Fourth) Have qualified staff to resolve trainee complaints;

Fifth) It has an efficient communication system between the interns and the Internship Coordination.

On the other hand, the items that need improvement are:

Twenty-second) Plan supervisory teacher visits to internship locations;

Twenty-first) Have a schedule of meetings with new trainees for clarification on the internship law;

Twentieth) Evaluate whether supervising teachers promptly assist trainees;

Nineteenth) Stimulate the creativity of trainees;

Eighteenth) Evaluate the trainees' spirit of cooperation.

One of the major challenges faced by the Internship Programs is precisely the twenty-second item “Plan supervisory teacher visits to internship locations”, there are few educational institutions that have enough teachers to monitor or follow up activities by their trainees (FUJINO; VASCONCELOS, 2011).

Thus, it is recommended that educational institutions better evaluate the curriculum structure of the courses and the aspects that involve the formation of the professional to be trained, to rethink actions that effectively contribute to the achievement of expected results.

Concerning the twenty-first item “Have a schedule of meetings with new trainees for clarification on the internship law”, it is of fundamental importance that internship programs create such a procedure to pass on benefits to new interns, internship law, answering questions and clarifying the trainee's rights and duties (NETTO et al, 2011).

Items 20, 19 and 18 again revealed the regular satisfaction level of the 99 students interviewed about the IFAM Campus Manaus Centro Internship Program in the evaluation of the performance of the interns and the supervising teacher.

Table 2: Satisfaction Level (Actual Effectiveness) of Items in Descending Order of $\bar{X}$ in (SL)

Dimensions	Ranking and Items	$\bar{X}$ SL	S	CV
Tangibility	1o) Have an adequate physical environment to attend the interns.	8.07	1.87	23.23%
Tangibility	2o) Have an easily accessible internship promotion wall.	8.01	1.90	23.69%
Assurance	3o) Has clear procedures for trainee applications.	7.84	1.83	23.39%
Assurance	4o) Have qualified staff to resolve trainee complaints.	7.66	2.02	26.33%
Empathy	5o) It has an efficient communication system between the interns and the Internship Coordination.	7.61	1.96	25.81%
Assurance	6o) Have employees who meet the demands of interns.	7.45	2.01	26.92%
Assurance	7o) Has an ombudsman system to provide clarifications to the parties involved	7.44	1.95	26.26%
Reliability	8o) Ensure the timeliness of your services	7.36	2.03	27.58%
Promptness	9o) Check if supervisors have training in the intern's area of expertise.	7.13	2.25	31.52%
Reliability	10o) Monitor the attendance of interns.	7.10	2.44	34.37%
Promptness	11o) Verify that internship supervisors accompany their interns.	6.97	2.29	32.82%
Reliability	12o) Evaluate during the internship the trainee's interest in the work.	6.93	2.23	32.18%
Empathy	13o) Have individual service hours.	6.89	2.14	31.10%
Promptness	14o) Have an updated manual for trainees.	6.84	2.31	33.80%
Empathy	15o) Continuously assess the satisfaction level of the trainees.	6.77	2.22	32.83%
Reliability	16o) Evaluate the ease of learning of trainees.	6.74	2.25	33.38%
Promptness	17o) Develop actions that improve cooperation between supervisors and supervisory trainee teachers.	6.59	2.18	33.04%
Reliability	18o) Evaluate the trainees' spirit of cooperation.	6.56	2.17	33.08%
Reliability	19o) Stimulate the creativity of trainees.	6.47	2.20	34.,00 %
Promptness	20o) Evaluate whether supervising teachers promptly assist trainees.	6.35	2.19	34.49%
Empathy	21o) Have a schedule of meetings with new trainees for clarification on the internship law.	6.25	2.21	35.27%
Promptness	22o) Plan supervisory teacher visits to internship locations.	6.20	2.47	39.89%

Source: Author

4.4 Comparison between Relevance and Satisfaction (Gaps)

The comparison between relevance (ideal) and satisfaction (real) of the investigated variables (Figure 2) aims to identify the gaps (discrepancy – Figure 3), to point out ways to improve the services of the IFAM Campus Manaus Centro Internship Program.

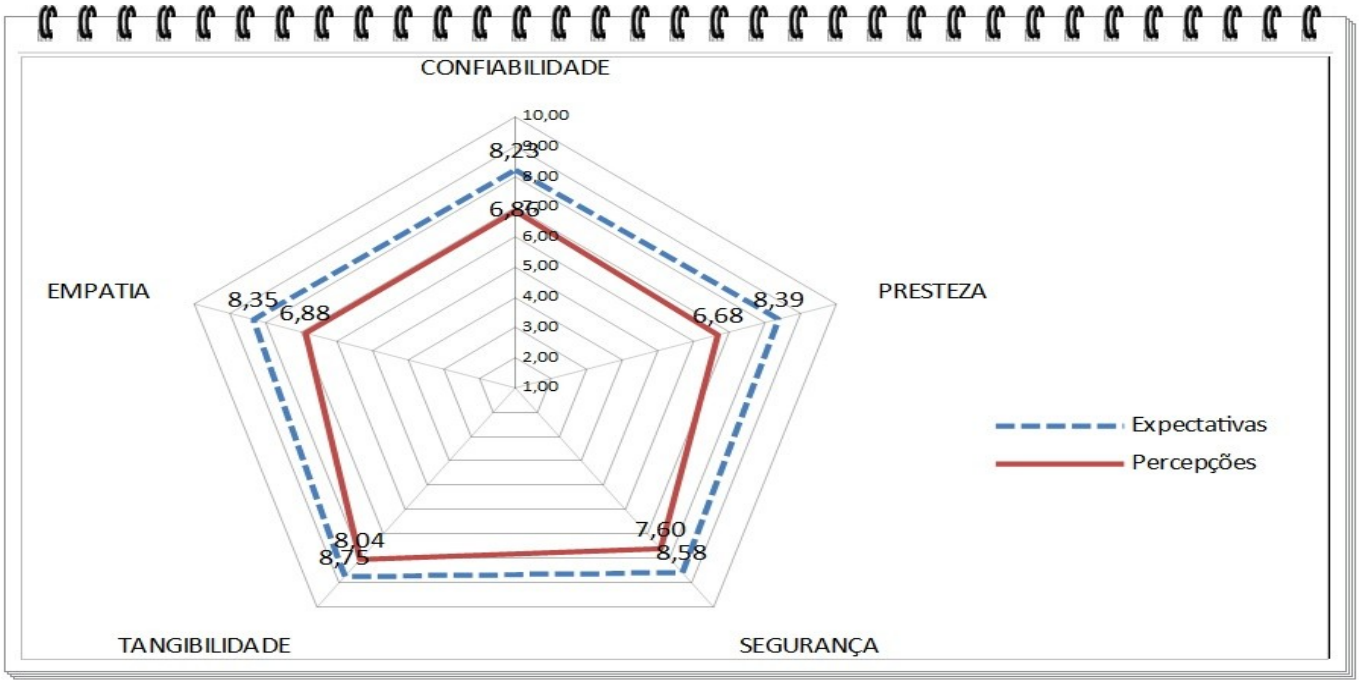

Figure 2 – Average Levels of Relevance and Satisfaction of IFAM/Centro Interns

Source: Author

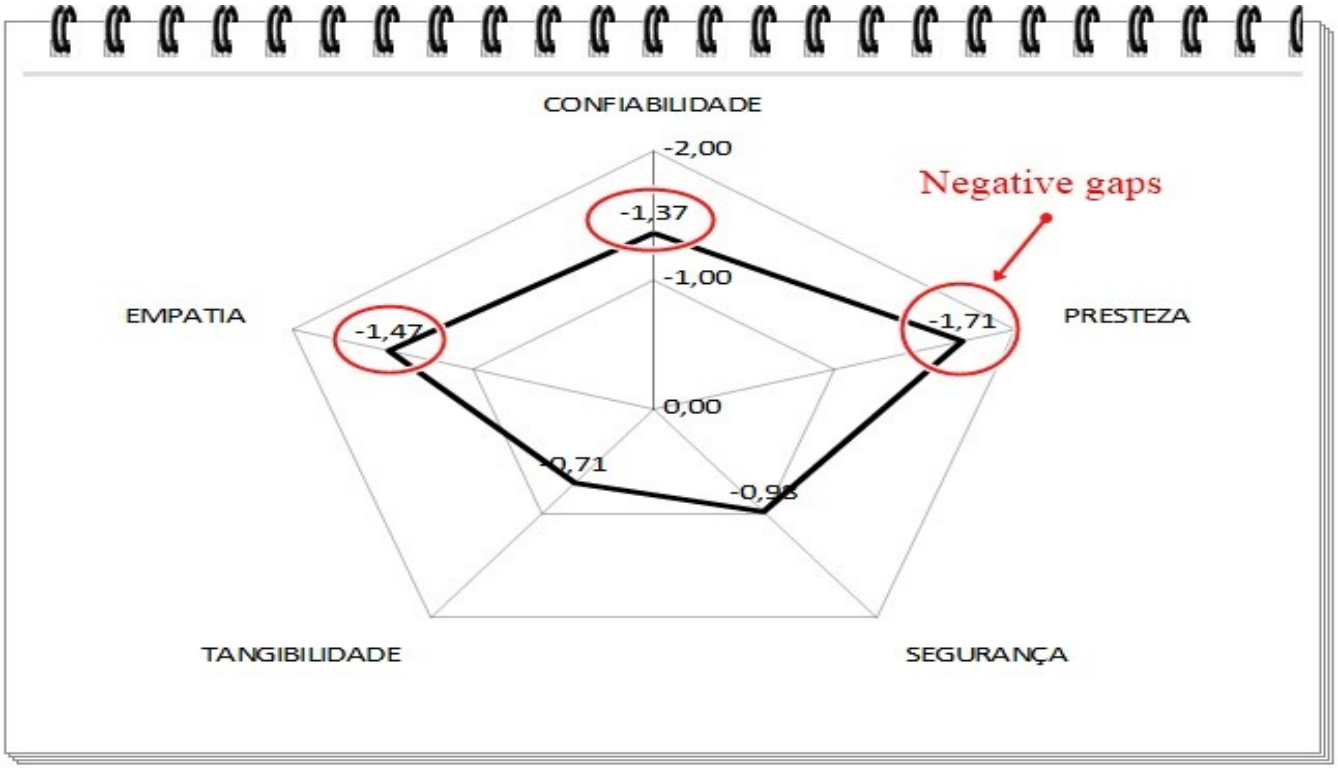

Figure 3 – Gaps of the Five Dimensions Investigated

Source: Author

The quality of services is calculated by the difference between the level of satisfaction (perception) and the level of relevance (expectation). Positive values indicate the satisfactory quality of service and negative values indicate poor quality of service (MACHADO et al, 2006).

Regarding the five dimensions studied, it was found that all gaps were negative, highlighting the dimensions of promptness (-1.71), empathy (-1.47) and reliability (-1.37), while the smallest Negative gaps are in Tangibility (-0.71) and Assurance (-0.98), as can be seen in Figures 2 and 3.

4.5 Objectives Analysis of the IFAM Campus Manaus Centro Internship Program

In the questionnaire, a question was formulated to investigate which objectives of the IFAM/Centro Internship Program the investigated students throughout the internship period effectively met.

The question had the following options:

Objective 1 (OB1) - Make it possible to place the student in the job market through the internship;

Objective 2 (OB2) - To attend the students of IFAM Campus Manaus Centro in search of clarification and internship procedures;

Objective 3 (OB3) - Plan the internship supervision;

Objective 4 (OB4) - Search for new partnerships;

Objective 5 (OB5) - Expedite and control all internship documentation.

The 99 students answered this question and the results indicate that:

First) Objective 5 “expedite and control all internship documentation” was the highest-rated ($\overline{X}$ = 8.75); Second) Next appears the objective 2 “to attend the students of IFAM Campus Manaus Centro in search of clarification and internship procedures ($\overline{X}$ = 7.76); Third) Then came objective 1 “to make it possible for the student to be placed in the job market through the internship” ($\overline{X}$ = 7.28).

On the other hand, the objectives of the IFAM/Centro Internship Program with the lowest level of attendance were: objective 4 “seek new partnerships” ($\overline{X}$ = 6.47) and objective 3 “plan internship supervision” ($\overline{X}$ = 6.76).

4.6 Impact of Internship on Student Hiring

The evaluation of this topic was obtained through the question “what happened after the six months internship?” With 5 (five) answer options:

1) had his internship contract renewed in the same company; 2) was immediately hired by the company; 3) was hired by another company; 4) Not hired by any company, and 5) others.

As a result, slightly more than half (52%) of the students surveyed were not hired by any company. While only 20% had their internship contract renewed by the same company, 14% had other reasons and 8% were hired by other companies.

4.7 Intern's Performance and Contract

Most (97%) of respondents reported that they worked in their technical training area, and only 3% did not. Of the students who had their internship contract renewed or were hired as employees, 31% stayed in the same technical training area and only 1% were out of the area, while the majority (67%) did not have their internship contract renewed or was not hired as an employee.

5. Conceptual Model Proposal

Based on the students' contribution and the use of Edraw Max Software version 6.8, a conceptual model was proposed to assess the effectiveness of the IFAM Campus Manaus Centro Internship Program (Figure 4).

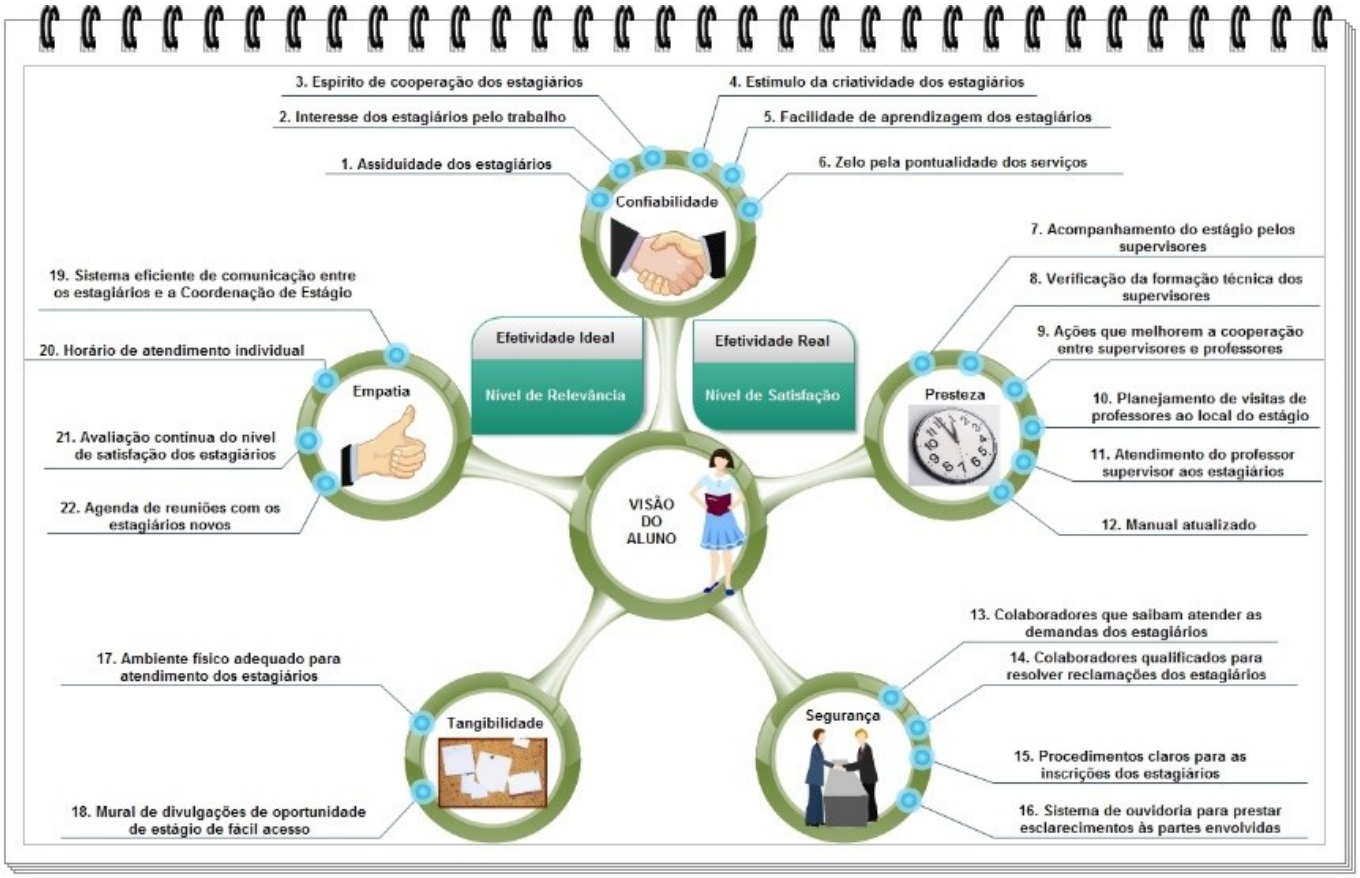

Figure 4 – IFAM/Centro Internship Program Effectiveness Evaluation Model
Source: Author

The model is based on five basic moments:

The first moment, called ideal effectiveness, evaluates the level of relevance of the 22 items corresponding to the five quality dimensions mentioned above, from the student's point of view, taking into consideration the search for excellence in the services provided by the Internship Program;

The second moment is called real effectiveness when students verifying their level of satisfaction with the services provided by the IFAM Campus Manaus/Centro Internship Program evaluating another 22 items;

The third moment would contemplate actions to document good practices as well as disseminate them to the academic community;

The fourth moment would contemplate corrective actions to improve the weak points;

The fifth moment would be to celebrate the results by planning to repeat the evaluation over time.

This assessment can be applied annually using the stages of the PDCA organizational learning cycle, widely known in academia, science, and business.

6. Conclusions

The effectiveness evaluation model of the IFAM Campus Manaus Centro Internship Program was developed based on the Servqual questionnaire, adapting it to the local reality, based on five dimensions and twenty-two questions.

The study showed that all dimensions used to assess the quality of IFAM/Centro Internship Program services (reliability, promptness, assurance, tangibility, and empathy) have negative gaps, especially regarding the aspects of promptness and empathy.

The research identified that the IFAM Campus Manaus Centro Internship Program has as weaknesses items related to the evaluation and monitoring of the company supervisor, as well as the supervising professor at the internship location. On the other hand, the items with the smallest negative gaps were related to the knowledge and skills of the servers to respond to the students' needs, as well as the adequate physical environment to attend the interns.

Besides, a majority (96%) of the interns indicate the IFAM/Centro Internship Program to other students, due to good attendance; good internship opportunities; assistance in entering the labor market; and good physical structure.

For further research, it is recommended that studies be conducted with the supervisors of the companies in which the interns are working. It is recommended that IFAM managers apply the moments suggested in the conceptual model, as well as study the impact of actions taken on the perception of trainees, to verify the evolution of the effectiveness of the program over time.

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8. References

[1] ALBRECHT, K. Vocação para serviço. **HSM Management,** São Paulo**,** v. 4, n. 3, p. 47-54, jul. 2000.

[2] AKHLAGHI, E.; SHAHNAZ, A.; AKHLAGHI, H. Assessing the quality of educational services in technical and vocational schools, using the servqual model**. Procedia Social and Behavional Sciences**, Istanbul, 20 nov. 2012. Disponível em: <http://www.sciencedirect.com>. Acesso em: 10 jan. 2013.

[3] BATESON, J. E. G.; HOFFMAN, K. D. **Marketing de serviços.** Porto Alegre: Bookman, 2003.

[4] CAMPOS, V. F. **TQC – controle da qualidade total (no estilo japonês).** 8. ed. Minas Gerais: INDG Tecnologia e Serviços Ltda, 2004.

[5] COSTA, Elieser Arantes da. **Gestão estratégica:** da empresa que temos para a empresa que queremos. 2. ed. São Paulo: Saraiva, 2007.

[6] COSTA, R. S.; JARDIM, E. G. M. As cinco principais dimensões do diagnóstico. **Operacional Net**, Rio de Janeiro, 30 out. 2010. Disponível em: <http://www.trilhas.projetos.com.br >. Acesso em: 15 jun.

2012.
[7] CROSBY, P. B. **Qualidade é investimento.** Rio de Janeiro: José Olympio, 1984.
[8] DEMING, W. E. **Dr. Deming:** o americano que ensinou a qualidade total aos japoneses. Rio de Janeiro: Record, 1993.
[9] DETTMER, B.; SOCORRO, C.; KATON, H. T. Marketing de serviços – análise da percepção da qualidade de serviços através da ferramenta servqual em uma Instituição de Ensino Superior de Santa Catarina. **Revista de Ciências da Administração**, Santa Catarina v.4, n. 08, p. 30-52, jul/dez. 2002.
[10] FEIGENBAUM, A. V. **Controle da qualidade total.** São Paulo: Makron Books, 1994.
[11] FREITAS, A. L. P. A qualidade de serviço no contexto da competitividade. **Revista Produção,** Brasília, v. 5, n. 1, p. 19-30, set. 2005.
[12] FRÓES, R. F. **Marketing de serviço:** a mensuração da qualidade do serviço de uma instituição de ensino superior. 2009. Dissertação (Mestrado em Administração) – Instituto Brasileiro de Mercado de Capitais, Rio de Janeiro, 2009.
[13] FUJINO, A. & VASCONCELOS, M. O. Estágios: reflexões sobre a ação didático-pedagógica na formação do profissional da informação. **Revista CRB-8**, São Pulo, v.4, n.1, p.40-58, abr. 2011.
[14] GANDOLFO, C. A. G.; KOLAVESKI, J. L**.** Estágio supervisionado: uma interface entre o Cefet- Pr unidade de Campo Mourão e o meio produtivo local e regional. In: Encontro Nacional de Engenharia de Produção, 24., 2004, Florianópolis. **Anais eletrônicos**... Florianópolis: ENEGEP, 2004. Disponível em: <*http://*www.abepro.org.br/enegep/>. Acesso em: 13 abr. 2012.
[15] GIANESI, I. G; CORRÊA. H. L. **Administração estratégica de serviços – operações para a satisfação dos clientes.** São Paulo**:** Atlas, 1994.
[16] INSTITUTO EUVALDO LODI (IEL). **Regulamento prêmio iel de estágio 2011,** Goiânia. 10 fev. 2011. Disponível em: <http://www.sitedoestagio.com.br/premio/portal.xhtml>. Acesso em: 15 jun. 2012.
[17] MACHADO, M. D. QUEIROZ, T. R. MARTINS. Mensuração da qualidade de serviço em empresas de fast food**. Revista Gestão e Produção**. São Carlos, v. 13, n. 2, p. 261-270, mar/maio 2006
[18] MIGUEL, P. A. C.(organizador). **Metodologia da pesquisa em engenharia de produção e gestão de operações**. Rio de Janeiro: Elsevier Editora, 2010.
[19] MONTE, C. O estágio no contexto profissional**. Revista T&C Amazônia**. Manaus, v. 7, n. 16, p. 22-28, jan/mar. 2009.
[20] MOURA, T. L.; ALLIPRANDINI, D. H. Determinantes da qualidade em serviços de alimentação: o caso das empresas de refeições coletivas. In: Encontro Nacional de Engenharia de Produção, 24., 2004, Florianópolis. **Anais eletrônicos**... Florianópolis: ENEGEP, 2004. Disponível em: <*http://*www.abepro.org.br/enegep/>. Acesso em: 10 jun. 2012.
[21] NETTO, P. R.; TRINDADE, R. L.; CAMPOS, M. A.; ZAIA, R. E. M. As diferentes faces do programa de estágio. In: Seminários em Administração, 15., 2011, São Paulo. **Anais eletrônicos**... São Paulo: SemeAD, 2011. Disponível em: <http://www.semead.com.br>. Acesso em: 19 jul. 2012.
[22] OLETO, M. M. F. Estágio supervisionado – a nova proposta da UFMG. **Revista Angrad**. Rio de Janeiro, v. 09, n. 4, p. 01-11, abr/jun. 2008.
[23] OSTROSKI.; S. S. D. Sistema de acompanhamento e controle de estágios curriculares supervisionados**. Revista Angrad**. Rio de Janeiro, v. 10, n. 3, p. 01-17, abr/jun. 2008.

[24] PARASURAMAN, A.; ZEITHAML, V. A.; BERRY, L.L. A conceptual model of services quality and its implication for future research. **Journal of Marketing**, Chicago, p. 41-50, Oct. 1985.
[25] ROJAS, R. S. B.; MONICH, A. E.; LEZANA, A. G. R. Avaliação da efetividade de um programa de empreendedorismo no ensino fundamental. In: Encontro Nacional de Engenharia de Produção, 30., 2010, São Carlos. **Anais eletrônicos…** São Carlos: ENEGEP, 2010. Disponível em: <*http://*www.abepro.org.br/enegep/>. Acesso em: 02 ago. 2012.
[26] SILVA, C. J. R. ; PACHECO, E. M.; PEREIRA, L. A.; VIDOR, A. M. **Institutos Federais:** Lei 11.892, de 29 de dezembro de 2008 – comentários e reflexões. 1. ed. Natal-RN: IFRN Editora, 2009.
[27] SILVA, F. R. V. Qualidade do projeto à continuidade dos serviços em busca da excelência. **Instituto Curitiba de Informática,** Curitiba, 21 out. 2003. Disponível em: <http://www.ici.curitiba.org.br>. Acesso em: 23 jun. 2010.
[28] STEFANO, N.; FERREIRA, A. R.; GODOY, L. P. Satisfação dos clientes interno e externo mensurada através da escala servqual e do modelo gap em uma empresa prestadora de serviços. In: Congresso Nacional de Excelência em Gestão, 4., 2008, Niterói. **Anais eletrônicos**...Niterói: CNEG, 2008, Disponível em: <http://www.latec.uff.br/cneg/documentos/anais_cneg4/T7_0019_0367.pdf>. Acesso em: 12 mar. 2012.
[29] ZEITHAML, V. A.; BITNER, M. J. **Marketing de serviços:** a empresa com foco no cliente. 2. ed. Porto Alegre: Bookman, 2003.