National Park Service Superintendents' Views on Interpretation and Education

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Marc J. Stern and Bethany Mutchler
Department of Forest Resources and Environmental Conservation
College of Natural Resources and Environment
Virginia Tech
mjstern@vt.edu

Robert B. Powell
Dept. of Parks, Recreation, and Tourism Management
Dept. of Forestry and Natural Resources
Clemson University
rbp@clemson.edu

Introduction
We conducted a survey of superintendents in the U.S. National Park Service to understand their views on interpretation, education and visitor orientation and how they make resource allocation decisions regarding interpretation and education within their units. This report addresses the following questions:

1. What do NPS superintendents consider to be the roles of interpretation and curriculum-based education within their park units?

2. What do superintendents believe interpretation and curriculum-based education actually achieve in their units?

3. What types of interpretation and education programs do superintendents consider to be most important in their units?

4. What factors influence superintendents' resource allocation decisions?

5. What information do superintendents use to make resource allocation decisions about interpretation and education?

6. What data do/would superintendents find most useful for this purpose?

Methods
NPS Regional Directors emailed all superintendents an invitation and a link to an online survey. In some cases, the survey invitation reached other individuals in the NPS. We thus added a question to the survey to help us determine respondents' positions. We also made follow-up phone calls and inquiries to more definitively determine the positions of survey respondents. This report only reflects responses from those who could be confirmed as superintendents, deputy superintendents, or assistant superintendents. The survey remained open for access on-line from October 4, 2010 to November 2, 2010. One-hundred and fifty-six respondents could be confirmed as superintendents.

Superintendents were asked to define the role of interpretation and education, to rate the importance of interpretation and education in achieving different goals, and to rate the importance of different interpretation and education program types at their park units. Superintendents were also asked to indicate the importance of different factors when making resource allocation decisions and then asked to indicate the five most important factors. The last two series of questions asked superintendents to indicate whether they use and find helpful different types of data for making resource allocation decisions for interpretation and education and what types of data would be useful for this purpose even if it does not yet exist. One-hundred and fifty four surveys were completed by superintendents. Specific survey items are described in the results section of this report.

Results
Superintendents were asked to describe the relative focus of their unit on a scale from entirely natural resource-focused to entirely cultural-resource-focused (Table 1). The majority of participating units were situated on the cultural end of the spectrum, reflecting the general mix of units within the National Park Service. A thorough review of all 393 units at the time of the study suggests that approximately 59% of all units have a predominantly cultural-resource focus, 31% focus primarily on natural resources, and the remainder appearing to be an equal mix.

Table 1: Focus of NPS Park Units

Park Focus	Percentage of parks	Cumulative percentage
Entirely cultural resource focus	13.1	51.6
Predominantly cultural resource focus	38.6	
Roughly equivalent between natural and cultural resources	25.5	25.5
Predominantly natural resource focus	21.6	22.9
Entirely natural resource focus	1.3	

Defining roles for interpretation and education

The survey asked superintendents two open-ended questions regarding what they personally consider to be the role of interpretation and curriculum-based educational programs within their park unit. Write-in responses were coded and tallied to provide a general depiction of superintendents' ideas about these roles (Tables 2 and 3). We divided the sample to account for differences in these roles for units with different foci (natural vs. cultural).

Table 2: What is the Role of Interpretation at NPS Park Units?

Role from coded write-in response	% of natural focus parks	% of equivalent natural/cultural focus parks	% of cultural focus parks	% of total parks
Increase knowledge/ provide education	51.4	64.1	44.3	51.0
Increase understanding	40.0	35.9	25.3	31.4
Increase resource protection/stewardship	45.7	38.5	16.5	28.7
Connect visitors to resource/park	28.6	23.1	31.6	28.7
Enhance visit/enjoyment	20.0	20.5	12.7	16.3
Increase appreciation of resource	10.0	15.4	7.6	12.4
Legal mandate/mission	2.9	7.7	15.2	10.5
Provide orientation	11.4	20.5	3.8	9.8
Increase support for NPS/park unit	14.3	2.6	3.8	5.9
Increase safety	14.3	5.1	1.3	5.2
Increase awareness	5.7	2.6	2.5	3.3
Supplement/enhance school curriculum	0.0	2.6	2.5	2.0
Improve health/fitness	0.0	2.6	1.3	1.3

The most common role mentioned for both interpretation and educational programs was to increase knowledge about a particular topic or theme. Superintendents also commonly reported enhancing visitors' understanding of the significance of park resources, their sense of stewardship and connection to park resources. Superintendents' more commonly stressed the enhancement of the school curriculum and creating partnerships as goals for curriculum-based educational programs.

Table 3: What is the Role of Curriculum-Based Education Programs at NPS Park Units?

Role mentioned in free response answer	% of natural focus parks	% of equivalent natural/cultural focus parks	% of cultural focus parks	% of total parks
Increasing knowledge/education	40.0	56.4	35.4	41.8
Supplement/enhance school curriculum	34.3	28.2	30.4	30.7
Outreach/create partnerships	22.9	28.2	25.3	25.4
Connect visitors to resource/park	20.0	23.1	25.3	23.5
Increase understanding	20.0	12.8	11.4	13.7
Increase support for NPS/park unit	14.3	12.8	10.1	11.8
Increase resource protection/stewardship	20.0	10.3	7.6	11.1
Increase appreciation of resource	14.3	7.7	17.9	9.8
Legal mandate/mission	5.7	5.1	6.3	5.9
Enhance visit/enjoyment	0.0	0.0	10.1	5.2
Increase awareness	8.6	5.1	2.5	4.6
Improve health/fitness	0.0	0.0	1.3	0.7

Goals of interpretation and education and their achievement

The next series of questions asked superintendents to rate the importance of interpretation and education in achieving different park unit goals and the contribution of these programs to the achievement of those goals. Each was measured on a four-point scale. The first question asked "How important is it that interpretation and education accomplish each of the following goals at your unit?" Response categories were: not important (1), somewhat important (2); moderately important (3); and very important (4). The second question asked for the contribution of interpretation and education to the achievement of each goal at the unit. Response categories were: none (1); low (2); moderate (3); high (4).

Table 4 displays importance/achievement scores for the parks in the study. The most important and most highly achieved goals include the enhancement of visitors' experiences, visitor orientation, enhancing appreciation for park resources, and building public support for the park unit. The least important and least achieved goals included creating a more environmentally literate public, influencing visitors' behavior after they leave the park unit, and promoting public engagement in park management issues. We compared the responses of primarily culturally-focused parks, primarily nature-focused parks, and parks with an approximate equal focus. The only significant differences noted were associated with outcomes pertaining to environmental literacy and knowledge about cultural heritage.

Table 4. Importance and Achievement Ratings of Goals for Interpretation and Education.

Goal	Importance	Achievement
The enhancement of visitor experience	3.96	3.57
Orienting visitors to what the park unit has to offer during their visit	3.88	3.64
Enhancing appreciation for park resources	3.88	3.41
Building public support for the park unit	3.77	3.23
Resource protection through visitor education (influencing on-site behaviors)	3.75	3.1
Enhancing public knowledge about cultural heritage	3.72	3.31
Enhancing the academic experience of students	3.64	3.13
Enhancing visitor safety	3.63	3.19
Building public support for the National Park Service	3.63	3.01
Improving the public's level of trust for the agency	3.29	2.97
Creating a more environmentally literate public	3.23	2.63
Influencing visitors' behaviors after they leave the park unit	3.19	2.63
Promoting public engagement in park management issues	3.13	2.52

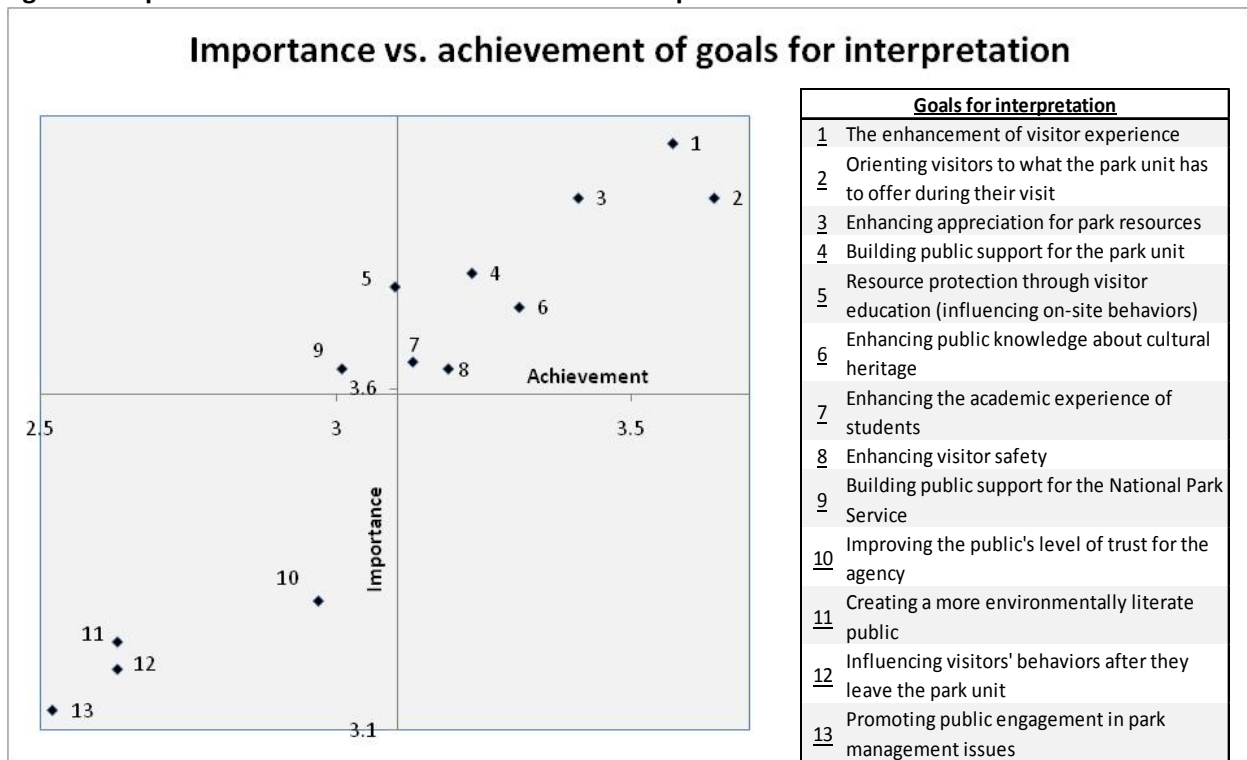**Figure 1. Importance vs. Achievement of Goals for Interpretation**

Figure 1 shows graphically the importance and achievement of interpretation and education programs for different goals in park units as perceived by superintendents. The axes cross at the mean scores for each question. The chart suggests that most goals are achieved in relation with their importance (though all goals had higher means for importance than their achievement). Two exceptions involve *resource protection through visitor education* and *building public support for the National Park Service*. In other words, survey results suggest that superintendents generally feel that interpretation and education are commonly underperforming in these areas.

Importance of program types
The survey asked superintendents to rate each of the program types in Table 5 in terms of their relative importance for meeting the management objectives of their units. On-site programs and the park website rated the highest on average, with video podcasts receiving the lowest scores. Open-ended comments revealed that many parks did not have a wide suite of interpretation and education programs types.

Table 5. Importance of Program Types

Program type	Importance (mean- 0=not important, 10=extremely important)
On-site visitor orientation (staffed visitor center)	8.99
On-site live interpretive programs	8.81
Park website	8.76
On-site exhibits	8.60
On-site education for school groups	8.47
Signage for visitor orientation	8.40
Printed materials for visitor orientation	8.15
Park film	7.55
School visits by park rangers	7.49
Off-site community programs	7.33
Video podcasts	6.27

Decision-making
Superintendents were asked to rate the importance of the factors listed in Table 6 in their decision-making about resource allocations in their units. They were first asked to rate each on a four-point scale: not important (1); somewhat important (2); moderately important (3); very important (4). They were then asked to select up to five items they consider to be the most influential factors in their decision making processes. Most showed a strong focus on achieving the objectives of their units and elements of return on investment. Many also rated elements of adaptive management and the maintenance of successful programs quite highly. The concept of invested-costs did not seem particularly important to superintendents, as few rated prior investments as a meaningful consideration.

Superintendents were also asked about the types of data they currently use for making resource allocation decisions for interpretation and education (Table 8). The majority of NPS superintendents found input from the Chief of Interpretation or Resource Education to be helpful in making resource allocation decisions. Also helpful were visitor demand, number of programs offered, number of visitors served, and inventories of topics, or themes covered. Write-in responses for those selecting the "other" response category included staffing and financial constraints, multiple forms of feedback and input from multiple stakeholders (including staff, visiting public, and partners), personal opinions and observations, and comparisons to other units. The least seldom used data included research results on program outcomes. Superintendents were then asked what data would be most useful to them (whether currently existing or not). Table 9 displays the results. The most coveted data included assessments of the impacts of programs on participants, followed by visitor demand for programs, current attendance numbers, and costs associated with maintaining programs. Among the least useful data were general park visitor statistics, staff training levels, and the spatial mix of where programs are offered within the park.

Table 6. Factors that Influence Resource Allocation Decisions

Factors	Mean	% in top 5
Relative importance of program area to main objectives of my park unit	3.81	71.4
Likelihood of measurable long-term achievement	3.56	47.4
Responding to emergent needs/ changing conditions on the ground	3.51	46.8
Maintaining or enhancing successful program areas	3.50	38.3
Consensus of management team	3.43	31.8
Expected return on investment delivered by program area	3.32	33.8
Quality of individuals working in the program area	3.16	26.0
Eliminating poorly performing programs	3.16	10.4
Public demands	3.14	18.8
Directions from superiors	3.10	19.5
Improving a struggling program area	3.10	13.6
Current objective measures of program area success	3.05	7.8
Availability of data for monitoring and evaluating program area	3.01	11.0
Demands from within the agency	2.89	5.2
Park Service-wide initiatives	2.84	5.8
Likelihood of measurable short-term achievement	2.74	9.1
Political pressures	2.68	7.1
Existing guidelines or standard operating procedures	2.67	3.9
Distributing resources as equitably as possible across program areas	2.39	16.2
Prior investment(s) to program area	2.36	1.3

Table 8. Data Used for Resource Allocation Decisions

Data Types	Don't use (%)	Use, but not very helpful (%)	Use, helpful (%)
Input from Chief of Interpretation or Resource Education	8.0	2.7	89.3
Visitor demand	21.4	11.7	66.9
Numbers of programs offered	12.1	22.1	65.8
Numbers of visitors served	12.0	23.3	64.7
Inventory of themes or topics covered	25.5	18.8	55.7
General visitor surveys	22.7	32.0	45.3
Staff training levels and/or certifications	35.3	28.0	36.7
Demographics or other descriptions of attendees	47.0	22.8	30.2
Research results on program outcomes	58.0	13.3	28.7
Other	87.2	1.3	11.5

Table 9. Data that Are/Would Be Useful for Resource Allocation Decisions

Data useful for resource allocation	Mean (1=not useful; 4=very useful)
Assessments of the impacts of programs on participants	3.74
Demand of visitors for specific programs	3.62
Number of visitors attending interpretive and educational programs	3.53
Specific costs of maintaining each program	3.29
Number of programs provided	3.22
Lists of specific themes or topics addressed by different programs	3.18
Comparisons of programs to established best practices	3.15
Demographic make-up of participants in programs	3.11
General park visitor statistics	2.87
Staff training levels and certifications	2.81
Spatial mix of where programs are offered within the park	2.66

Discussion

NPS superintendents were asked to describe the roles of interpretation and curriculum-based education programs at their park units in two free response questions. The most prevalent roles of interpretation at their park units were increasing visitor knowledge and educating visitors, increasing understanding of the significance of park resources, increasing resource protection and stewardship, and connecting visitors to the resource or to the park. The most prevalent roles of curriculum-based education programs were increasing knowledge and educating visitors, supplementing or enhancing school curricula, outreach and creating partnerships, and connecting visitors to the resource or to the park. Superintendents indicated that on-site visitor programs and the park websites were the most important for meeting park management objectives.

They were also asked to rate potential goals for interpretation in terms of their importance and achievement. Overall, superintendents viewed the most important goal for interpretation and education to be enhancing the visitors' experience. For the most part, superintendents perceived that the most important goals were being achieved at rates commensurate with their importance, with two exceptions; superintendents felt interpretation and education were falling short on enhancing resource protection through visitor education and on building support for the National Park Service.

When superintendents were asked to rate factors that influence general resource allocation decisions, the most important factors included the relative importance of the program area to the main objective of the park unit, the likelihood of measurable long-term achievement, and responding to emergent needs and changing conditions on the ground. Superintendents were also asked to indicate the five most important factors. Over two-thirds of superintendents indicated that the relative importance of a program area to the main objective of the park unit is one of the most important factors that influence their decisions about resource allocation in the park unit. Overall, the results suggest a focus on objectives-based management, efficient resource allocation, and adaptive management.

When asked about the use of data in making decisions for resource allocation for interpretation and education programs, 89.3% of the superintendents surveyed stated that they used input from the Chief of Interpretation or Resource Education. Other important data included visitor demand, numbers of programs offered, and numbers of visitors served. The least used data were research results on

program outcomes, with fewer than 58% of superintendents using this type of data. Meanwhile, superintendents indicated that the most helpful data, whether currently existing or not, would be assessments on the impacts of programs on participants, suggesting a broad-based desire for more research in this arena. Other potentially useful data types include visitor demand for specific programs and the number of visitors attending the programs. Ironically, the least useful data types are among those most commonly recorded, including general park visitor statistics and staff training levels and certifications.

Implications for Assessment Tool Development
This study was undertaken to investigate the specific information that superintendents currently use, as well as desire, to inform their resource allocation decisions pertaining to interpretation and education. This information is seen as vital for ensuring the future utility of the Assessment Tool for Interpretation, Education, and Visitor Orientation. The results of the superintendent study support the preliminary direction that the NPS Standards Working Group and the researchers have taken to develop the new Assessment Tool for Interpretation, Education, and Visitor Orientation. The results of the study support the inclusion of indicators of program quality, public demand for a service, attendance, relative costs of programs per visitor served, the number and mix of programs (audiences served, location, types, etc.), and the specific themes or topics addressed by different programs. In addition, the results pertaining to the factors that influence resource allocation (table 6) also suggests that the Assessment Tool should allow for park management teams to assess the relative importance of a particular program to the achievement of the NPS unit's goals and mission. Ultimately the results of this study will inform the development of the assessment tool and the authors would like to thank the superintendents for their participation in this study.