

Why do they bring their classes? Teacher and learner perceptions of the purpose for class visits to science centres.

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Abstract

This presentation examines motivations of teachers when bringing their classes to science centres and museums. Drawing on the international literature on visitor motivation, the presentation describes a recent study in which nearly 100 teachers related their purpose and objectives when visiting four informal learning institutions in Gauteng. The study involved interviewing teachers accompanying their classes on the visit. Findings indicate that while teachers espoused motivations for the visit mainly relate to curricular and educational goals, they carried out limited preparation and follow-up which would enable their students to gain the most from the visit. More intensive interviews with four teachers revealed that they had multiple purposes for their visit, including the curriculum, entertainment/edutainment, and relating to possible careers for the students. However, these teachers tended to play down the 'day out' aspect of the visit. All of the 12 learners interviewed about the purpose of their visit had differing ideas from those of their teachers. The paper suggests that teachers need to ensure that students are clear about visit purposes, and that science centres need to consider teachers' motivations for visits when planning exhibitions

Introduction

A number of studies over the past two decades have attempted to understand the reasons why people visit museums and science centres. (Falk & Storksdieck, 2005; Falk, Moussouri, & Coulson, 1998; Paris, 1998; Silverman, 1995). Of particular relevance to this paper is a study by Kisiel (2005) which examines why 115 primary teachers conducted museum visits with their students. In his review of the literature, Kisiel suggested that many teachers "may not be taking full advantage" of school visits (p. 937). Kisiel identified eight fieldtrip motivations among the teachers in his study, including connecting with curriculum (90% of teachers), exposure to new experiences (39%), providing a general learning experience (30%) being the most cited. Kisiel further examined teachers' perceptions of successful field trips, and found some conflict between their agendas and success criteria, as well as between teacher expectations and the museum experience.

Methodology

During 2008, interviews were conducted with nearly 100 teachers visiting four different institutions in Gauteng province: the Johannesburg Planetarium (n=62), the Johannesburg Zoo (n=12), the Sci-Bono Discovery Centre (n=14) and the Hartebeesthoek Radio Astronomy Observatory (n=11) (Lelliott, 2009). Selection of teachers was by convenience: those who happened to be visiting on the day of the data collection were approached and asked if they would be prepared to be interviewed. Interviews lasted 10-15 minutes and took place as teachers arrived at each venue with their learners. The specific interview question which relates to this paper was "What is the purpose for the learners visiting the <centre>? Is there anything in particular you are expecting the learners to do today? Is there any link to the curriculum? [If so, what?]" In addition, four teachers were interviewed in greater depth during which time they were able to expand on their reasons for the visit. These four teachers were selected on the basis that they had in interest in pre- and post-visit activities to be carried out at their schools. Three learners per school (selected by each of the four teachers) were also interviewed, to determine how closely the learner and teacher motivations matched.

Findings

Teachers' responses to the question on the purpose of their visit were classified into nine categories, as shown in Figure 1. The four main categories were that the purpose of their visit was for learning (45%),

related to the classroom curriculum (41%), exposure to new experiences (19%) and visualisation of phenomena (15%). Examples of responses falling into each of these categories are shown in Table 1.

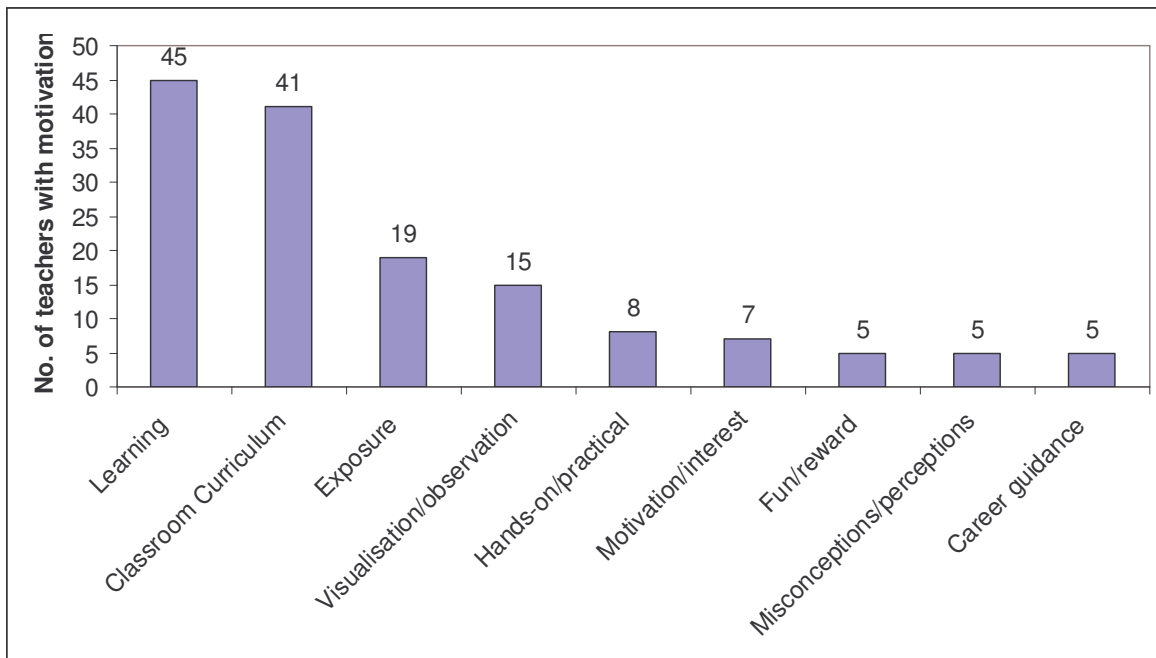


Figure 1. Teacher Fieldtrip Motivation categories identified (n=99)

The first three categories in Figure 1 correspond to Kisiel's top three categories, although the percentages differ. Whereas 90% of Kisiel's sample referred to the classroom curriculum, this figure was halved for the South African sample. The SA top category was 'learning', at 45%, compared with 30% for the US sample (which ranked 'exposure' 2nd, with 39%). Although both samples were limited in extent, and cannot be generalised to the whole teacher population, it would appear that South African and American teachers have broadly similar goals for their school visits.

Table 1. Examples of teacher utterances from the top four categories

Category	Examples of teacher responses (quotations from transcripts)
Learning	purpose was strictly educational purpose of their visit was educational. learners were expected to learn
Classroom Curriculum	to make a fulfilment of the NSC requirements on themes The things here are related to many learning areas of the curriculum e.g. Natural science, technology, Arts and Culture etc
Exposure	To see things that they have not seen before and those things they do not have in school visit was meant to expose learners to the solar system
Visualisation/Observation	to see exactly what happens in the universe concretize or see some of the things we teach them in class

Four teachers (who claimed to prepare for and follow up after the visit) were further interviewed regarding aspects of the school fieldtrip they were organising, and three of them gave multiple purposes for their visit (Table 2).

Table 2. Teacher Fieldtrip motivations

Teacher	Grade	Entertainment	Edutainment	Curriculum	Interactive	Career	Tradition	Site visited
A	7	X	X	X	-	X	-	Planetarium
B	6	-	X	X	X	-	X	HartRAO
C	9	X	-	-	-	X	-	Sci-Bono
D	7	-	X	X	-	X	-	HartRAO

Unlike the main sample, none of these five teachers referred to learning, but four of them identified the curriculum as being one of the purposes. Reasons like entertainment were usually not explicitly stated by the teachers but their plans suggest that they view the visit as a 'day out'. For example

Researcher: why are you doing this visit at this time, why not at any other time, why time in particular?

Teacher C: mmmhh... errr... learners are not that much busy so that...we are busy completing the tasks. We are through with the tasks of the whole year so that's why we have to take them somewhere

Three of the teachers referred to exposure to ideas for careers as being a motivation for the visit, for example teacher D stated:

And it's also...a career may be job opportunity somewhere and ...going up into space as astronaut

However, it was interesting to compare what these teachers' students considered as the purpose of the field trip. Three students per school were interviewed, and their responses are summarised in Table 3.

Table 3. Purpose of visit as viewed by learners

Learner	Grade	Entertainment	Edutainment	Curriculum	Interactive	Career	No clear Purpose	Centre visited
A1	7	-	-	X	-	-	-	
A2	7	-	-	X	-	-	X	Planetarium
A3	7	X	-	X	-	X	-	
B1	6	X	-	X	-	-	-	
B2	6	X	-	X	-	-	-	HartRAO
B3	6	X	-	X	-	-	-	
C1	9	-	-	-	-	-	X	
C2	9	-	-	-	-	-	X	Sci-bono
C3	9	-	-	-	-	-	X	
D1	7	-	-	X	-	-	X	

D2	7	-	-	X	-	-	X	HartRAO
D3	7	-	-	X	-	-	X	

Like their teachers, the students had multiple perceptions of the purpose of their visit to the science centre. The commonest category of purpose was that the visit was related to the curriculum. However, the second highest category was 'no clear purpose', and it would appear that in at least two schools the teacher's purpose was not communicated effectively to the students. In the third school, teacher B had made the visit purpose very clear to the learners, that it was about learning related to what they were doing in class, as well as enjoying themselves. For example, student B1 stated:

Letty: She told us that we gonna come and make rockets and its interesting, and we gonna have a lot of fun. We are learning about stars and the planets and we are learning about solar system.

Researcher: is that what you are doing at school now?

Letty: Yah

Discussion and Implications

This study indicates that teachers have several motivations for taking school field trips, the most important being learning, linking to the curriculum, exposure to new experiences, and visualisation/observation of phenomena. Entertainment and career opportunities also featured as visit purposes, although teachers may have 'played down' this aspect when being interviewed in an attempt to promote a more academic slant for the visit. However, communication of the field trip's purpose appears not to have been communicated clearly to all the learners, as many did not understand the purpose of the visit.

Ideally, it is important that teachers articulate their field trip purpose clearly for themselves, to maximise learning opportunities. This will only happen effectively if their learners also understand the reason for the visit. From their side, science centres should try to find ways to support the teachers' agendas. Kisiel (2005) suggests that centres should provide teachers with sufficient information about their facilities for them to more clearly convey the purpose of the visit. He also suggests that student motivations should be discussed beforehand in class, so that students are more likely to accept the teacher's agenda for the trip.

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