MANAGING TECHNOLOGICAL CHANGE IN SPORT: ELITE SNOWBOARD COMPETITION AND PROPOSED JUDGING INNOVATIONS

Jason Harding[1], Daniel Lock[1], Kristine Toohey[1]
[1]Department of Tourism, Hotel, and Sport Management, Griffith University, Australia
Jason Harding: j.harding@griffith.edu.au, Daniel Lock: d.lock@griffith.edu.au, Kristine Toohey: k.toohey@griffith.edu.au

Abstract keywords

change, technology, sport, competition, snowboarding, stakeholders, community, identity, perceptions, management

Background

Technology is an increasingly pervasive influence in elite sport. However, the absence of an established evaluative framework to assist sport governing bodies in making informed decisions on adopting technological innovations is a pressing issue (Hardman, 2002; Trabal, 2008). Such a framework could also provide an opportunity for sport management researchers to investigate how proposed technological changes fit with the underlying characteristics and identity of a given sport as a means to successfully manage future technological changes. The purpose of this research is to explore the reactions of a specific sporting community (the elite snowboarding community) to the proposed introduction of technology that calculates airtime and rotation to objectify competition results (historically judged subjectively by humans). In doing so we aim to provide evidence for applicability and continual development of Hardman's (2002) Pyramid of Constraints, which conceptualises community responses to sport technologies through a rigid continuum of structural, aesthetic and moral dimensions. We subsequently offer a revised conceptual model that provides sport managers with a more fluid framework for the integration of technological innovations.

The adoption of technological innovations in sport has the potential to create difficulties in the management of stakeholder perceptions (Hardman, 2002; Trabal, 2008). The enduring norms and characteristics of specific sport communities have the potential to influence the success or otherwise of the adoption of new technologies. Hence, if a proposed innovation does not 'fit' with the enduring norms and characteristics of a sporting community, members are likely to resist it. To frame our inquiry, we use the social identity approach on group behaviour (Tajfel & Turner, 1979; Turner, 1985) to provide an understanding of how social perceptions and attitudes are shaped by group memberships. This allows us to place the social and contextual facets of snowboarding at the centre of a revised framework used to understand community members' perceptions of the proposed change.

Methodology

We used a qualitative research design to explore the perceptions of officials, judges, coaches, and athletes' in relation to the adoption of the proposed innovation. The sample was drawn from the Fédération Internationale de Ski's (FIS) list of registered officials, judges, coaches, and athletes. Face-to-face interviews, email correspondence, and an online survey instrument (all structured to provide opportunities for open-ended questions and responses) were selected as the most suitable data collection tools for officials, judges, coaches, and athletes and were applied based on logistics for access and preferred contact method specified by a sample of international subjects. Face-to-face interviews required transcription and all responses were analysed using manual coding to identify major themes and the associated sub-dimensions.

Results

Respondents' definitions of snowboarding's identity centred on perceptions of its freedom, style, and lifestyle elements, and the perceived differences between snowboarding and derogated outgroups, such as those associated with more traditional sports. Respondents valued the existing subjective competition judging protocols as they were perceived to promote athletic individuality and freedom of expression, ideals closely linked with the sport's focus on its aesthetic dimension. However, respondents also acknowledged that competition results were often decided by contentious decisions, due to the current subjective judging protocol, which reflects human error and has created impetus in some quarters for technological innovation. Respondents strongly argued that the technological innovation proposed by the current study should not be used as the only judging tool to generate a final score in snowboarding competitions, because it challenged the freedom, individuality, and aesthetic focus afforded by existing protocols. The majority of respondents did, however, perceive the idea of using technology to 'assist' the current judging protocol positively, if such a change was well managed. Whilst respondents believed that the forecasted technological change would not damage the structural integrity of the sport, the majority expressed concerns that it contrasted with snowboarding's focus on freedom and style, and may negatively impact on competition aesthetics.

Discussion

Sport managers need to understand the core social identity that athletes, coaches, and judges share in order to place the group's culture at the centre of the technological innovation narrative. Whilst Hardman's Pyramid of Constraints is focused on useful evaluative levels, the rigidity of the hierarchical process presents challenges for its use for a sport such as snowboarding, as the model prioritises either structural or moral dimensions as most important. In this study the aesthetic aspects of snowboarding emerged as the primary dimension of concern for community members. We consequently forward a more fluid conceptual model of the structural, aesthetic, and moral components of a sport that is void of any hierarchical

process and where the prioritisation of the most important dimension (structural, aesthetic, or moral) is established by the sporting community itself.

This conceptual reframing results from understanding what makes a sport distinct from other groups, and why this is important to members through a social identity approach. In sports where style and freedom are key values of a sport group, the aesthetic dimension is arguably more important than moral or structural dimensions; hence the issues with the rigid structure of Hardman's framework. The key contribution of this study is to place the views of the sport community and its stakeholders as central to the technological innovation process. This is not to privilege athletes, coaches and judges as the only stakeholders who need to be consulted, but to develop a structured implementation process, designed to increase the chances that technologies can be integrated in ways that acknowledge the norms, characteristics and cultural intricacies of the sport in question. Further research analysing proposed technological changes in other sports will provide opportunities to refine the fluid conceptual model offered by this study and determine its transferability to other sporting contexts.

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