An Importance-Performance Appraisal of Cleveland Metroparks Zoo

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Introduction and Background

An evaluation tool finding increasing popularity among leisure service agencies is the importance-performance (I-P) appraisal (Guadagnolo, 1985; Martilla & James, 1977). I-P appraisals have been used in evaluation studies of park districts (Mullins & Spetich, 1987), state parks (Cottrell & Graefe, 1991), special events (Guadagnolo, 1990), and boating tours (Dawson & Buerger, 1992).

The logic and administration of the I-P appraisal are simple. Visitors are asked to rate different service attributes in terms of their importance and performance. Average importance and performance scores are then calculated and graphed in the form of a scatter plot. The scatter plot provides an easy technique for judging the relative importance and performance assigned to the various attributes. In effect, a comparison of I-P scores provides a basis for determining which service attributes an agency may wish to improve, maintain, and, perhaps, de-emphasize.

The I-P appraisal has been limited in its application to zoos. However, a modified use of the I-P appraisal was reported by Wagner (1989) in a study of the Philadelphia Zoological Garden. In that study, visitors were asked to rate how well the Zoo performed in terms of six major areas of visitor services: parking, admissions, food services, souvenirs, grounds, restrooms and water fountains, and directions and special events. Visitors were then asked to check those facets of the above services that were most important to their good time at the Zoo. Wagner reported that areas of concern for the Zoo include ease of weekend parking and cleanliness of restrooms. Well-maintained grounds and ease of getting to different areas scored high in term of both importance and performance.

This report provides a summary of an I-P appraisal of Cleveland Metroparks Zoo in Cleveland, Ohio. The attributes selected for appraisal included a variety of service attributes. Data were collected over a two-week period in August, 1992. Cleveland Metroparks Zoo is owned and operated by Cleveland Metroparks, a separate political subdivision of the state of Ohio. The tax base of the Zoo includes all of Cuyahoga County and Hinckley Township in Medina County.

Research Design

The I-P appraisal was conducted as part of a larger study of Zoo visitors. (Readers may contact the author for a complete report of the study.) The sampling period was stratified by day, time, and entrance. We sampled visitors at 18 different times at two entrances to the Zoo during the summer of 1992. To ensure randomness, visitors were contacted at four-minute intervals. Those contacted were asked if they would be willing to have a questionnaire sent to their homes. As an incentive, visitors were told that a free ticket to the Zoo would be sent to them if they returned a completed questionnaire. Visitors who agreed to participate in the study were asked to print their names and addresses on mailing labels. Of the 482 people contacted, 453 agreed to participate in the study.

Three mailings were employed during the study. In the first, visitors were sent a letter of thanks, the questionnaire, and a postage-paid return envelope. The second mailing was sent one week later. Here, a friendly postcard reminder was sent to participants who had not yet returned a completed questionnaire. One week after this, the third mailing was sent out: new questionnaires and postage-paid envelopes were sent to those who still had not returned a completed questionnaire. A total of 374 participants returned a questionnaire, amounting to an 83% response rate.

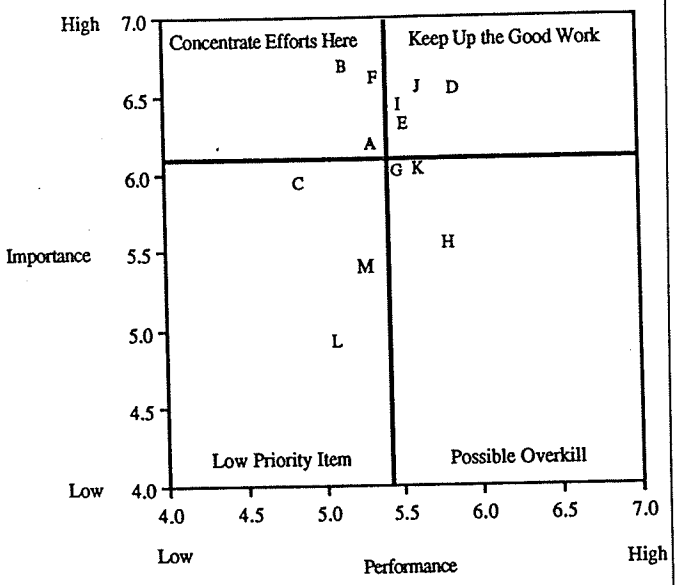
Importance-Performance Questions

The questionnaire included 13 importance-performance (I-P) items. The items included a broad range of attributes likely to be relevant at any zoo (e.g., variety of animals, signs describing animals, cleanliness of restrooms, landscaping, helpfulness of employees). The I-P scale required each visitor to rate just how important each attribute was to them. Response categories for these attributes fell along a seven-point scale, ranging from "not important" (1) to "somewhat important" (4), to "very important" (7). Next, visitors were asked to rate how well Cleveland Metroparks Zoo performed on each of the attributes. Again, seven response categories were used, ranging from "terrible" (1), to "mixed" (4), to "delighted" (7).

Analysis and Results

Mean importance and performance scores were calculated for each of the 13 attributes. Pairs of mean I-P scores for the 13 attributes were then plotted in the form of a grid (see Figure 1). A comparison of I-P scores provided a basis for determining the relative importance visitors assigned to different attributes along with their assessment of how well Cleveland Metroparks Zoo was performing on each of these attributes. Codes and mean scores for each pair of items are provided in Table 1.

Figure 1. Importance-Performance Grid



Four recommended management strategies are implied when using an I-P appraisal: (a) keep up the good work; (b) concentrate efforts here; (c) possible overkill; and (d) low priority. Criteria used to classify an attribute under one of these four management strategies involves comparing mean attribute scores with some cutoff point. Studies that have used a seven-point scale have typically used the five-point as a cutoff (Cottrell, 1991; Guadagnolo, 1990). Hence, attributes with importance scores above the five-point are defined as relatively important; attributes with importance scores below the five-point are defined as relatively unimportant. The same logic holds for performance scores: attributes with performance scores above the five-point are defined as performing relatively well, while attributes with performance scores below the five-point are defined as performing relatively poorly.

Table 1
Mean Importance and Performance Scores for Different Attributes of Cleveland Metroparks Zoo – Broken Down by Recommended Management Strategy

Code Letter	Importance-Performance Attributes	Mean[a] Importance Score	Mean[b] Performance Score	Mean Difference
Keep Up the Good Work				
D	Cleanliness of Zoo	6.56	5.85	0.71
E	Variety of animals	6.35	5.53	0.82
I	Quality of exhibits	6.44	5.52	0.92
J	Cleanliness of exhibits	6.57	5.66	0.91
Concentrate Efforts Here				
A	Availability of restrooms	6.21	5.30	0.91
B	Cleanliness of restrooms	6.94	5.17	1.77
F	Ability to see animals	6.61	5.38	1.23
Possible Overkill				
G	Signs describing animals	6.03	5.50	0.53
H	Landscaping	5.56	5.81	-0.25
K	Easy to read exhibit signs	6.06	5.62	0.44
Low Priority				
C	Ease of getting to different areas	5.96	4.86	1.10
L	Availability of Zoo employees	4.93	5.08	-0.15
M	Helpfulness of Zoo employees	5.42	5.27	0.15
ALL ITEMS		6.11	5.43	0.68

[a] Response categories for importance items ranged from "not important" (1) to "somewhat important " (4) to "very important" (7).

[b] Response categories for performance items ranged from "terrible" (1) to "mixed" (4) to "delighted" (7).

In this study, visitors rated the various attributes relatively high in both importance and performance (Table 1). In fact, only one attribute received a mean score that was less than 5.0. (The mean importance score for availability of zoo employees was 4.9). Since the goal of the Zoo is to improve services, we sought a more strict criteria for classification purposes. Hence, we decided to compare the mean scores for individual attributes to the grand means for the combined importance (6.11) and performance scores (5.43)

Attributes falling under the heading of "Keep Up the Good Work" include those aspects of the Zoo that earned higher than average importance scores and higher than average performance scores. These attributes include cleanliness of the Zoo, variety of animals, quality of exhibits, and cleanliness of exhibits.

Attributes falling under the heading of "Concentrate Efforts Here" were ones assigned higher than average importance scores but lower than average performance scores. These include availability of restrooms, cleanliness of restrooms, and ability to see animals.

Those attributes subsume under the heading of "Possible Overkill" were assigned lower than average importance scores but higher than average performance scores. These include signs describing animals, landscaping, and easy to read exhibit signs.

Finally, "Low Priority" items include attributes assigned lower than average importance scores and lower than average performance scores. These include the following features: ease of getting to different areas, availability of Zoo employees, and helpfulness of Zoo employees.

Conclusions

What features of the Zoo were rated high in importance and performance? Two of these include variety of animals and quality of exhibits. These attributes are really the bread-and-butter of zoos nationwide. Cleveland Metroparks Zoo will remain committed to ensuring diversity in its animal selection and presenting these animals in exciting, innovative exhibits. Two other features were rated high in both importance and performance: cleanliness of the Zoo and cleanliness of the exhibits. This finding corroborates findings reported by Wagner (1989) in a study of the Philadelphia Zoo: people appreciate clean, well-maintained grounds.

Areas that Cleveland Metroparks must work on to improve services include availability and cleanliness of restrooms. These areas were also a source of concern among visitors to the Philadelphia Zoo (Wagner, 1989). Another area of potential concern may be the ease of seeing animals. Future research, however, must first determine if this is a problem of exhibit design or simply inactivity on the part of the animals.

Surprising to the Zoo staff is the fact that visitors rated those attributes dealing with interpretive signs as relatively unimportant. One explanation is that Zoo visitors may regard their outing more as a source of entertainment than as an educational experience. Since education is an important part of the Zoo's mission, new techniques for conveying educational material may need to be explored. Before such changes are undertaken, however, more research is needed in order to determine visitors' perceptions of interpretive signs throughout the Zoo.

Given the dearth of known or published I-P appraisals of zoos, findings from this study are begging for similar kinds of research at other zoos. Differences in instrumentation between studies conducted at Cleveland Metroparks Zoo and the Philadelphia Zoo (Wagner, 1989) make for only tentative comparisons. To determine whether there is commonality in the kinds of things that zoo visitors find important, future I-P appraisals should include a broad range of service attributes for analysis and utilize established survey methodologies.

References

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