Visitor perceptions of the roles of tour guides in Kakum National Park in Ghana

Yaw Boakye Agyeman and Nana Boaa Antwi-Bosiako

Abstract: National parks are global cornerstones supporting not only biodiversity conservation but also educational and recreational opportunities. Based on these opportunities, ecotourism has gained wide application in national parks as a sustainable form of tourism, providing visitors with recreational and educational opportunities to garner support for biodiversity conservation. Tour guides play vital roles to support these opportunities while ensuring appropriate behaviours and attitudes of visitors in the park. The performance of these roles potentially influences visitors’ satisfaction, which has the potential to ensure repeat visits, referrals, and financial success of national parks and other protected areas. However, the literature indicates limited studies examining visitor satisfaction with tour guiding. Therefore, this paper investigated visitors’ perceptions of the importance and performance of the roles of tour guides in order to identify areas needing management interventions to improve visitor satisfaction. Using convenient sampling, questionnaires were administered to 200 visitors to rate the importance and performance of a set of role attributes of tour guiding. The data were subjected to descriptive, gap and grid analyses. The results showed that there were role attributes that were...
important to the experiences sought by visitors. Also, some attributes were identified that required management intervention and re-allocation of resources to improve visitor satisfaction.

**Subjects:** Tourism; Tourism Management; Tourism Behaviour

**Keywords:** National parks; ecotourism; tour guiding; importance-performance analysis; service quality; visitor satisfaction

1. **Introduction**

National Parks do not only promote biodiversity conservation but also support recreational, aesthetic and educational values important to society (Mondino & Beery, 2019). With ecotourism emerging as a significant form of sustainable tourism in such areas, it strives to enhance visitors’ understanding of and appreciation for natural and cultural environments (Wearing & Neil, 2009). Ecotourism is tourism to natural areas that support environmental conservation, social equity and environmental education to maintain economic viability without degrading the environment (Stronza et al., 2019). One of the main objectives of ecotourism is to create “responsible travel” that promote respect for the natural environment and culture based on education (Fennell, 2014).

Tour guides are the vital link between ecotourism and visitors because the roles they play support the ecological, economic and socio-cultural functions and the appropriate behaviours and attitudes of visitors (Fennell, 2014). These roles do not only clarify and communicate parks’ recreational and educational functions but also facilitate visitor satisfaction (Hansen & Mossberg, 2017). With the tourism industry considered as a typical service industry, examining visitor satisfaction has become a central theme because of its potential in ensuring repeat visits, recommendations, competitiveness and financial success of destinations (Huang et al., 2015; Weiler & Black, 2015). Satisfaction involves “positive feelings that an individual gains from engaging in activities and the degree that he or she is content with those experiences” (Littlejohn et al., 2016, p. 203).

The extant literature indicates that tour-guiding studies have evolved over the years and some studies have focused on roles played by tour guides (Cohen, 1985; Hansen & Mossberg, 2017; Randall & Rollins, 2009; Seyitoğlu, 2020). Other studies reported on the tour guides’ compliance with ecotourism principles (SIRakaya & McLellan, 1998), and engagement in interpretation (Ababneh, 2017). Some studies examined the knowledge, attitudes and behaviour of visitors (Cook, Cook et al., 2019; Hofman & Hughes, 2017; Juma et al., 2020), visitor segmentation (Chen, Hwang & Lee, 2006), tour guiding quality assurance system (Ap & Wong, 2001; Huang & Weiler, 2010), and perceptions and behaviour of tour guides (Kong, 2014). Despite these appreciable advances in tour guiding scholarship, there have been relatively few studies examining visitor satisfaction based on the evaluation of the value and performance of tour guides’ roles (See Ap & Wong, 2001; Black & Ham, 2005; Littlejohn et al., 2016; Zhang & Chow, 2004). Therefore, this paper investigated visitors’ perceptions of the importance and performance of the roles of tour guides in order to identify areas needing management interventions to improve visitor satisfaction. Specifically, the paper sought to; 1) Identify the roles of tour guides important to visitors; 2) Examine the perceived deficiencies in the roles performed by tour guides; and 3) Identify the attribute roles requiring management intervention to improve visitor satisfaction. The importance-performance perspective helps identify the key attributes that define the expectations of visitors and determine the level of visitor satisfaction with tour guiding in protected areas. It compares the importance and performance of tour guiding which would allow management of protected areas to identify those attributes of tour guiding that contribute to successful and satisfactory tours. It would enable management to assess the performance of tour guiding and identify deficiencies that would require interventions to improve visitor satisfaction with tour guiding.
1.1. Literature review

1.1.1. National parks and ecotourism
National parks are global cornerstones supporting biodiversity conservation, spiritual, scientific, educational, and recreational opportunities (Dudley et al., 2010). Based on these opportunities, ecotourism has gained wide application in national parks as a sustainable and responsible form of tourism (Nguyen, 2020; Panta & Thapa, 2017; Ojedam, 2012). It provides visitors with nature, recreational and educational opportunities to garner support for biodiversity conservation and host communities (Esfandiar et al., 2020; Fennell, 2014; Nguyen, 2020). Visitors’ increasing attraction to such areas makes ecotourism a potential tourism market (Hausmann et al., 2018). As a result, visitor satisfaction has become vital to ecotourism’s long-term sustainability (Newsome, Rodger, Pearce, & Chan, 2019). Ceballos-Lascurain (1993) defined ecotourism as “travelling to relatively undisturbed or uncontaminated natural areas with specific objectives of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas” (p. 12). One major goal of ecotourism is contributing to ecological, economic and socio-cultural sustainability, through the roles played by tour guides (Fennell, 2014).

1.2. Roles of tour guides
Tour guides play multifaceted roles, serving as a vital link between ecotourism and visitors in national parks. A review of the literature indicates they are interpreters/educators, storytellers, service providers, information givers, planners, cultural interpreters, activity experts, environmental conservators, and choreographers (Bogdan & Lasiński, 2019; Rokenes, Schumann, & Rose, 2015; Weiler & Walker, 2014; Wong & Lee, 2012). Cohen (1985) identified and organized these roles as; instrumental, social, interactionary, and communicative. These were captured in a four-cell conceptual framework. However, a limitation of Cohen’s (1985) framework was identified by Weiler and Davis (1993) who argued for a third sphere of the role of tour guides. As a result, they proposed a modification of Cohen’s framework by incorporating the resource management (Table 1), representing the sphere on a guide’s roles as a motivator and environmental interpreter (as cited in Weiler & Black, 2015).

1.3. Tour guides roles and visitor satisfaction
Tour guides are viewed as important front-liners in the tourism industry because of the performance of the services they provide, which potentially influence visitors’ experiences and

| Table 1. Roles of tour guides |
|-------------------------------|
| **Spheres/orientation** | **Outer Directed** | **Inner Directed** |
| **Leadership** (Group focused) | **Instrumental**  |
|  | - Navigation.  |
|  | - Direction giving.  |
|  | - Providing physical access  |
|  | - Shepherding a group.  |
| **Mediatory** (individual focused) | **Interactionary**  |
|  | - Go-between.  |
|  | - Facilitating engagement with locals and local services.  |
| **Resources management** (focused on the environment) | **Motivator**  |
|  | - Motivating and managing visitors’ on-site behaviour to minimize adverse effects on the natural and cultural environment.  |
| **Social** | - Entertaining.  |
|  | - Managing tension and group dynamics.  |
|  | - Maintaining group morale.  |
| **Communicative** | - Informing.  |
|  | - Mentoring.  |
|  | - Interpreting.  |

Source: Weiler and Black (2015)
satisfaction (Huang et al., 2010; Weiler & Black, 2015). Particularly, they are the vital link between ecotourism and visitors because of their roles contribute to increased knowledge, satisfaction, attitudes and behaviour modification in visitors (Hofman & Hughes, 2017; Juma et al., 2020; Kong, 2014). The literature suggests that the performance of tour guides positively affect visitor satisfaction with pro-place behaviours, such as return visitation and recommendations to others. In effect, visitor satisfaction is a key determinant of financial performance, loyalty and repeat visits (Deng, 2007; Weiler & Black, 2015), creating a positive correlation between visitor satisfaction and the long-term economic success and competitiveness of tourism destinations (Ban & Ramsaran, 2017; Coglan, 2012).

In the ecotourism literature, visitors to national parks, like other customers, usually have initial expectations of the services provided, formed through previous experience, advertising, word-of-mouth and product traits (Oliver, 1997). The ultimate goal of delivering service and experience at the destination is to increase the market competitiveness of the protected areas (Weiler & Ham, 2001). Consequently, studies advocate for the measure of satisfaction through measuring service quality in national parks to increase ecotourism competitiveness (Said et al., 2013; Yusof et al., 2014). Evidently, measuring the service quality has management implications as it helps to develop knowledge of the level of visitor satisfaction, and if there is a discrepancy, to develop service recovery strategies (Endalkachew & Endalew, 2018; Ban & Ramsaran 2017). Service quality is a direct function of what customers expect and what they perceive (Kotler, 2014). The outcome of service quality is whether customers are satisfied or not. To calculate service quality, the differences between expectations and performance need to be compared (Manhas & Tukamushaba, 2015). This gap between expectation and performance, conceptualized as the expectancy-disconfirmation theory, stipulates that the difference between expectation and performance determine the level of satisfaction (Oliver, 1980). The result of these differences can only be known when services are consumed (Litvin et al., 2008). If service performance meets or exceeds expectations, then tourists will be satisfied, but, if performance falls below expectations, tourists could become dissatisfied (Akama & Kieti, 2003; Žabkar et al., 2010). When a service fails to meet customer's expectation, a service failure occurs (Michel, 2001). Understanding the types of service failure encountered is the starting point to developing effective service recovery strategies and improving customer retention (Mack et al., 2000). Assessment based on the expectancy-disconfirmation theory offers the capability of identifying the strengths and weaknesses for management intervention (Wang, 2016).

1.4. Measuring service quality

The literature suggests that customers determine the quality of the service received (Parasuraman et al., 1985). In measuring the service quality, the initial and latter assessments of these services from the perspective of visitors is preferred. The Importance-Performance Analysis (IPA) has proven to be of a popular managerial tool in measuring the initial and latter assessments by visitors. It is based on the assumption that satisfaction is affected by both the importance of an attribute and the perceived performance of that attribute. Therefore, it compares both the important attributes to the performance of those same attributes, thereby measuring visitor satisfaction and helping to prioritize service quality improvements in protected areas and other systems (Agyeman et al., 2019; Bhalla & Bhattachary, 2019; Taplin, 2012). It enables management to reallocate resources to appropriately critical attributes underperforming (Bowie & Chang, 2005) and identify the most appropriate strategic options to enhance competitiveness (Lai & Hitchcock, 2015).

According to Martilla and James (1977), IPA presents results in four quadrants, using the means of the scale as the cross-points. Bacon (2003) referred to it as a “scale-centered quadrants approach” and characterized them as follows: (I) concentrate here, (II) keep up the good work, (III) low priority, and (V) possible overkill. However, some researchers (See Hawes & Rao, 1985) used a diagonal line to separate regions of differing priorities in which the region above the line represents a high priority for improvement and the region below represents a low priority. Bacon (2003) conducted an empirical study to compare the performance of the two quadrants
approaches with a “diagonal line model”. He concluded that the performance of the “diagonal line model” was generally better than the quadrant model.

IPA complements analysis with gap and grid analyses. The gap analysis employs and uses the means scores of importance and performance to determine whether or not some attributes are not performing and need management interventions as a measure of satisfaction (Taplin, 2012). In this case, the means of the importance is subtracted from the performance means, using a paired sampled t-test to determine whether the gaps are statistically significant. A positive result portrays that what visitors perceived important, are also performing whiles a negative result indicates important but not performing attributes (Taplin, 2012; Tonge et al., 2011). The grid analysis uses the means of the role attributes to create a two-dimensional grid with a diagonal line separating the grid into regions above and below the line.

2. Materials and methods

2.1. Study area

The study was carried out at Kakum National Park (KNP; Figure 1) located in the Twifo Hemang Lower Denkyira and Assin Districts of the Central Region in Ghana. It was the first protected area gazetted as a national park in 1992 in Ghana by Legislative Instrument 1525 (as cited in Agyeman et al., 2019). The park lies between latitudes 05° 20’N and 05° 40’N and longitudes 1° 18’ W and 1° 26’ W. It has an estimated area of 210 km². It is located in the moist evergreen forest with other vegetation types, such as swamp and riverine forests. The area is generally undulating with highlands levels ranging between 150 and 250 m above sea level. Rainfall is bimodal with the mean annual amount of between 1500 and 1750 mm (Monney, Dakwa, & Wiafe, 2010).
Table 2. Roles attributes of tour guides

| Role Attributes and dimensions | A. Leadership: Instrumental |
|-------------------------------|-----------------------------|
|                               | (1) They should set a pace for the tour that is comfortable for you. |
|                               | (2) They should discuss hazards that may be present in the park. |

|                               | B. Leadership: Social |
|-------------------------------|-----------------------|
|                               | (3) They should handle tension or conflict quickly and effectively. |
|                               | (4) They should promote a social and happy group environment. |

|                               | C. Mediatory: Interaction |
|-------------------------------|---------------------------|
|                               | (5) They should reduce conflict with other groups. |
|                               | (6) They should keep the group organized and on schedule. |

|                               | D. Mediatory: Communicative |
|-------------------------------|-----------------------------|
|                               | (7) They should provide information on local culture. |
|                               | (8) They should provide field guides and books to the group. |

|                               | E. Resource Management: Motivator of responsible behaviour |
|-------------------------------|----------------------------------------------------------|
|                               | (9) They should discuss the rules and ethics to protect the park with the group. |
|                               | (10) They should highlight the importance of removing any garbage in the park. |

|                               | F. Resource Management: Environmental interpreter |
|-------------------------------|--------------------------------------------------|
|                               | (11) They should help you develop keen awareness and appreciation of the park. |
|                               | (12) They should increase your knowledge and understanding of the park. |

Source (Weiler & Davis, 1993)

to the International Union for the Conservation of Nature (2010), the park is an important conservation area because it serves as home to many globally endangered species notably, the forest elephant, the bongo and the yellow back duiker. Also, it is recognized as an Important Bird Area recognized with an estimated 266 bird species, including eight species of global conservation concern such as white-breasted Guinea fowl (Appiah-Opoku, 2011).

The rich biodiversity, and recreational activities, such as the canopy walkway, nature walk, camping, cultural display and nature tour and interpretation, transformed the park into a highly patronized tourist destination in Ghana. Over the past years, visitation increased from about 27,000 tourists in 1996, 164,886 visitors in 2012 to 131,631 visitors in 2016. This growth reflects the level of visitations and corresponding revenues generated over the same period. In 2012, the revenue was GHS 512,368, increasing to GHS 787,600 in 2016 (Ghana Statistical Service, 2018). Over the years, the park has received some awards, including Ghana Tourist Attraction of the Year for 1997, Conde Nast Traveler Magazine’s 1998 Ecotourism Destination of the Year and the 1999 British Airways Tourism for Tomorrow (Omland, 1997). Despite these achievements, the park is experiencing a decline in visitation, recording 439,323 tourists in 2014, 270,779 tourists in 2015 and 113,830 tourists in 2017 (Ghana Heritage Conservation Trust, 2018). Though tour guides play active roles in the cultural and nature tours and interpretation, with the declining visitation over the years, there has been no attempt to investigate how tour guides are performing in terms of their roles and how these contribute to visitor satisfaction. As there is a positive correlation between visitor satisfaction and the long-term economic success and competitiveness of tourism.
destinations (Ban & Ramsaran, 2017; Coghlan, 2012), examining the perceived roles of tour guides is important.

2.2. Research design
A sample size of 200 respondents was selected using convenience sampling at the information centre within the park. The centre provides visitors with information about recreational and tour guiding opportunities. In selecting the respondents, the researcher approached the visitors at the

| Variable                  | Sample Size(n) | Percentage (%) |
|---------------------------|----------------|----------------|
| Gender                    |                |                |
| Male                      | 90             | 45.7           |
| Female                    | 107            | 54.3           |
| Age                       |                |                |
| Young (20 years and less) | 56             | 28.4           |
| Young Adult (21-24 year)  | 45             | 22.8           |
| Adult (25-34 years)       | 49             | 24.9           |
| Old (35 years and over)   | 47             | 23.9           |
| Marital Status            |                |                |
| Single                    | 135            | 68.5           |
| Married                   | 56             | 28.4           |
| Others                    | 6              | 3.0            |
| Education                 |                |                |
| Secondary                 | 48             | 24.4           |
| College                   | 2              | 1.0            |
| Tertiary                  | 147            | 74.6           |
| Employment                |                |                |
| Students                  | 104            | 52.8           |
| Employed                  | 92             | 46.7           |
| Unemployed                 | 1              | 0.50           |

Table 4. Ranking of importance assigned to the roles attributes of tour guides

| Tour Guide Role Attributes | Ranking | Mean  | Std. Deviation |
|----------------------------|---------|-------|----------------|
| (1) Leadership: Instrumental | 1       | 4.36  | 1.04           |
| (2) Leadership: Social     | 4       | 4.20  | 1.06           |
| (3) Mediatory: Interaction  | 5       | 4.12  | 1.06           |
| (4) Mediatory: Communicative | 6     | 3.73  | 1.14           |
| (5) Resource Management: Motivator of responsible behaviour | 3 | 4.22 | 1.06 |
| (6) Resource Management: Environmental interpreter | 2 | 4.27 | .97 |
counter of the information centre. Those who were willing to participate in the study were given the self-administered questionnaires. Two sets of questionnaires (i.e., pre-trip and post-trip questionnaires) were given to respond. The questionnaires contained 12 attributes grouped into six dimensions based on the Weiler and Davis (1993)’s model with a focus on tour guides’ role attributes: leadership, mediatory and resource management. The pre-trip questionnaire asked visitors to rate the role attributes of their guides perceived as important to them using a 5-point Likert scale ranging from extremely unimportant to extremely important. The post-trip questionnaire asked the same visitors to rate the performance of the same role attributes using a 5-point Likert scale ranging from extremely unimportant to extremely important.

Table 5. Gap Analysis of the Tour Guide Role Attributes at Kakum National Park

| Tour Guide Role Attributes                        | Importance Means (l) | Performance Means (P) | Gap Value (P-I) | P Value |
|--------------------------------------------------|-----------------------|-----------------------|----------------|---------|
| Leadership: Instrumental                          | 4.36                  | 4.19                  | −0.17          | .035*   |
| Leadership: Social                               | 4.20                  | 4.11                  | −0.09          | .208ns  |
| Mediatory: Interaction                           | 4.12                  | 4.13                  | 0.01           | .950ns  |
| Mediatory: Communicative                         | 3.73                  | 3.67                  | −0.06          | .019*   |
| Resource Management: Motivator of responsible behaviour | 4.22                  | 4.23                  | 0.01           | .000*   |
| Resource Management: Environmental Interpreter   | 4.27                  | 4.27                  | 0.00           | .399ns  |

Figure 2. Importance-Performance analysis grid.
Likert scale ranging from strongly agree to strongly disagree. These questionnaires also captured the demographics of respondents, such as gender, age, marital status, education and employment status (See, Table 2).

The questionnaires were pretested with 10 visitors to check clarity in the first week of June 2017. The feedback helped to make the necessary corrections before administering them. The questionnaires were administered within three weeks from 8 am to 5 pm each day in June 2017. Before the data collection, permission was sought from the park management. Respondents willing to participate were given the pre-trip questionnaires (Importance) to fill before going for a tour and upon returning, they were asked to fill out the post-trip questionnaires (Performance). Each visitor was given a number and the same number written on both the pre-trip and post-trip questionnaire as a way of identifying the visitor upon return from the tour guiding. A letter was attached to the questionnaires indicating the purpose of the study and the right to opt out anytime they felt like it. Respondents were asked not to write their names to ensure anonymity and confidentiality.

2.3. Data analysis
Each variable in the questionnaires (pre-trip and post-trip) was coded and entered into SPSS (Statistical Package for the Social Sciences) version 24. The data were subjected to descriptive, gap, and grid analyses. The descriptive analysis was performed on the demographic and importance-performance data of the respondents. The means were used to rank the attributes in a hierarchical order to identify attributes of importance to the respondents. Also, a gap analysis was determined by subtracting the importance means from the performance means to produce a gap value or scores, which determine whether there is a gap between visitors’ expectation and experience of the park based on the role attributes of tour guides. The statistical significance at the 5% level and standard deviation were then determined on the gap values using a paired-samples t-test. Also, the means of importance and performance for each attribute provided the coordinates for placement in a two-dimensional matrix (i.e., grid analysis) using excel, with crosshairs located at the grand means of both the importance and performance of the attributes to produce a diagonal line showing the distribution of the role attributes above and below the line (Bacon, 2003; Ryan & Cessford, 2003), which suggest the role attributes requiring management intervention to improve visitors’ satisfaction with tour guiding in the park.

3. Results

3.1. Visitor demographics
Questionnaires were administered to 200 respondents at the information centre of the park. Out of these, 197 accepted the invitation and completed the questionnaires, resulting in a response rate of 98.5%. The incomplete questionnaires were attributed to the tiredness and lateness of the tours as reasons given by the respondents, for not filling the performance questionnaires (i.e., post-trip). Table 3 shows the demographic characteristics of the respondents.

3.2. Important Role Attributes of Tour Guides
Table 4 below shows the ranking of the important role attributes of tour guides in descending order based on the mean scores. The most important role attribute according to the respondents was “Leadership: Instrumental” with a mean of 4.36. The least important attribute was ‘Mediatory: Communicative; with a mean of 3.73.

3.3. Gap in the Role Attributes of the Tour Guides
The gap analysis was calculated by subtracting the Importance means from the Performance means of the role attributes of the tour guides. The results show generally poor performance of the role attributes indicated by the negative gap values, except for ‘Mediatory: interaction” and “Resource management: motivator of responsible behaviour”, even though the differences were negligible. Also, the differences between the Importance and Performance of the roles attributes were not significant statistically (i.e., p < .001, .01 and .05) with the exception of Leadership
Instrumental, Mediatory: Communicative and Resource Management: Motivator of responsible behaviour (See, Table 5).

*a*, **, & ***denote gaps statistically significant at .05, .01 and .001 level.

3.4. Grid Analysis of the Role Attributes of Tour Guides

The mean scores of Importance and Performance were plotted into a two-dimensional grid (See, Figure 2). Using the diagonal-line approach, the grid analysis shows two separate regions of attributes above and below the diagonal line. The attributes above the line represent a high priority for improvement. These were: “Mediatory: Interaction” (1); “Resource management: motivator of responsible behaviour” (2); and “Resource management: Environmental interpreter” (3). The dimensions below represent attributes of low priority to management. These were: “Leadership: Instrumental” (4); “Leadership: Social” (5); and “Mediatory: Communicative” (6). However, it is worth noting that, the “Leadership: Social” dimension is found close to the diagonal line.

3.5. Discussion of Results

The paper aimed to investigate visitors’ perceptions of the importance and performance of the roles of tour guides in order to identify areas needing management interventions to improve visitor satisfaction at Kakum National Park in Ghana. The findings of the study showed that, generally, visitors placed relatively high importance on some roles of tour guides than the others. For instance, they identified “Leadership: Instrumental” as the most important role and “Mediatory: communicative” as the least role important to visitor experience and satisfaction. Randall and Rollins (2009) conduct a similar study at the Broken Group Islands (BGI) section of Pacific Rim National Park in Canada and found that visitors rated “Resource Management: Motivator of Responsible Behavior” as the most important role attribute, contrary to the finding of this study. However, the least important role reported was “Mediatory: Communicative”, which is consistent with this study. The identification of “Leadership: Instrumental” role as important to visitor expectation could be attributed to the perceived risk in being in a park and the need to be guided. Meaning, visitors place emphasis on safety and comfort in unfamiliar territory such as a national park as the basis for their satisfaction. Particularly, safety has been identified as an important element in tour guiding where visitors find themselves in an unfamiliar territory (Bhalla & Bhattachary, 2019; Weiler & Walker, 2014). The expressed low interest in “Mediatory: Communicative” suggests a corresponding low interest in self-guided tours with field guides and books, a service, which the visitors probably know, is not offered at the park. However, it will be unexpected to suggest that visitors to the park were not interested in the local culture. A similar observation was made in Randall and Rollins (2009)’s study. Such low interest in the local culture among the expectations held by visitors could be attributed to the non-existence or poor promotion of local culture by the park. Because Oliver (1987) noted that the expectation of visitors could be formed through previous experience, advertising, and word of mouth. The limited interest in local culture undermines one of the key principles of ecotourism, which is to showcase local culture with many potential benefits to the host communities (Esfandiar et al., 2020; Fennell, 2014; Nguyen, 2020). Whatever the case may be, it is critical for managers of national parks to give particular attention to the expectations of visitors as suggested by Crilley et al. (2012), since these natural areas are increasingly becoming more attractive to visitors (Hausmann et al., 2018).

The gap analysis showed generally poor performance of the role attributes indicated by the negative gap values, with the exception of “Mediatory: interaction” and “Resource Management: Motivator of responsible behaviour” even though the gap values were low, and, there were statistically significant differences (i.e., p < .001, .01 and .05) between the importance and performance of the roles attributes with respect to “Leadership: Instrumental”, “Mediatory: Communicative” and “Resource Management: Motivator of responsible behaviour”. These findings contradict the findings of Randall and Rollins (2009)’s study,
who identified a general improvement in all the role attributes after visitors experience with the tour guides. The poor performance of these roles in this study suggests that management should pay particular attention to these areas to improve visitor experience and satisfaction with tour guiding. Whiles general poor performance of the roles was observed, the grid analysis unpacked those specific roles that require management intervention. Since protected area management is always challenged with decreasing budget and staff to protect the natural resources, and increasing visitors (McCool & Lime, 2000; Rome, 1999), prudent management requires channelling limited resources to those roles above the diagonal line, constituting those roles critical to visitor satisfaction with tour guiding. The literature is clear about how limited visitor satisfaction can adversely affect repeat visits, referrals, and the financial sustainability of national parks (Huang et al., 2015; Weiler & Black, 2015). Based on the diagonal-line model, roles, such as the “Mediatory: Interaction”; “Resource management: motivator of responsible behaviour”; and “Resource management: Environmental interpreter” were found above the line, requiring immediate resource investment to improve visitor experience and satisfaction. Alternatively, little investment is needed for other aspects, such as the ‘Leadership: Instrumental and “Mediatory: Communicative”. It is worthy to note that the closeness of the “Leadership: Social” dimension to the diagonal line, suggest it may warrant management attention in the case of sufficient resources as it may contribute to visitor experience and satisfaction.

3.6. Conclusion
Ecotourism creates opportunities for the recreational use of natural and cultural resources in national parks. In ensuring the sustainability of these resources, tour guides play a variety of roles, which do not only clarify the ecological, economic, and socio-cultural functions but the appropriate behaviour and attitude required of visitors. They are responsible for the high-quality services provided which determine the level of satisfaction of visitors. A study to understand the expectations of tour guides’ roles as part of the experiences sought by visitors showed that they placed relatively high importance on some roles than others. Particularly, they prioritize safety and comfort in unfamiliar territory and have a low interest in local culture. There was a generally poor performance in the role attributes of the guides suggesting a need for management use of limited resource investment into roles, such as the “Mediatory: Interaction”; “Resource management: motivator of responsible behaviour”; and “Resource management: Environmental interpreter”, to improve visitor experience and satisfaction. Of particular interest for further research is the observation of low interest of visitors in local culture. With culture featuring as an important component in ecotourism, why visitors showed low interest needs investigation.

3.7. Usefulness of the theoretical framework and Limitation of study
The study was guided by the expectancy-disconfirmation theory, which stipulates that the difference between expectation and performance determine the nature of visitor satisfaction with tour guiding. It suggests that when visitors perceive that service performance meets or exceeds expectations, then they become satisfied, but, if performance falls below expectations, visitors could become dissatisfied. This theory was useful in unpacking those roles of tour guides that are important to their satisfaction of tour guiding experiences in the park. This suggests that management needs to promote these roles as important to tour guiding experiences in the park. Also, those roles requiring management intervention to improve visitors’ satisfaction with tour guiding were identified. Again, in this case, intervention in terms of training for the guides may be of interest in avoiding potential service failures based on poor performance from guides. In effect, the theory offered the capability of identifying the strengths and weaknesses for management intervention (Wang, 2016). However, since the roles studied were derived from Weiler and Davis (1993)’s framework, there should be a further attempt at refining these roles based on discussion with the park management to identify those roles peculiar to tour guides in the park.
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