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ABSTRACT

This paper introduces Importance-Performance (IP) analysis as a method to evaluate teaching effectiveness in a university outdoor program. Originally developed for use in the field of marketing, IP analysis is simple and easy to administer, and provides the instructor with a visual representation of what teaching attributes are important, how important each attribute is, and how well the instructor performed on each attribute. Implementing IP analysis requires four steps: developing a set of attributes that accurately describe and reflect the topic of study, presenting the attributes to respondents in questionnaire form that requires them to rate importance and teacher performance for each attribute, analyzing data for the importance and performance values of each attribute, and plotting each attribute on a four-section action grid according to its rated importance and teacher performance. In an application of this method, 35 attributes describing teaching effectiveness were generated from teacher evaluations at North Carolina State University and other institutions. Faculty review and feedback resulted in a final list of 23 attributes, which were presented in questionnaire form to 72 students in rock climbing courses. Importance and performance means were calculated and plotted on a grid. The instructor's strengths were identified as technical, safety, organizational, and communication skills, while some weaknesses were apparent in actual delivery of the activity. (SV)

Using Importance - Performance Analysis To Evaluate Teaching Effectiveness

By

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Abstract

This paper introduces the use of Importance-Performance Analysis as a method to evaluate teaching effectiveness in a university outdoor activity program. An important feature of this approach is that it examines both the importance and performance of selected attributes and presents them in an easy to interpret format.

Introduction

Evaluation is an important part of any program or service. It can be used to assess program goals and objectives, quality and improvement, gain support and credibility for programs and assist in the marketing of a program or product (Flor, 1995; Ford & Blanchard, 1993). To be effective, evaluation should include input from three sources: from professionals within the organization (management, staff), from professionals outside the organization (consultants and peers), and from those participating in a service or program provided by the organization (Mengak, Dottavio, & O'Leary,1986).

Importance-Performance (IP) is an evaluation technique originally developed for use in the field of marketing. It is based on the premise that evaluation or feedback be obtained from the consumer (or in this case, students or program participants) (Martilla & James, 1977). IP is simple and easy to administer, provides the instructor with a visual representation of *what* attributes are important, *how* important each attribute is, and *how well* the instructor performed on each of the attributes (Guadagnolo, 1985).

Importance-Performance Analysis

Implementing the IP analysis requires four steps. In the initial stage a set of attributes are developed to accurately describe and reflect the topic of the study. Following the identification of attributes, a questionnaire is developed and a survey conducted. The questionnaire requires that respondents be asked to rate the importance of a particular attribute and rate the performance of the instructor on the same attribute. A five-point Likert-type scale is used (1=low, 5=high) for both importance and performance (Mengak, et al., 1985). This step is followed by analyzing data for the importance and performance values for each attribute. In the final step, data are presented by plotting each attribute on an action grid according to its perceived importance and performance (Figure 1).

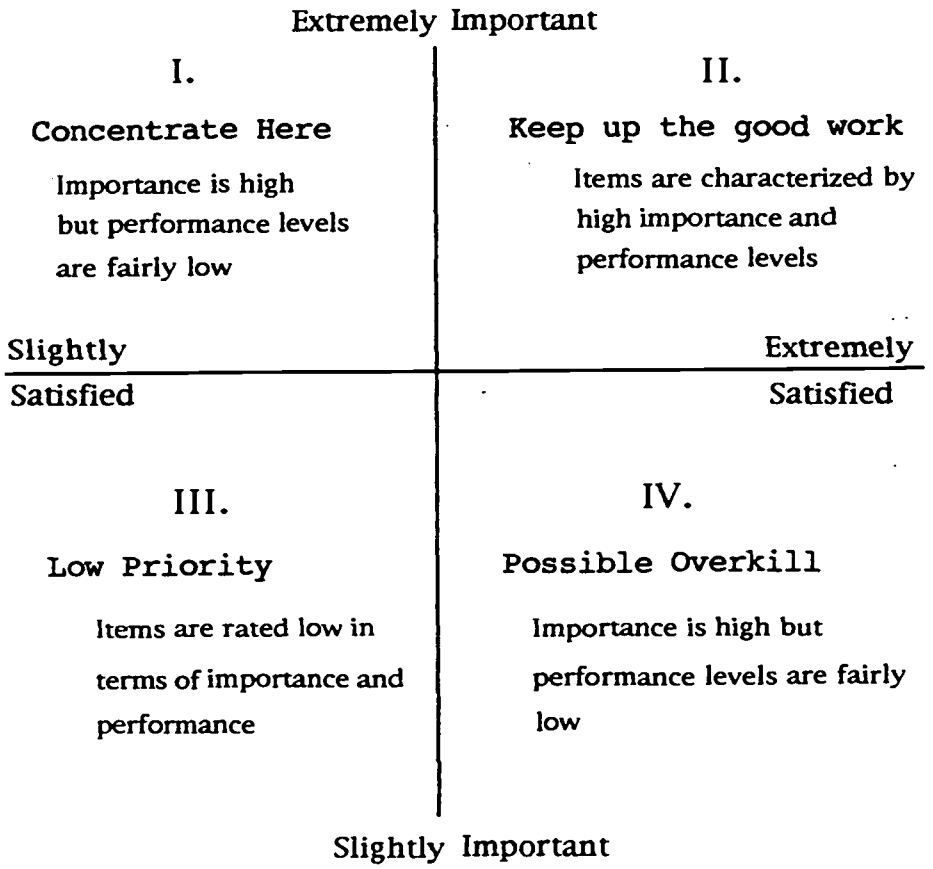
Methods

Generating a list of attributes is an important part of the IP procedure. For the purpose of this paper, a list of attributes for providing

feedback on an instructor's teaching effectiveness were developed by reviewing course and instructor evaluation forms used by a variety of academic departments at North Carolina State University. Teacher evaluation materials from other instutions were also reviewed for possible attributes.

This procedure generated a list of 35 attributes that focused on instructor's teaching effectiveness. This list was reviewed by a group of faculty members in the Department of Physical Education at North Carolina State University. Faculty members were instructed to review the original list of attributes and encouraged to add or delete any attributes they felt were missing or irrelevant. Feedback from this group resulted in a final list of 23 attributes (Table 1).

Figure 1. Action Grid
(Martilla & James, 1977)



Subjects

A convenience sample of students enrolled in the researcher's basic rock climbing and intermediate rock climbing courses during the spring semester 1995 were asked to volunteer as subjects (N = 72) in this study. Those students who volunteered to participate in the study were given a questionnaire to complete during the final class meeting.

Table 1. Instructor's Teaching Attributes
(N = 72)

Code*	Teaching Attributes	Importance Mean	Performance Mean
A	Demonstrates knowledge of the subject	5.0	4.9
B	Use examples to facilitate learning	5.0	4.4
C	Is highly skilled	4.8	4.7
D	Is able to demonstrate skills	5.0	4.6
E	Appropriate material for student's skill level	4.9	4.4
F	Ensures safety of all students	5.0	4.4
G	Uses a variety of teaching techniques	4.3	3.8
H	Reviews previous class material	4.8	4.3
I	Is accessible to students	4.6	4.2
J	Starts and ends class on time	4.6	4.0
K	Enthusiasm for the material being taught	4.4	4.2
L	Uses fair evaluation methods	5.0	4.7
M	Knows students by name	4.8	4.6
N	Provides opportunities to practice skills	5.0	4.5
O	Provides a challenging course	4.8	4.3
P	Presents material in a logical manner	4.8	4.2
Q	Pace of instruction is adequate	4.7	4.3
R	Summarizes material when appropriate	4.5	4.4
S	Stimulates my interest in the subject matter	5.0	4.5
T	Gives feedback to improve skills	5.0	4.3
U	Has a good rapport with students	5.0	4.7
V	Communicates subject material effectively	5.0	4.5
W	Recognizes good student performance	4.8	4.4

*Codes correspond to points plotted on Figure 2.

Analysis of Data

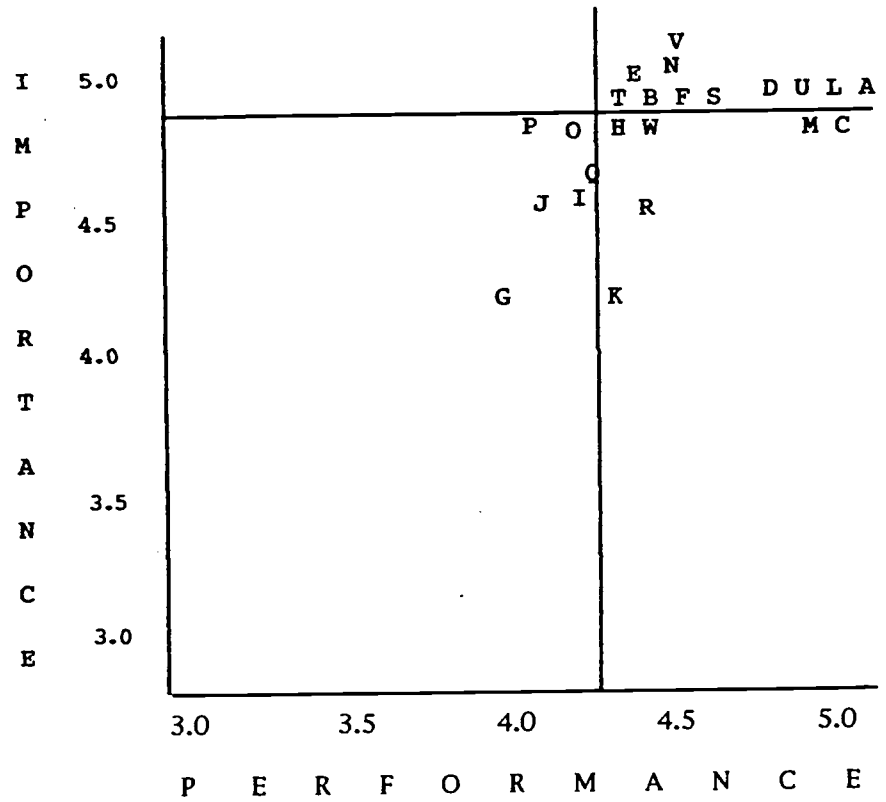
Analysis of data involved calculating the means of the perceived importance and performance attributes. Means were then matched and plotted on an action grid (Figure 2). The x and y axis were positioned on the action grid at the overall mean for each attribute (4.8 for Importance, 4.3 for Performance) This method was adapted from research conducted by Hollenhorst, Olsen, and Fortney (1992) who noted that most attributes tend to be rated high by respondents and therefore very little information is provided relative to problem areas or areas requiring attention. By incorporating the IP analysis, the instructor was able to view the importance and performance of a given attribute and its relationship to all others.

Results

The results of this study suggested that students were generally satisfied with the teaching effectiveness of the instructor. This finding is supported by the high importance and performance ratings noted in the quadrant "keep up the good work" (Figure 2). Students were particularly satisfied with the instructor's knowledge of the subject matter, ability to demonstrate the skills associated with the activity, rapport with students, use of fair evaluation methods, opportunity to practice skills, stimulating interest in the activity being taught, communicating subject matter, ensuring safety, providing feedback to improve skills, and the material being taught is

appropriate for the student's skill level. In addition, the importance scores of six attributes fell on the overall importance mean (4.8). This finding suggests that the instructor is doing well in these areas and should continue.

Figure 2. Action Grid for Teaching Attributes



Four of the attributes; is highly skilled, reviews class material, knows students by name, and recognizes good student performance were identified as high in performance, suggesting that students were satisfied with the instructor's performance and that the instructor continue to stay focused on these attributes. Two attributes, pace of instruction is adequate and material presented in a logical, orderly sequence were scored low on performance. In this situation the instructor may consider channeling more attention into the planning and delivery of course material.

Respondents also identified five items that were low on both importance and performance, thus indicating these attributes as low priority. These attributes included: access to students, beginning and ending class on time, enthusiasm, and using a variety of teaching techniques. One item, summarizing class material was noted by respondents as performing well but not being that important, suggesting that less attention be focused in this area.

Discussion

I-P analysis is an adaptable and easily interpreted technique that is easy to administer, score, and evaluate. Importance-Performance analysis may be a valuable tool in assessing the teaching effectiveness of instructors in university sponsored outdoor activity classes. Through this process, both instructional strengths and weaknesses can be identified. In this study, the instructor's strengths centered primarily around technical, safety and teaching skills, and the instructor's organizational and communication skills. Weaknesses might be in the actual delivery of the activity (challenging course, presentation of material).

Other uses of I-P analysis may include developing a set of attributes to assist program managers and field staff identify strengths and weaknesses of specific outdoor programs or program components, evaluating student's or staff in leadership roles, or including IP as one part of a more comprehensive evaluation process. When used as a repeated measure, I-P analysis may help detect changes in one's teaching effectiveness, program delivery, or other pre-determined factors. In conclusion, Importance-Performance analysis can provide a useful and adaptable alternative to traditional evaluation procedures.

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