

# SuperFan 2.0

Exploring the Producership Qualities of Hockey Fans

by

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## Abstract

This study examines the impact communication technology has had on hockey fans. Professional sports are a billion dollar industry as fans attend live events, collect merchandise and gamble on outcomes. Information is also a major product of professional sports and has been used by sports fans to predict outcomes, participate in fantasy league contests and to interact with other fans. Past research has depicted fans as simple consumers of professional sports. Fans have various reasons to follow sports and use various technological tools to stay informed and interact with other fans. There was found to be a lack of research regarding the role hockey fans play in the creation, development and distribution of information. The advancement of technological tools, combined with the participatory culture fans operate within, has given fans more opportunities to be creators and distributors of information.

This study uses a qualitative content analysis to examine a single fan-generated hockey blog. Content from this blog, including the homepage, options for users of the blog and blog articles, is coded using the four key principles of produsage as a guide. Examples of the four key principles were found throughout the hockey blog, and highlight the produsage capabilities of hockey fans.

# Introduction

## Background

Professional sports are currently a major industry grossing millions of dollars around the world, across different sports. Professional sports provide entertainment to fans, which generates profits for owners and leagues in partnership with sponsors and governments of all levels. In Canada, the National Hockey League (NHL), a professional ice hockey league, draws millions of fans and remains one of the most popular sports to follow. Across different mediums, such as television, radio and web technology, the NHL strives to provide their audience the product they demand.

Information is a critical product that professional leagues, such as the NHL, must provide to their fans. Statistics from games, team schedules, player history, and player transactions between teams are only a few examples of the information fans rely on to engage with the game of hockey. This information keeps them informed about the game and maintains their interest in live events. The NHL can remain interactive with fans and stakeholders by understanding what information they demand and consume. The NHL and its hockey clubs provide this information on their own websites or through media outlets such as newspapers and sports-dedicated broadcast networks. Fans in turn use this information to attend games, predict winners and losers or to discuss with other fans current events in professional sports, among others. Leagues and athletes must take this into serious consideration, as their survival and success depends on this fan support. If fans need this information to stay engaged and interested in professional sports, then league executives, franchise owners, media outlets and athletes must be ready to oblige to survive and succeed in the sports entertainment market.



Communication technology is a critical tool for fans to acquire the information they need. Examples of this technology include broadcast mediums such as television, radio and newspapers, with each having its benefits and limitations. The development of web technology, mobile phones and social media applications, in conjunction with the traditional mediums, has now made this information available to fans in abundance and in real-time.

*“We become what we behold. We shape our tools and then our tools shape us.”*

- Marshall McLuhan (1964)

Communication technology has evolved and has influenced the behaviour of hockey fans. With information being an important product being transferred using communication technology, a focus needs to be placed on the role of hockey fans in its creation, development and distribution. Fans have become more than consumers of information and have instead taken on a more active role.

## **Objectives of the Study**

Fans use technology to remain engaged with the game of hockey, but current literature has only explored the traditional model of consumption. Information in particular is of high value to fans, but research is limited to their consumption patterns and use of this commodity, which is produced by professional hockey leagues. Rather than being simple consumers and “prosumers” of information, fans have become more active participants in its creation, development and distribution.

This study will examine a hockey blog and collect data using qualitative content analysis. The study will then compare the findings from the specific blog to the concept of produsage, which is defined by Bruns (2008) as “the collaborative and continuous building and extending of

existing content in pursuit of further improvement” (p. 21). Producership is comprised of four key characteristics:

1. Open Participation, Communal Evaluation – Producership environments are open to all to get a wide array of experience and contributions.
2. Fluid Hierarchy, Ad Hoc Meritocracy – Leadership within the project depends on the contribution the individual makes. Those whose contributions are valuable to the project will elevate their status within the community.
3. Unfinished Artefacts, Continuing Process – Rather than a finished product, the aim of producership is to evolve and continuously improve the shared content within a community.
4. Common Property, Individual Rewards – Individuals working within a producership environment are motivated by their ability to contribute to a communal purpose. Producership environments ensure that the shared content will not be exploited and will remain available to those who contribute to the project.

By comparing the findings to the key concepts of producership, this study will explore the changing roles and behaviours’ of hockey fans as a result of the technology present in their environment.

Relying on current technological advances as a baseline, the study will examine how the changing role of hockey fans could influence the NHL and its current information management practices.

**Problem Statement: Based on the key principles of producership, can hockey fans be considered “producers” (Bruns, 2008)?**

By documenting what fans are doing using the technology available to them, this study will serve as a foundation for future research into online sports fan culture and information management. This study could shed light on how knowledge is generated, expanded and shared by a community of users. It could potentially give further insight into other areas that are impacted by knowledge management and community engagement such as business management, sports marketing and information technology.

# Literature Review

## Introduction

The objective of this literature review is uncover scholarly literature related to fan culture, develop and apply an analytical framework to assess the literature on fan culture, and to articulate one or more gaps or unresolved research questions that emerge from that literature.

## Analytical Framework

### Foundational Concepts

With web technology becoming easier to use and develop social networks, sports fans are able to express their creativity within a supportive participatory culture. Jenkins (2006a) describes this participatory culture as one where media producers and consumers interact with one another (p. 3). Fans have demonstrated a strong desire to not only consume sports as entertainment, but also become producers of online content within this participatory culture. Sports fans have found new ways of experiencing the game and have used web technology to increase their engagement. According to Jenkins (2006a), “audiences, empowered by these new technologies, occupying a space at the intersection between old and new media, are demanding the right to participate within the culture” (p. 24) and become producers of their own culture.

Examples of participatory culture include fan films, such as the ones made by Star Wars fans (Jenkins, 2006a, p. 155), as well as fan fiction (Jenkins, 2006b, p. 143). Both examples involve fans who create new storylines and plots using actual characters from films and

television shows. Fans are able to complete mashups to bring together their favourite characters from various movies, for example, to create new content. Fans are then able to share these new artefacts within a fan community. Another example of participatory culture is machinima, where fans “[make] animated movies in real-time with the software that is used to develop and play computer games” (Lowood, 2006, p. 26). Using video game engines, fans can create their own storylines and share their new content with others. According to Jenkins (2006a), since average people have low cost, easy to use technological tools available to them, fewer barriers to participate and express creativity, and new channels for publicity and distribution available, fans can create extraordinary content (p. 152). Weblogs, or blogs, also serve as examples of individuals working within a participatory culture. By publishing content, providing links to other sites and allowing for commentary, individuals use blogs to consume media and also control their own content. By connecting with others, a blog becomes part of a “blogosphere” (Bruns & Jacobs, 2006, p. 5), which is the “overall community of blogs and bloggers, which is interlinked through a large number of cross-references between individual blog entries”.

These examples of individuals functioning within a participatory culture exemplify the interaction occurring between media producers and consumers. A similar convergence is occurring in professional sports as sports fans and professional sports leagues, such as the National Hockey League (NHL), have both become sources of information and online content. Fans have begun influencing the culture that they experience by creating and sharing new and unique content using different mediums. The NHL provides content using websites, mobile phone applications and social media, while fans create their own hockey related content such as video mashups on Youtube, commentary on message boards and by playing video games. A participatory culture changes the roles of producers and consumers. For example, rather than

being a passive audience, fans are now actively involved with the media they are presented with.

A participatory culture has also impacted the behaviour of human beings. For example, how humans learn and educate one another has been influenced by the technology available and the different channels to express creativity. Peppler & Kafai (2007) found that a participatory culture can play a critical role in education as activities such as video game making “can provide a rich context for learning programming, how to collaborate with others, becoming a member of an affinity group [and] developing sustained engagement” (p. 6). Blogs in particular have been found to be strong educational tools as it allows students to connect theory and findings to their own personal experiences within a social environment (Burgess, p. 111). Blogs are a communication process, which allows bloggers to “take knowledge into their own hands” (Jenkins, 2006b, p. 151). By publishing their own unique content and supporting it with weblinks and references, bloggers can openly exchange information and knowledge pertaining to a subject. Online fan communities connected by blogs also exemplify the “collective intelligence” envisioned by Levy (1997, p. 13). Jenkins (2006b) argues that

“online fan communities might well be some of the most fully realized versions of Levy’s cosmopedia, expansive self-organizing groups focused around the collective production, debate, and circulation of meanings, interpretations, and fantasies in response to various artefacts of contemporary pop culture” (p. 137).

There are an abundance of blogs created by fans that serve as a platform for them to create new hockey related content, exchange information and develop knowledge. Blogs serve as an example of “produsage” (Bruns, 2008), which is defined as “the collaborative and continuous building and extending of existing content in pursuit of further improvement” (p. 21). Fans have become creators of information that is shared with other fans resulting in an

abundant amount of information created, maintained and shared within a network of fans. This process has changed the traditional model of consumption into one where typical consumers, such as sports fans, have taken on a greater role in the production of new content for others to consume and build upon. Producers cannot be confused with the concept of “prosumer”, a term coined by Toffler (1990), which is when the “customer contributes not just the money but market and design information vital for the production process” (p. 220). Bruns (2009), distinguishes the two concepts by describing prosumers as “professional consumers [who] assist commercial producers in being better at what they do” and producers as “productive users [who] become active in their own right in content creation, replacing producers altogether or at least working with them on an equal basis”. With the development of a participatory culture, hockey fans have become more than prosumers. Web technology such as blogs have given hockey fans the power to produce, develop and distribute content, allowing them to be on equal ground as traditional content producers.

## **Professional Sports & Fans**

Professional sports are currently a billion dollar industry (Santomier, 2002). Leagues, such as the NHL, host live events throughout the year for fans to attend. They market the sport to drive interest and ensure that their costs are offset by fan attendance. Franchises work with their city and corporate sponsors to establish themselves within the local community. This includes doing charity work, conducting public service announcements and supporting local hockey schools. Professional sports have grown to become a part of the culture and identity of individuals, communities and nations. In Canada, hockey has become engrained in the cultural fabric that represents its people. Gruneau (1994) found that:

“Historically hockey fans have had a special relationship to the experience of life in Canadian communities and, indeed, to the very idea of community in Canada. Canadians have experience the game both as a community practice and as a commercial product – variously connected to the local community, to broader ‘communities’ of loyal fans who follow professional teams, and, finally, to an imagined national community” (p. 200).

“In these international contests, hockey has acted as a medium not just for the expression of Canadian identity, but also for the reaffirmation of a preferred version of ‘national character’: tough and hard, passionate yet determined, individualistic.” (p. 267).

Arenas and stadiums are built, providing landmarks for the team and a presence in the community, as well as within a larger, national community. Sports leagues provide live games over television, radio, internet and mobile applications. They produce official merchandise such as jerseys, autographed memorabilia, video games, board games and comic books, among others. Professional sports leagues continue to grow around the world, both financially and physically. Corporations and sponsors recognize this passionate fan base and invest millions of dollars to align themselves with sports leagues. However, without fan support, professional sports could not become the industry it is today. Professional athletes, teams, leagues and sponsors must be mindful of the power fans hold to provide the services and products that fans demand.

Millions of fans invest their time and resources to follow the sport and engage with the game through different ways. Fans can attend live events and purchase products but also play the game recreationally, play video games or gamble on live events. In recent years, web content has become a popular product of sports leagues that fans use to increase their

engagement. News stories, video highlights, radio programming and statistics are available to meet the demands of fans. Because of the prevalence of hockey related content online and the easy-to-use software and web applications, NHL fans have more recently begun using web technology and various software tools such as blogs to create their own sports related content online. A participatory culture currently exists, which allows fans to share the responsibility of creating content with the NHL and mainstream media outlets. Leagues such as the NHL are no longer in full control of the information available to the public and must be aware of the changing media landscape. Fans, whether or not they blog, must also be aware of the ubiquitous online content and establish their own methods of filtering through the information available to them. Understanding what exactly fans are creating using blogs will shed light on the potential of the information available. How this information is used will impact future demands of fans and the knowledge they obtain regarding the game of hockey.

## Literature Search

In order to locate articles related to my research question, a general search for scholarly, peer-reviewed articles was first completed. Literature was not restricted to a time period, but was limited to peer-reviewed work written in English. Using EBSCO Services and Google Scholar, I used “sports”, “fan” and “culture” to search for literature. The readings that were found could be categorized into three main areas of focus. The first being literature that examines fan motives. These articles examined what their motives are to attend games, cheer for teams, buy merchandise and dedicate their time to a professional sport, team or athlete. The second category examined the business aspect of professional sports and the role a fan community plays in sustaining sports leagues and franchises. This category approaches fan communities as a marketing opportunity to promote the game and sell additional products to. The third category examined how fans consume professional sports and develop an engagement with the



game. This looks past the financial aspect and more into how fans commit their time and energy to sports and professional athletes. Examples of fan engagement include collectively singing at games, playing video games and registering for fantasy leagues. In this regard, fans are more than passive consumers of professional sports. Based on my organization of the initial list of readings, my research question is most closely related to literature found in the third category of fan engagement with professional sports.

Additional scholarly, peer-reviewed literature was then searched for using EBSCO Discovery Services, Google Scholar and WorldCat databases. Literature was not restricted to a time period, but was limited to peer-reviewed work in English.

The following searches were complete on June 30, 2011, using EBSCO Discovery Service available through the University of Alberta Libraries website.

The search for "hockey fan blogs" produced 3 results.

The search for "fan blogging" produced 28 results.

The search for "sports fan blogging" produced 7 results.

The search for "sports fan participatory culture" produced 10 results.

The search for "hockey fan participatory culture" produced one result. It is in no way relevant to my research project.

The search for "sport producers" or "sports produsage" produced 6 results.

Next, on June 30, 2011, I used Google Scholar to find literature that cited *Convergence Culture* by Henry Jenkins or *Blogs, Wikipedia, Second Life, and Beyond* by Axel Bruns.

1903 articles cited Henry Jenkins` (2006) book. The majority of it focussed on gaming, learning and teen online activity. I then searched those 1,903 articles using the keyword "produsage sports fans". This produced 18 results.

322 articles cited Axel Bruns` (2008) work. I then searched for `sports fans within this list of results. This produced 18 results.

Google Scholar provided 30, unique, articles.

The following searches were complete on July 22, 2011, using the WorldCat database available through the University of Alberta Libraries website.

The search for ``hockey fan blogs`` produced 0 results.

The search for ``sports fan blogging`` produced 1 results.

The search for “sports fan participatory culture” produced 3 results.

The search for “hockey fan participatory culture” produced 0 results.

The search for “sport producers” or “sports produsage” produced 0 results.

All articles were reviewed for their research methodology, foundational concepts and key findings. After assessing the strengths and weaknesses of each article as well as the overlap among the current set of literature, the gaps within the collection of literature was explored to provide direction for this research study. The literature was found to fall within one of three categories:

1. Marketing and consumption perspectives
2. Fan motivation literature
3. Online engagement of fans

A common theme among the literature was the depiction of sports fans as consumers with little research completed on the actual content sports fans create online.

## **Analysis & Interpretation**

### **Marketing and Consumption Perspectives**

The relationship between sports fans and professional sports is one that is complex and constantly evolving. Scholarly examination of this relationship can be taken from a business, psychological, sociological, cultural or interdisciplinary perspective. Various studies have

explored a wide array of topics within this field such as aggressive fans who verbally abuse athletes and teams (Courtney & Wann, 2010), the impact of a sports teams' relocation on fans (Mirtrano, 1999) and the current and historical fan culture of specific sports such as NASCAR (Amato, et al, 2005). Research studies often take one of two approaches when examining fans and professional sports. One is from the viewpoint of fans and how they behave, consume sports or are influenced by the sport. The other is from the viewpoint of the sport itself, which examines the relationship with fans from the league or sports point of view. This includes research that examines sports marketing strategies (Moutinho, 2007) and profitability of a professional league (Winfrey, 2009).

Literature on the current state of professional sports provides insight into the commercial aspect of leagues as well as fan consumption patterns. Fans are vital for the sustainability, and profitability of sports leagues. Team, player and league revenue is generated by fan consumption, as well as the corporate sponsorship that targets the fan base. Examples of fan consumption include attending live events, purchasing merchandise and watching events on television. Santomier (2002) examined professional leagues around the world and summarizes the financial data available regarding league financial values, player transactions and endorsement deals to support this assertion. The study highlights the importance of dedicated sports fans to revenue streams for sports leagues such as live games, sporting goods and advertising opportunities, but also provides suggestions on how to effectively capitalize on fan consumption. The study provides a strong foundation when trying to understand the importance of professional sports using hard data and financial figures. Unfortunately, the study ignores the diverse fan bases dedicated to different sports to explore why sports can do well in one part of the world and fail in another. This also depicts professional sports as a one-way consumption model, with products made available by sports leagues for fans.

To better understand fan produsage, it is important to understand what products are available to fans. A summary of what specifically a professional sports league sells was completed by Mason (1999) to provide a better insight into how markets are targeted. The study looked at groups that consume sports, such as fans, cities and corporate sponsors, and analyzed the revenue created by leagues, how the game is marketed, the indirect revenues and ancillary purchased. This used both quantitative and qualitative methods to collect data and determined that, aside from the entertainment of an event, fans primarily consume the unpredictability of a game. It is the unknown result of games and the unknown action within it that fans are most drawn to when watching professional sports. It is this unpredictability that could potentially inspire fans to start blogging, but is not examined by any current research. Unpredictability allows for speculation and discussion among fans to predict outcomes of live events. This speculation and discussion is a continuing process, producing unfinished artefacts, which is an integral aspect of produsage (Bruns, 2008) projects such as blogs. Using blogs and discussion boards, fans have demonstrated their strong desire to communicate with like-minded individuals but would require additional analysis before coming to any conclusions. The current set of literature does not compare fan consumption with prosumerism (Toffler, 1990, p. 239).

Fan consumption, as demonstrated by Santomier (2002) and Mason (1999), increases revenue and sustains professional sports leagues such as the NHL. But an understanding of the ramifications this consumption has on technological tools will be important to understand the blogging activity of hockey fans. Because of their demand for live events and high quality content, sports fans have played a role in the evolution of mobile technology (Boyle, 2004). Mobile phones have begun broadcasting live sporting events, as well as applications to track real-time statistics during games. This also exemplifies Jenkins (2006) assertion that a convergence is occurring among the broadcasting mediums fans use to engage with online content. Boyle's (2004) research depicts fans as only consumers, but hints of their produsage

capabilities appear as their access to information and data transfer have become faster and easier. This study looks at the historical evolution, but needs to be updated to provide a more current understanding of the relationships between mobile technology and professional sports. The study does bring forward quantitative data regarding fan consumption, but lacks any research into fans that create new content. Fans do use mobile technology, but no research has been done to examine what exactly they might create with advanced technological tools.

Further research has examined how the consumption patterns of fans and their influence on technological tools can benefit sports leagues. English Premier League (EPL) football clubs, recognizing the increase in communication tools used by their fans, have placed a high value on greater communication between themselves and their supporters (Cleland, 2010). Using interviews and surveys, this study found that feedback and suggestions from fans as well as a sense of importance to the team were vital for fans to feel engaged. This study however, only looked at financial ramifications for EPL clubs, showing that clubs that took feedback from fans generated more revenue than those that did not. Furthermore, open communication, for EPL clubs, included surveying fans, inviting input using telephone or email and public relation campaigns. This open communication appears to follow the prosumerism (Toffler, 1990, p. 239) refers to. However, the case study could be examined to see if it encourages fans to create blogs that could serve as an open dialogue between fans and EPL clubs.

Sports leagues can also indirectly benefit from online fan activity. Sanderon (2009) looked at how information communication technologies (ICTs) enable sports organizations to capitalize on fans who indirectly act as tools of surveillance of professional athletes. Fans who comment and share news content online demonstrate their prosumerism (Degli Esposti, 2009), but also help professional teams monitor the behaviour of athletes away from the game. Commenting on news stories or sharing the information using various web technologies allows

the news to spread faster. This in turn, forces professional athletes to take greater caution when in public. Fans play a major role in the spread of negative publicity (Lake, 2010) and inadvertently impact an athlete's reputation and potential endorsement deals (Waller, 2009). No other studies were completed on how prosumers such as sports fans can be exploited, but Martens (2011) did explore an online community of teenage girls who are encouraged to contribute ideas to influence the book and story of which they are fans. Aside from highlighting the prosumption activities of teenage girls, the research found that their contributions and to the Amanda Project is in fact being exploited for their free labour and are sold back the content they help to create. Sports leagues could be examined to see if they do in fact exploit the labour of fans and embed the content fans create within their own licensed products to sell back to them.

## **Fan Motivation Literature**

To better understand how or why fans engage in produsage activities, it will be important to understand their motivations for dedicating their time and energy to these activities. Research into the psychological state of fans and their motivation for following sports could potentially be linked to the content they create on blogs. To get a sense of the characteristics of sports fans, Gantz et al (2006) conducted a comparative analysis that examines fans of different genres. The study compared the general behaviour of sports fans to fans of other entertainment such as television shows, movies and literature. Through questionnaires, the researchers found that sports fans highly identify with their favourite sports, resulting in a higher degree of engagement before, during and after live events compared to fans of other genres. In this study, however, engagement was defined as reading articles and watching re-cap shows related to their interests. Even though this research study depicts fans as consumers with no examination into how they might create new content, it does provide some hints as to why fans might start blogging about sports. For example, Gantz et al (2006) found sports fans have a high degree of

identification with sports, sports content readily available to them, as well as a commitment to the game before, during and after live events. These traits of sports fans as well as their desire to speculate about game outcomes within a community may result in the creation and usage of blogs.

Identification with professional sports was also examined by Wann et al (2008) who compiled a summary of the characteristics and preferences of fans of different sports. Using surveys, this study examined what the motivations of sports fans were across different sports and dichotomies to give a sense of how different fans are depending on the sport they follow. Fans of aggressive sports, for example, identify differently with athletes and seek out different feelings from live events, compared to fans of non-aggressive sports. This study, however, does not examine online behaviour and instead focuses on consumption patterns of fans. Regardless, these motivations for following sports could have a link to the produsage (Bruns, 2008) activity of fans and provides a good reason to examine a specific sport when exploring fan blogs. A major motivation for individuals to participate as producers is the personal merit they receive for contributing to a communal project and the open accessibility to participate. It is unknown whether fans are drawn to specific sports that encompass communal relationships and open accessibility.

Blogs could be viewed as an expression of fan identification with sports, but no supportive research exists. It has been found that fans are more likely to express their identification with sports when their team is successful (Cialdini et al, 1976), which could potentially have an impact on blog creation and activity. Berg and Harthcock (2008) examined how college basketball fans construct and express their identity when participating on message boards during the NCAA basketball tournament. They found that basketball fans used team names as part of their online names, mascot images as avatars and college slogans as

signatures when posting messages. Using a content analysis, the researchers then separated the message board participants into categories to understand the roles they play in the discussions. Social identification, as found in these studies, could potentially be a reason why fans create online content on blogs, but further research would need to be completed.

## **Online Engagement of Fans**

An understanding of the consumption patterns of sports fans as well as their motivation for following sports helps to provide further insight into their online activity and engagement with the sport. Online activity such as participating on message boards, playing video games and registering for fantasy leagues demonstrates the produsage capabilities of sports fans. Research into this online fan activity, however, is limited.

Studies have found that there has been a major increase in the amount of sports related content available on the internet for fans to utilize. Aside from soaring subscription rates to online sports content, websites such as ESPN.com, which started as websites for live scores, in 1995, now offer over 10,000 pages in 2004 (Real, 2006, p.185). These pages cover every sport worldwide, are updated regularly and are customizable by sports fans. Surveys and interviews of fans were used by Real (2006) to present a strong argument confirming active sports fans online. This study found that fans are using content for fantasy league games, video games and gambling. However, the study only examined the content provided by sports leagues and excluded any exploration into fan blogs. Through an exploratory research, sports fans have been found to play an increasing role in the online broadcasting of sports (Hutchins and Rowe, 2009). The study analyzed the current online environment to compare the traditional broadcast methods of sports, which have greater barriers for groups and individuals to participate in, to the new, online, methods of broadcast. Blogs, which could potentially merge the broadcasting of



sports with the content available online, were neglected by both studies.

Studies that did examine blogging as broadcast tools were quick to dismiss the tool and the role of fans. Comparisons of blogging and webcasting, considered new media technologies, to traditional methods of sports broadcasting have been completed during significant world sporting events. Dart (2009) looked at blogs during the 2006 FIFA World Cup soccer tournament to examine the individuals who produced the content. Using content analysis of randomly selected soccer blogs, the research found that the majority of blogs were platforms for corporations, which employed professional journalists, rather than actual fans. Instead of randomly selecting blogs, it may have been far more valuable to ask fans which blogs they read and then carry out the content analysis. The Olympics Games in China also provided a comparison of new media technologies to traditional methods of broadcasting (Marshall, 2010). Researchers found that traditional media dominated new media since the majority of sports related news stories, images and information were tightly controlled by event organizers. This study did not examine fan engagement, but rather, their consumption of the content created by Olympic athletes' online.

In other cases, literature has looked at sports fans that have demonstrated their desire to create content that can function as legitimate information sources. For example, fans of the video game Madden devoted their time and energy into ensuring the accuracy of the game (Baerg, 2009). Madden, a highly successful football video game, simulates real life games and gives players the ability to create and trade players. This allows fans to experience the game in a completely different way. Researchers conducted surveys as well as a content analysis of message boards where gamers collaborated to ensure their high standards of the video game were met. Baerg (2009) found that gamers, intrinsically motivated, worked within a community and used scientific experimentation to solve the problems with the realism in the game. These

activities require fans to have some knowledge of sports, but also educate fans on the game. Similarly, Banks (2009) found, using participatory-observation research, that a creative relationship between professional game developers and gamers exists. The researchers took a social network approach to understand the co-ordination of expertise among community members, which included game developers and gamers. Both research studies demonstrate how fans engage with a sport, collaborate with a like-minded community and create their own experience through online technology. The studies did not examine blogs specifically, but did highlight some of the characteristics of blogs such as collaboration, information creation and knowledge development.

Fantasy league sports, another example of online engagement, are a popular game for fans as players select professional players to collect points and compete within groups for prizes. Online tools such as websites and mobile applications are used by fantasy league players to select rosters, trade players and keep track of the points they accumulate. Serazio (2008) found that a fans experience of professional sports changes dramatically when they are involved in these fantasy leagues. Fans become more aware of teams they would otherwise ignore, learn and analyze the statistics needed to make picks and develop a vested interest in game results. Sports fans must be able to find, develop and use the information available to them. Because of these characteristics, studies have examined the application of fantasy leagues as a teaching tool for adolescents (Halverson, 2008). Using interviews, surveys and artefacts from following fantasy league baseball players, the author argues that similar environments could help students learn more effectively. Since information has gained significant value and is easily accessed using computers and mobile technology by adolescents, online engagement has become critical when examining pedagogical issues (Alvermann, 2008). Classes have begun offering course materials online to teach adolescents various subjects and meet the needs of a digital generation. Further exploration could examine the characteristics of

sports blogs and how they can be used in the classroom.

Not only do sports fans use online information for video games and fantasy leagues, but they have also demonstrated a desire to be sources of online information. Fans are driven by intrinsic motivators (Shirky, 2010, p. 83) and work collaboratively with other fans online to achieve goals. Rather than exchange their labour for monetary reasons, these fans have become immersed in a sharing economy (Lessig, 2008), which is governed by social relations. Fans participate to be part of a community and have a desire to collaborate and support one another without monetary motivations. For example, Ferriter (2006) examined how Wikipedia was used by fans to discuss the success and failures of an athlete and to come to a consensus on how their history should be written. Researchers randomly selected athletes and conducted a content analysis of the Wikipedia page as well as the discussion and editing surrounding the page. The study found that fans showed a great deal of commitment to take part in the information creation. Additional research into what was created rather than the benefits of using Wikipedia would strengthen this research study. The analysis of popular Florida Gator blogs did highlight the information fans created (Watts, 2008), but focussed more on the phenomenon of fandom. Comparisons between fan blogging and investigative journalism exist, so more insight into the actual content and what it could be used for is lacking in this study. The research did highlight the ability of blogs to create a community to collaborate on the creation of news, but could have focussed more on the actual content.

## Summary of Findings from Literature Review

An exploration into the research literature related to participatory culture in the context of sports fans has provided a foundation for this research project. Three main areas of research have together provided a snapshot of the current literature as well as direction towards future studies. The first is research on the sports industry and the importance of fans in league sustainability and profitability. The second area of research examines fan motives for following a sport. And the third is research on fan engagement including case studies of online activity. Considerable gaps exist in the current literature leaving much to be examined and understand.

After assessing the current state of professional sports, we know that fans consume products provided by sports leagues. The unpredictability of sports draws fans to live events, gamble on results, play video games and discuss sports with other fans. Knowing what fans consume may provide insight into what they produce online. This consumption of content online has proven to alter what technological tools are available to fans. For example, mobile technology and broadcasting mediums have evolved in response to the changing demands of sports fans (Boyle, 2004, p.77). This change in technology has allowed leagues to get insight into the demands of their fans and develop strategies to benefit financially. Sports leagues can get their fans' opinions faster and in real-time, plus benefit from the surveillance that fans provide of their professional athletes.

Why fans follow professional sports has been researched extensively, but little work has linked the findings to online activity. Exploring why fans become fans could potentially provide insight into what these fans blog about. Studies have shown that fans highly identify with sports, which could potentially be why they begin blogging in the first place. Fans use their identification with sports teams to create online identities and interact with other fans, but further insight into

how this influences blogging activity remains unexplored. Fans across different sports differ considerably when comparing their motivations and goals (Wann et al, 2008) and, because of this variance, one sport will be selected to analyze.

Research into examples of online fan activity has been completed but lacks insight into participatory culture and produsage. Fans are using content and have an increased role in broadcasting sports, but no link has been made between studies. Research has depicted sports blogs as lacking fan involvement and as a tool unable to access information. Blogs have also been compared to the work of journalists and lauded for their passionate fans, but lack insight into actual content. Video games, message boards and fantasy league sports, however, have been found to be collaborative tools vital for information creation and knowledge sharing for sports fans.

Based on what was found in this review, this research project will draw on the concept of produsage to examine the content online hockey fans create on blogs. This study will provide the foundation for future research that could look into motivating factors for sports fans to start and maintain a blog, as well as how these blogs are used by other fans or professional leagues such as the NHL.

# Methodology

## Sources of Data

This research study will examine one fan-generated blog focussed on professional hockey. A blog was selected because the online tool has been deemed by Bruns (2006) as a prime example of produsage (p.6). The blog also had to be fan-generated, rather than one owned by a professional hockey team or a mainstream media outlet that reflect the “traditional, journalistic institutions” (Bruns, 2009, p.96). Within traditional media outlets, information is filtered by “conventional editors who ultimately exercise choice through the simple decision of whether or not to publish a story” (Bruns, 2009, p.74). The National Hockey League and established media industries such as newspapers and television outlets enforce their intellectual property and content, which goes against the values of produsage (Bruns, 2009, p.256). Therefore, the selected blog cannot be affiliated with any professional hockey leagues or media outlets. The blog must be available to the public and must not require a subscription fee. Having familiarity with hockey blogs, I selected one that I have viewed before but not one that I have participated on as a contributor or commenter. I have no affiliation, whatsoever, with the selected blog and will remain strictly as an observer throughout the study and afterwards.

Once the blog was selected, I sought and received approval to examine the blog from the blogs owner. The blog owners email address was available to contact regarding any questions or concerns with the blog. I received approval from the blog owner on December 13, 2011. The blog owner requested that the identity and privacy of individuals who participate on the blog be protected. Based on this request, the online aliases of blog users have been changed to a numeric code. The name of the blog will also be excluded from this study to protect the identity of individuals who participate on the blog. All content from the blog that is

cited or referred to in this study has been paraphrased to protect the identity of individuals who participate on the blog.

Approval was also required from the University of Alberta Human Ethics Review Committee since the contributions of humans on a public blog will be analyzed in this study. Permission to conduct this research study was received on December 19, 2011.

From this blog, three blog articles along with the homepage were selected to review. To take a snapshot of the artefacts and prevent new development or changes from impacting the content, the four selected items were converted to PDF format on December 19, 2011. The homepage or the blog articles could change daily, so a snapshot-in-time is critical to maintain consistency. The blog articles selected were the last to be published in a month, within the 2010/2011 hockey season. The NHL hockey season, which included regular season games only, commenced on October 7<sup>th</sup>, 2010 and ended on April 10<sup>th</sup>, 2011. Months that did not have a full schedule of games, such as April and October, were excluded. The three blog posts had to be at least thirty days apart from one another to ensure there was enough time for commenters to contribute to a blog posting. The findings of this research study are based on the blogs' contents on December 19, 2011.

The participants of this study are the blog owners and the hockey fans who participated on the blog as commenters (*Table 1*). No information regarding readers of the blog was collected. To protect the confidentiality of the blog owner and blog user's, no information or further detail regarding the participants was included in this research study. Any personal or demographic information was not searched for when examining the four artefacts. This study only examined this specific blog and the contents of this blog. Links to other websites that were found on this blog were out of the scope of this research study.

**Table 1 – Definitions of online roles**

<b>Term</b>	<b>Definition</b>
<b>Blog article</b>	Content produced by the blog owner
<b>Blog owner</b>	Individual who operates the blog. This person publishes new content (blog articles) and is also responsible for the layout of the blog, links provided on the blog and the categorization of content.
<b>Comment</b>	A message a user can leave on a blog article. Comments are collected and published after the blog article.
<b>Commenter</b>	Anyone that leaves a comment regarding a blog article. This includes the blog owner.
<b>Discussion/discussion thread</b>	The collection of comments left for a single blog post. The owner and readers of the blog can post a comment, but must be approved by the sites owner.
<b>User</b>	Anyone that accesses the blog. This includes readers, blog owners and commenters.

## Collection Techniques

Since this research study is aiming to compare the website content to an established theory and past research findings, a directed content analysis, or inductive approach, will be used. In this case, an online hockey fan community is being examined to understand its produsage capabilities, making a quantitative approach less effective. The concept of produsage and its characteristics as outlined by Bruns (2008) is qualitative in nature and best reflected in that manner. This study will follow the eight steps to complete qualitative content analysis outlined by Zhang & Wildemuth (2009). These eight steps are: (1) prepare the data; (2) define the unit of analysis; (3) develop categories and a coding scheme; (4) test your coding scheme on a sample of text; (5) code all the text; (6) assess your coding consistency; (7) draw conclusions from the code data; and (8) report your methods and findings (Zhang & Wildemuth,



2009, p. 4). The four key principles of produsage will serve as the units of analysis (Zhang & Wildemuth, 2009, p.3) to allow for themes and patterns to emerge from the analysis (*Table 2*). Therefore, a qualitative approach, emphasizing a researcher's interpretation is required to explore examples of produsage. An unobtrusive approach to understanding the online hockey fan community will ensure that the research study does not disturb the interaction between bloggers, commenters and readers, nor the direction that the blog takes in terms of content or discussion.

Each artefact was printed to analyze the content. The content included the text, images and options available to the blogs' users. Using Bruns (2008) four key principles of produsage, the findings from the artefacts were sorted. Any content found in the four artefacts that fell into any of the four categories were highlighted and marked in the PDF document by hand. Once the artefact was analyzed, the marked up content was transferred into a matrix diagram within a Microsoft Excel document (*Appendix A*). Once all the content is coded, each category is analyzed to ensure the content found to be a part of it is consistent with other similarly labelled content. Once completed, the content of the artefact is analyzed again with coded content transferred into a new matrix in Microsoft Excel. The two matrices are compared to ensure the interpretation of content is consistent. If the consistency of the coding is in agreement for 80% of the content, the findings will be considered reliable (Cresswell, p, 191). A count of the number of individuals who commented was determined by transferring all comments from a blog article into a Microsoft Excel document. Once transferred, blog users were isolated from the comments they wrote and counted for frequency.

**Table 2 – Codebook to record examples of produsage.**

Code number	Name of code (Produsage element)	Definition of code (Activities that reflect it)	Example of evidence in the blog
1	Open Participation, Communal Evaluation	Examples that demonstrate the ability of people to participate on the topic. Includes specific methods for people to participate. How do fans evaluate the content of others.	
2	Fluid Heterarchy, Ad Hoc Meritocracy	Examples that demonstrate the equal ability of individuals to make a worthy contribution to the project. How is a hierarchy established on the blog. How are people assigned tasks.	
3	Unfinished Artefacts, Continuing Process	Examples that demonstrate the continuing development of content. Gradual improvement of the communities' content. Includes the process involved.	
4	Common Property, Individual Rewards	Examples of the site being the property of contributors. How is the site protected from others selling or exchanging the content for profit.	

The confidentiality of blog users was protected, as requested by the blogs owner. To protect the confidentiality, any content that contained a blog user's online alias was changed into a numerical code. Any coded content that contained comments were paraphrased to protect the blog user's identity. Any coded content that contained the blog's name or its owner was never included in the data collection to protect the blog user's identity. All data collected, including the PDF version of the four artefacts from the blog as well as the Microsoft Excel document that contained the coding of the content from the artefacts was saved on my personal computer. These files were password protected to ensure confidentiality.

This research study uses Bruns' (2008) four key principles as the foundation to code and analyze the content found on a selected fan-generated hockey blog. By finding examples of

each of the four principles of produsage using a qualitative content analysis, this study intends to highlight the role of hockey fans in the development of information and knowledge regarding professional hockey.

## Procedures to Sort, Code and Interpret the Data

1. Website under review was accessed on December 19, 2011 and was converted to PDF format and printed. This includes the homepage as well as the three blog posts.
2. Each artefact (homepage and three blog posts) is scanned for examples of code 1 (*Table 2*).
3. Any content that can be considered an example of code 1 is highlighted and recorded in the results document (*Appendix B*).
4. The document is then scanned for examples of code 2, followed by a scan for code 3 and code 4 (*Table 2*).
5. Each document (homepage and the three blog posts) is reviewed using steps 2 to 4.
6. The highlighted content on the physical document is compared to the results document to ensure that everything has been recorded.
7. The results document is then reviewed to ensure the examples of codes are consistent within their category.
8. Each artefact is printed again, without mark-up of previous steps, to be analyzed a second time.
9. The findings from the second examination of each artefact are compared to the results of the first round. If the consistency of the coding is in agreement for 80% of the content, the findings will be considered reliable.

# Findings

## Analysis of Artefacts

### Homepage

The blog site under review was available to anyone with an Internet connection and a basic computer. This research study accessed the blog using a desktop computer. No mobile devices or tablets were used in this research study.

The site follows a typical blog format, containing blog articles and links that connect users to other websites. A large banner with the name of the blog is at the top of the page. The most recent blog posts appear first at this blog's homepage, and are sorted from most recent to oldest. The six blog posts currently available on the homepage provide the date and time the blog was posted, the author of the post, a headline, a photograph, the first two sentences of the blog posting and a count of comments the blog article has received. To read one of the blog articles on the homepage, users must click "Read more", which is found on the blog article. Clicking "Read more" provides users access to read the whole blog article in its entirety, including every comment that has been made regarding the blog article. To read blog articles older than the six found on the homepage, users must scroll to the bottom of the page and click "Older Posts". This then takes users to another page with recent blog articles. Also at the bottom of every page is a link that takes users back to the homepage. Users can also click "Links to this post" to see which other websites provide links to the blog under review.

The right side of every page on the blog site contains different sections. The first section consisted of links to other hockey related blogs. At this point-in-time, there are 36 links to different hockey blog sites. The second category on the right side lists the tags that have been used to categorize the blogs. Every tag that has been used on the blog is listed here

alphabetically, along with a count of how many times that tag has been used for a blog post. Clicking a tag directs users to another page consisting of blog posts that have used that specific tag. Examples of tags include hockey player names, past hockey seasons (i.e., 2008-2009, 2009-2010) and other topics such as “entry draft”, “injuries” and “trades”. At this point-in-time, there are over 300 unique tags that have been used on this blog site. A third section on the right side of every page provides users a method to access archived information. Users can select a month and year to access all the blog articles created in that period.

At the very top left of the page, users of the site have different options presented to them. This blog uses Blogger as its platform. There is a search field is at the top left where users can scan other blogs that use Blogger as a platform. Next to the search field is a link titled “Share”. This allows users to share a link to the blog using Twitter, Facebook or Google Reader. Next to the “Share” link is a link titled “Report Abuse” where users of the blog can file a “Terms of Use” violation with Google regarding the content of the blog. Clicking “Next blog” takes users to a random blog based on the Blogger platform. At the top right of the blog, users can click “Create Blog” to start their own blog site on the Blogger platform, or “Sign In” using their Google account.

At the very bottom of the homepage is a link to the company that produced the platform this blog is based on. In this case, it is a link to Blogger.com, a company owned by Google Inc.

## **Blog Articles**

The three blog articles selected for review were hockey related and focused on a single professional hockey team. Each blog article had a headline, either in the form of a single word or a short description, which gives an indication of what the blog article is about. Above the headline is the date of when the blog article was added to the blog. The most recent blog article

is at the top of the page. To access past blog articles, users of the blog could either click “Older Posts” found at the bottom of the page or click the “Blog Archive” drop-down menu to select a past month. Below the headline is a hockey-related picture. These pictures are often hockey players specific to the professional hockey team the blog focuses on, but on occasion can be a non-hockey related or miscellaneous artefact such as a natural setting (i.e., mountains, roadway). Below the image, is the body of the blog article, which in this study, was found to be hockey related. Blog articles ranged from 300 words in length to over 1,100 words. Below the body of the text was a short description of who posted the article on the blog and at what time of the day. Immediately after these are the labels, or categories, the blog article is part of. The labels allow users to search and view related articles. Every label the blog has ever used to categorize an article can be found alphabetically listed on the right side of the blog. This list of labels is available for users to navigate at all times on the blog.

Finally, the comments left by users of the blog, including a count of the number of comments, follows below the body of the text and details of the article. Comments are sorted chronologically from oldest to newest, with the oldest comments being at the top. Each comment consists of the commenter’s name, the body of their comment, followed by the date and time of their comment. The text of the comment is consistent with the format used in the original blog article, but can also be bolded or italicized. To post a comment, users click the “Post a Comment” link found following the most recent comment made on the blog article. To post a comment, users must log in with either a Google, LiveJournal, WordPress, TypePad or AIM account. Each user must have a screen name, but also have the option of posting a comment anonymously. Users can comment on the original blog article and its content, as well as the comments that other have made. Users can quote others by copying, pasting and italicizing the comments of others into a new comment. Once it has been quoted, users leave a space to distinguish the original comment and their own, followed by their additional comments.

It should be noted that users can also quote certain sections of the original blog article to specify what their comments are in regards to. Users can also direct their comments to someone by adding an ampersat symbol (“@”) before specifying the commenters online user name. This lets everyone know that their comments are in response to someone else in particular. The blog itself does not provide any functionality, rules or tools to quote comments or direct messages to others.

Other blogs that link back to the blog posts under review are listed immediately after the comments under the section called “Links to this post”. Users can also create a link to the post by clicking “Create a Link”. This prompts users to login using their Blogger account. As per the research methodology, other blog sites were excluded from this study. Therefore, there is no description of other blogs that linked to the blog site under review.

Following this section is a horizontal bar that provides users three options: “Newer Post” takes users to the article written after the one that is being read, “Older Post” takes users to the blog article that was written right before it, and “Home”, which takes users to the blogs’ homepage. Below these three options is a link that allows users to receive updates of any new comments left for the blog article. Users can utilize RSS feeds (Really Simple Syndication) to be notified of when another user has left a comment on the specific blog article.

## **Blog Article I**

The first blog article under review was written by the blog owner in January of 2011. The article is over 900 words in length and includes a picture of a player from the professional hockey team the blog focuses primarily on.

As of December 19, 2011, this blog article has garnered 109 comments from 43 unique commenters. This includes comments from the blog author. For this specific blog article, the top 10 most frequent commenters contributed approximately 50% of the comments.

The blog article discusses the performance of the players on the specific team that this blog focuses on. The author of the blog compares the statistics of every player at the midway point of the hockey season to the predictions the author made at the start of the season. The blog article includes each player's predicted performance, which includes games played, goals scored, assists and total points, along with scoring percentage, which is the total number of points divided by the number of games. These predicted statistics are then compared to the projected statistics, which is an extrapolation of the hockey players' current statistics. Following the statistical comparison for each player, the blog author writes a short paragraph discussing their thoughts on the predicted results, the projected results and overall performance of the player. For example, the predicted performance of one player does not match the projected performance. The author discusses how the player's usual line mates have been injured and that the team's overall performance has been poor. Another player is projected to match the predicted performance the author wrote about before the season. The author mentions that the player has been consistent and could be compared to other past or current players in the league. The purpose of this blog article, according to the author, is to determine if players can meet or exceed the author's personal expectations.

In this blog article, every comment made by users was in response to the article itself or the comments of others. Comments regarding the list itself were made, including responses to one another when users agreed or disagreed. Users supported their opinions with statistics from elsewhere and extended the statistics provided by the author. The idea of comparing players from different teams or generations was debated with users questioning one another on how



comparisons were made. Users also used quotes from the newspaper, links to other websites or other sources to support, question or defend arguments. Users discussed what their own expectations were and why they think they have been correct or incorrect in their estimations. Additional statistics were brought in by commenters, such as points players score on the powerplay and how they perform when playing road games. Soon after the blog article was posted, one of the players included in the list was released by the team. This was brought into the discussion with users giving their opinions of the player and who else on the team should be released. There was one comment that questioned the authenticity of one of the commenters. A user was accused of having a personal affiliation with the professional hockey player and attempting to influence the opinion of fans. One comment was removed by the commenter themselves.

## **Blog Article II**

The second blog article under review was written by the blog owner in February of 2011. The article is over 1,100 words in length and includes a picture of a player from the professional hockey team the blog focuses primarily on.

As of December 19, 2011, this blog article has garnered 77 comments from 38 unique commenters. This includes comments from the blog author. For this specific blog article, the top 10 most frequent commenters contributed approximately 53% of the comments.

This blog article focuses on a trade the professional hockey team recently made. This article examined the player and draft pick acquired by the team followed by an analysis of the player the team traded away. The article links to other websites that have information on the player acquired, including comments made by the general manager of the other team. The article then lists the prospects the hockey team could select in the following years' entry draft

using the draft pick acquired in the transaction. The author concludes the article with their opinion on the trade and what it means for the team in the long-term. The author provides their thoughts on the goals of team owners and management and what this transaction could mean for the direction of the team and other trade possibilities.

In this blog article, every comment made by users was in response to the article itself or the comments of others. Comments discussed a wide array of topics, including the player who was traded away and what their strengths and weaknesses were. This included speculation as to why this player was traded and what other factors may have been considered by management. To support or question arguments made by commenters, users included statistics and web links to information from other websites. Commenters also speculated as to which other players on the team might be traded away or which players may be acquired, including supporting arguments. For example, one commenter looked at the current contracts and salaries of players to determine who might be traded because of their contract soon to expire. Another commenter listed all the current players to demonstrate that the team lacked size and should consider types of players that the team does not have. The user talked about players from other teams who could be available to replace smaller players. Comments also included opinions about the player acquired by the team and how they would fit with the current roster. For example, some concluded that the new player would be sent to an affiliated hockey team for skill development. Commenters speculated as to which prospect the team might acquire in the upcoming entry draft using the pick acquired in the trade. This led to comments supporting or questioning the long term direction of the club, and how this transaction aligns with the goals of team owners and managers. The owner of the blog appears to have stopped accepting new comments citing a lack of respect among commenters.

### **Blog Article III**

The third blog article under review was written by the blog owner in March of 2011. The article is over 300 words in length and includes a picture of a natural setting.

As of December 19, 2011, this blog article has garnered 203 comments from 58 unique commenters. This includes comments from the blog author. For this specific blog article, the top 10 most frequent commenters contributed approximately 45% of the comments.

The purpose of the blog article, according to the headline, is to preview the upcoming game for the hockey team and provide a space for comments from users during the actual game. The text of the blog article, however, discusses the hockey teams business and financial issues, including the debate on whether or not the city the team plays in should support the team financially. A recent news story regarding the potential relocation of the hockey team is cited along with the author's opinion regarding the matter.

In this blog article, every comment made by users was in response to the article itself or the comments of others. Comments were in regards to the rumour of the team relocating elsewhere and their current business dealings with local government. The merits of the city the team could relocate to are commented on including the strengths and weaknesses of their economy. Comments also included opinions on other teams in financial turmoil, including cities that could potentially support a professional hockey team. Commenters include links to other websites as well as information from other sources to support or question the article and other comments. News regarding the recent signing of players by the team is also included in the comments. Comments are also made during the game on the day this blog article was posted, including opinions on the specific play in a game and the performance of players. There are some comments that lead into other topics, such as the picture used in the blog article and the visits people have made there as well as professional hockey players being categorized into the Canadian province they were born in.

## Coding Summary

The content found on the selected hockey blog was coded and categorized using the four principles of produsage (*Appendix A*). The findings were recorded in a spreadsheet and reviewed for reliability and validity (*Appendix B*). The following section is a summary of the findings.

### Code 1 - Open Participation, Communal Evaluation

*“The assumption within the produsage community is that the more participants are able to examine, evaluate, and add to the contributions of their predecessors, the more likely an outcome of strong and increasing quality will be (Bruns, 2008, p. 24).*

The hockey blog is open to anyone interested in professional hockey and requires no previous knowledge or experience. Produsage environments require fewer barriers to participate since the more people there are to participate, the more knowledge, skills and ideas can be applied at the project at hand. Hockey is the main topic, but there are no requirements established by the blog owner for users to follow. No registration is required to access the blog or its content. Anyone with a computer and an internet connection can access the blog articles, comments by other users, web links, and methods of categorizing the blog. Only the blog owner can post articles, but any user of the blog, including the blog owner, can participate in the comment section of each article.

The varying degrees of knowledge regarding professional hockey is apparent in the comments section of the blog. For example, in Blog Article 3, a commenter compares the financial struggles of the professional hockey team to a professional baseball team that folded because of a similar situation. In the same article, another commenter argues that the hockey team’s financial struggles reflect the volatile local economy rather than an unsupportive fan base. Both comments reflect the wide variance of experience not only with professional hockey,

but with other related topics as well. Blog Article 1, which assessed the performance of players, included comments that brought forth comparisons of players from past generations. For example, one current player was compared to a player who has been retired, which reflects the commenters knowledge of hockey history. Users also provided links to other websites or blogs to support their contributions or argue against the comments of others. This would also reflect an individual's social networks, which varied across the commenters. Regardless of experience, background or knowledge, commenters were free to contribute any knowledge related to the game of hockey they had to the blog.

The ability of anyone to read or comment on the blog articles is critical for the communal evaluation required in produsage environments. Fewer barriers to contribute to the hockey blog allow more people to read and comment on the work of others. The blog itself uses a "holoptic model" (Bruns, 2008, p. 25), where every user can see and evaluate the work of any other user. Users can see what others have written so they know what is expected of them before commenting and evaluating. This holoptic model combined with the clear definition of what the blog is about on the homepage, as well as the headlines of the blog articles, has resulted in a consistent blog. The blog is clearly dedicated to hockey and topics surrounding a specific professional hockey team.

Commenters use consistent techniques to evaluate the work of others. For example, to direct a message at another user, while at the same time posting the comment publicly, users use the "@" symbol before typing the name of the user they are referring to. Using the "@" symbol did not create a function within the blog, such as creating a link. Instead it simply notified anyone reading the comment that it is in reply to another user.

For example:

**User\_267889290 said:**

@user\_9088766728111 Your argument lacks sufficient evidence. Please review the following article that diminishes your argument!

To quote the work of others, users copy, paste and italicize the comments of others to supplement their own comments.

For example:

**User\_2866766 said:**

The hockey team is doing well. Ownership must decide what they will do.

*User\_12119737 said: It is up to the coaches to decide how the team succeeds.*

Both owners and coaches must work together.

Both examples demonstrate the ability of all users to evaluate the work of others, including the work and contributions of the blog owner. Comments that were not related to the blog article or lacked clear evidence was not built upon to extend the discussion. For example, in Blog Article 3, the majority of comments were either about the live game occurring or the financial struggles of the hockey team. When one user posted a comment unrelated to the article, the current game or the financial struggles of the team, there was no interest in further discussing the comment. Instead, users completely ignored the comment and continued discussing the original topics. Comments deemed useful to the discussion were regularly built upon either with critique or support.

This hockey blog demonstrated the qualities of a produsage environment, which is “based on a principle of inclusivity, not exclusivity” (Bruns, p. 24) and must remain open to participation from all. According to Bruns (2008), the more people that participate, either as readers, commenters or evaluators, the more knowledge, skills and ideas can be applied to the

task at hand. This quality of produsage is reflected in the blog since anyone with a computer and internet connection can access the website, read the content and post comments.

## **Code 2 - Fluid Heterarchy, Ad Hoc Meritocracy**

*“Leadership is determined through the continuous communal evaluation of participants and their ideas, and through the degree of community merit they are able to build in the process; in this sense, then, produsage heterarchies constitute not simply adhocracies, but ad hoc meritocracies (Bruns, 2008, p. 26).*

Produsage proceeds on “the assumption that while the skills and abilities of all participants in the produsage project are not equal, they have an equal ability to make a worthy contribution to the project” (Bruns, p. 25). The leaders of the community emerge based on the quality of their contributions, rather than as an organization that defines the roles of community members.

Several instances of this characteristic of produsage were found upon review of this hockey blog. The fluid heterarchy that allows for leaders to emerge from the fan community was found in the general structure of the blog as well as the comments section. The blog site owner is the only person that can post a blog article, design the layout of the blog, categorize the blog articles and post links on the sidebar. Those who comment on the blog articles, however, have an integral role in the development of the information available on the blog. Those who contribute what the online community deems valuable undertake a leadership role. This depends on the topic as some users have more knowledge and experience than others when discussing the topic. For example, the three most active contributors on Blog Article 1 were different than the top three most active contributors on Blog Articles 2 or Blog Article 3. This was due to the fact that all three articles were about three different topics. Contribution was based on the number of times they posted a comment and the number of times they were replied to or

referenced by others. The communal evaluation leads to some users being more active on discussion threads or referenced more times than others.

Since the heterarchy is fluid as different individuals, or as groups, take on different tasks, an ad hoc meritocracy develops. Depending on what individuals contribute to the discussion thread, and their personal experience and knowledge, certain responsibilities are assigned to them. For example, in Blog Article 2, a commenter posts a question for the blog owner asking for their opinion on a hockey player that the team could potentially acquire in a future draft. In the article that they wrote, the blog author demonstrates their ability to assess and predict player performance, warranting a question of opinion from a commenter. Another commenter, in Blog Article 3, posed a question to another commenter who appears to have experience with local government and the issue of the team relocating to another city. In both instances, the person being asked for their knowledge was an active participant and was valued for their contributions. Those that extended the information on the blog with support or critique of arguments were treated as sources of knowledge.

### **Code 3 - Unfinished Artefacts, Continuing Process**

*“Prodsusage does not work towards the completion of products (for distribution to end users or consumers); instead it is engaged in an iterative, evolutionary process aimed at the gradual improvement of the community’s shared content” (Bruns, 2008, p. 27).*

The three bog articles that were reviewed are still open for development. By having an open discussion thread, the blog allows for the information regarding the hockey team to remain under construction with no end-product as a final goal. Instead the article will develop over time and open to influence from future events and new information.

Each blog article, as well as the comments, is date and time stamped to let users know when the article was written and last updated. Users can thus track the development history of



the content. Blog articles are listed from the most recent to oldest. Comments, however, are listed from the oldest to the most recent. All three blog articles had comments posted the day the article was published until approximately four days after. All three blog articles are still open for comments as of December 19, 2011. Users can also subscribe to be notified when a new comment is posted under a blog article. Users of the blog can find every article as well as their corresponding comments using the blogs archive functionality. Blog articles are sorted by month and year, allowing users to see the history of the blog and comments made by users. Every article is categorized by the blog author, allowing users to find what topics the blog has covered related to hockey and the team. Topics include individual hockey players, past seasons and team coaching strategies, among other topics discussed by the hockey fan community. A list of every category used by the blog owner to sort articles is found on the right pane of the blog. Each topic is listed alphabetically with a count of unique articles that fall under the category. The categories let users find information easily to either use or extend, but also lets them know what topics have been a popular subject.

Several examples of the continuing process of information development regarding hockey were found on the blogs homepage and in all three blog articles. Each blog article is open for comments, allowing for real-time updates by users. For example, in Blog Article 1 while users were discussing player performance, the hockey team announced one of the players under review in the blog article was traded to another team. A user provided a link in the discussion thread, which was then discussed by others. This changed the conversation from one of reviewing all players to one focussing on a single player. A similar incident occurred in Blog Article 3, where a commenter quoted a live radio host. Again, the conversation changed direction because of real-time events. To further build the information on the blog, several commenters would also include links to other websites. There is also a link at the top of the blog

that lets users create their own blog. Since the scope of this research study included only this hockey blog, links to other sites and services was not examined.

These findings demonstrate how the blog is continuously developing information, rather than striving to complete a finished product. The best one can do is take a snapshot in time, but the content can change that day or in another year. The characteristics found on this blog are key in produsage environments and vital to the information used and developed by hockey fans.

#### **Code 4 - Common Property, Individual Rewards**

*“Participation in produsage projects is generally motivated mainly by the ability of producers to contribute to a shared, communal purpose” (Bruns, p.29).*

This study excluded interviews with users, so there are no indications of what motivates hockey fans to participate on this blog. Fans have a strong desire to collaborate with other like-minded fans (Berg & Harthcock, 2008) and identify with professional sports teams (Cialdini et al, 1976) but specific reasons or motivations for participating on this blog is at this point unknown. Of the 102 unique participants, including the blog owner, 7 posted a comment on all three articles reviewed, while 30 posted on at least two of the three articles. Across all three blog articles, 62% of the unique users posted two comments or more. There is some consistency among the activity of users, which confirms that there is a motivation. However, there was no evidence of what that motivation is.

There was no evidence of the blog being a common property belonging to all that contribute, as outlined by Bruns as a characteristic of a produsage environment. The blog is based on the Blogger platform, which, according to its Terms of Use, does not claim ownership of the content posted by users. There is no assurance by the blog author or the blog platform that the contents of the blog will remain available to those that contribute, the same way it has

been available in the past. The blog owner does not have their blog under any sort of license assuring users that their contributions will not be sold or exchanged for profit.

There were, however, several examples of blog users sharing a communal purpose. The blog is dedicated to a single professional hockey team. Users are united by the topic of the blog as well as the current events pertaining to the hockey team. The contributions towards a blog post were consistent with the topic of the blog post. There was a clear indication that blog users were working towards a common goal of building new content through discourse and analysis.

## Discussion/Conclusion

Based on a review of one hockey blog and its users, hockey fans can be considered producers. Hockey fans who engage with the game through blogging meet the four key characteristics of produsage. The blog articles and corresponding comments function as an example of a fan community sharing content and developing information.

Despite the examples of produsage demonstrated by hockey fans on this blog, some weaknesses exist in this research study. A closer study of the text may reveal some more details regarding who the leaders of the community are and perhaps the exact knowledge they have regarding the game of hockey and related topics. This approach however, would require approval from each blog user to reveal their identity and contribution. Significantly more time would thus be required.

This study excluded the links and supplementary information users provided outside the scope of the blog. These links could potentially provide further detail regarding the information developed by these hockey fans and the process for its development. Including external links in this study, however, would require significant time as each of these sites would need to be fully explored and approval is required by each websites owners.

To understand the motivations of users to participate, an interview or survey would have been beneficial. A qualitative content analysis is limited to the content, and unfortunately, the motivations of hockey fans to participate on blogs were not found. Hockey fans focussed on the task at hand and gave no indication about their reasons for contributing to the blog. Interviews or surveys would have taken more time considering the number of users along with the requirement to receive their approval to share the findings. The approach taken to analyze the

hockey fans as a community collectively pursuing information and knowledge worked well regardless and cannot be discounted.

## The NHL and Producers

An understanding of the behaviour of fans is critical for professional sports leagues such as the National Hockey League (NHL) to be successful. Knowing what exactly fans are capable of allows the NHL to develop methods to accommodate their demands. The NHL provides a number of products in the form of merchandise, entertainment from the uncertainty of game and information surrounding the game. The NHL has methods to manage the creation and distribution of these products to ensure efficiency and profitability.

The advancement of technological tools has provided more ways to engage with the game. Mobile technology, along with various applications and software, has become easier to use and access. Combined with the passion fans have for professional sports, these tools have enabled fans to become more than consumers of products. A participatory culture (Jenkins, 2006a) exists for hockey fans as tools are available and channels to express creativity are established. Using blogs, fans have taken on a greater role in the creation, development and distribution of information related to the game of hockey. Fans are able to publish their ideas, opinions and questions regarding the game with support of links to other sites. Fans also comment on the content of one another to exchange opinions and ideas. Information and knowledge, in particular, has become a product that fans develop as it is no longer under the control and direction of the NHL. Hockey fans have demonstrated their ability to be more than prosumers (Toffler, 1990), who help producers such as the NHL be better at what they do. Hockey fans do provide input into what the NHL produces, but they have also become producers on their own by engaging with a fan community on blogs.

Blogs have become important tools for fans to learn about professional hockey and develop the information surrounding the game. Fans can use blogs to continuously develop knowledge about hockey, as blogs have been found to be effective tools for learning and knowledge sharing. The foundational concepts of blogs, such as the ability to connect to other blogs and leave comments, support the collective intelligence (Levy, 1997) of hockey fans. Communities of blogs, including blog owners, commenters and readers, form to work together in pursuit of further information and knowledge development.

Leagues such as the NHL must recognize the fans desire and ability to be more than consumers. Their clientele is highly motivated to engage with the game and have the tools necessary to influence the information related to the game. The NHL must recognize the produsage capabilities of hockey fans, and develop products and processes to accommodate their behaviours. By aligning themselves with the key concepts of produsage (*Table 3*), the NHL can become participants within the produsage environment to collaboratively construct the information and knowledge surrounding the game of hockey.

In order for the NHL to foster a produsage environment, a number of steps must be taken. By using the technological tools available to them, the NHL can complete these steps to better engage with hockey fans.

1. Understand what data hockey fans find valuable. This includes determining if the current data being collected is still valued or if there are areas for improvement.
2. Collect the data hockey fans require for their analysis. This may include tracking new statistics, developing new data collection methods or improving the current data.

3. Provide all data in various easy-to-use formats, across different mediums such as web and mobile technology. This data must also be accompanied by simple definitions of the data as well as the data collection methodology. The NHL must ensure that any questions or concerns raised by fans regarding the data be handled promptly.
4. Recognize the work being done by bloggers by sharing their work during live games and on the official NHL websites. Ensure that bloggers are credited for their work and that links are provided to the blogs.
5. Encourage players, coaches and managers to connect with bloggers to answer their questions and provide feedback.

Regardless of the work the NHL completes to satisfy the needs of hockey fans, it is vital that the NHL participate with the produsage project in mind, rather than their potential financial gains.

**Table 3 – Key Concepts of Produsage (Bruns, 2008)**

<b>Produsage Concept</b>	<b>Description</b>
<b>Open Participation, Communal Evaluation</b>	Produsage environments are open to all to get a wide array of experience and contributions.
<b>Fluid Heterarchy, Ad Hoc Meritocracy</b>	Leadership within the project depends on the contribution the individual makes. Those whose contributions are valuable to the project will elevate their status within the community.
<b>Unfinished Artefacts, Continuing Process</b>	Rather than a finished product, the aim of produsage is to evolve and continuously improve the shared content within a community.
<b>Common Property, Individual Rewards</b>	Individuals working within a produsage environment are motivated by their ability to contribute to a communal purpose. Produsage environments ensure that the shared content

will not be exploited and will remain available to those who contribute to the project.

By either creating a produsage environment or participating in environments created by fans, the NHL can contribute to communal projects. The contribution made by the NHL could be built upon by others, which would increase their value among fan communities. The NHL would also be more visible as a collaborator, which would in turn promote the game of hockey. The league would indirectly benefit from their engagement with producers. Working with fans, the NHL could develop a more symbiotic relationship with their clientele to better understand their characteristics and needs. The NHL may also acquire knowledge regarding the game that they may not have been aware of. Without profiting on the shared content created in a produsage environment and infringing on the produsage concepts, the NHL could develop products for fans based on the needs uncovered while working with fans. Most importantly, by engaging with their fans in a produsage environment, the NHL could recognize their fans for their contribution to the game of hockey. A shift away from the traditional producer-consumer model towards a collaborative, participatory culture would create a sense of community which nurtures the relationship between the NHL and its fans.



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# Appendix

## Appendix A: Content analysis codebook

Code number	Name of code (Prodosage element)	Definition of code (Activities that reflect it)	Example of evidence in the blog
1	Open Participation, Communal Evaluation	Examples that demonstrate the ability of people to participate on the topic. Includes specific methods for people to participate. How do fans evaluate the content of others.	<ul style="list-style-type: none"> <li>- Website can be viewed by anyone with a computer, mobile phone or tablet with a connection to the internet.</li> <li>- Website has main writers/contributors whose posts are open for comments from anyone.</li> <li>- Those who do want to participate must register with the website (available for free and requires login name, email address) OR they can sign in using their Facebook account.</li> <li>- Commenters can build off of one another.</li> </ul>
2	Fluid Heterarchy, Ad Hoc Meritocracy	Examples that demonstrate the equal ability of individuals to make a worthy contribution to the project. How is a hierarchy established on the blog. How are people assigned tasks.	<ul style="list-style-type: none"> <li>- Site writers control what appears on the main page, while readers can comment on blog posts or start their own threads on the discussion board.</li> <li>- Hierarchy is established, but readers can be invited to become regular contributors to the main page.</li> <li>- Readers can also be cited by main contributors.</li> <li>- The posting history of readers can also be tracked by anyone.</li> </ul>
3	Unfinished Artefacts, Continuing Process	Examples that demonstrate the continuing development of content. Gradual improvement of the communities content. Includes the process involved.	<ul style="list-style-type: none"> <li>- Blog postings open for comments, trackbacks</li> <li>- Site can be linked to and cited within the website or elsewhere</li> <li>- Blog posts and their comments are saved on the website for future reference</li> <li>- Discussion threads continue</li> </ul>
4	Common Property, Individual Rewards	Examples of the site being the property of contributors. How is the site protected from others selling or exchanging the content for profit.	<ul style="list-style-type: none"> <li>- Type of platform used. Guidelines in Terms of Use agreement.</li> <li>- Continues to be available to all.</li> <li>- Shared communal purpose (ex. Topic to discuss)</li> <li>- People gain personal merit for their contributions</li> <li>- Creative commons license, open source</li> </ul>

## Appendix B: Coding results from hockey blog

Artefact	Code 1	Code 2	Code 3	Code 4
Homepage	<ul style="list-style-type: none"> <li>- website is available to anyone with an Internet connection and computer</li> <li>- no registration to access or read the blog is required</li> <li>- option to sign in</li> <li>- ability to comment</li> <li>- different topics that people can participate in on sidebar</li> <li>- no pre-requisites (commenters have various backgrounds)</li> </ul>	<ul style="list-style-type: none"> <li>- no indication of a hierarchy; all are welcome to post</li> <li>- no requirements to post; just an interest in the topic</li> <li>- one main writer who runs the blog, but no indication that there is a hierarchy to follow</li> <li>- main blogger has their user name at the top of the page, but that indicates the name of the site</li> <li>- all seven blog posts that appear on the homepage are posted by the sites owner (everyone else is equal)</li> </ul>	<ul style="list-style-type: none"> <li>- blog posts from 2007 exist; archive available (easy to find)</li> <li>- posts are always open for comments</li> <li>- blog posts are date stamped and sorted chronologically</li> <li>- links to other hockey blogs on the side pane</li> <li>- blog posts are tagged</li> <li>- tags include their frequency</li> <li>- every tag used are provided on the side pane plus count (let people know what the site has posted and what can be built upon)</li> <li>- link at the top to create your own blog</li> </ul>	<ul style="list-style-type: none"> <li>- blog based on Blogger</li> <li>- no terms of use available from the blogs' homepage</li> <li>- no comment on who owns the content</li> <li>- comments were related to the main blog post and the topic of the blog</li> </ul>
Blog Article 1	<ul style="list-style-type: none"> <li>- anyone can read the comments; no login required</li> <li>- don't need to contribute to be able to read the comments</li> <li>- commenters can read and respond to one another</li> <li>- using the "@" before another commenters name means their response is in regards to specific people</li> <li>- italicize other peoples comments to reference them</li> <li>- people critique the main blog post or support it further, raise new questions, answer others</li> </ul>	<ul style="list-style-type: none"> <li>- people must login to comment, but do not need to follow any hierarchial rules</li> <li>- blog owner decides what the main blog post will be</li> <li>- readers can contribute in the comments section, pending approval by owner</li> <li>- blog owner also comments on the blog to respond to others</li> <li>- no set of rules on how to comment (quoting or replying to others)</li> <li>- accusations of pushing hidden agendas</li> <li>- comments removed by blog owner</li> <li>- commenters dictate where the discussion goes</li> </ul>	<ul style="list-style-type: none"> <li>- blog post is still open for comments</li> <li>- comments range from Monday January 31, 2011 to February 2, 2011</li> <li>- blog post and corresponding comments are available to link to</li> <li>- readers can subscribe to blog comments and be notified when new comments are posted</li> <li>- references to local newspaper; bring it in to the comments section to discuss</li> <li>- latest related news appears in the comments section</li> </ul>	<ul style="list-style-type: none"> <li>- blog based on Blogger</li> <li>- no terms of use available from the blogs' homepage</li> <li>- no comment on who owns the content</li> <li>- comments were related to the main blog post and the topic of the blog</li> </ul>
Blog Article 2	<ul style="list-style-type: none"> <li>- arguments supporting and arguing against the main blog post</li> </ul>	<ul style="list-style-type: none"> <li>- anyone can participate and discuss whatever they desire</li> <li>- anyone can communicate with anyone</li> <li>- blog owner responds to others within the comments section</li> <li>- commenters ask blog owner questions;</li> </ul>	<ul style="list-style-type: none"> <li>- blog post provides link to other sites blog owner has written for</li> <li>- link to other news sites; information</li> <li>- commenters quote and reference one another</li> <li>- discussion topic remains consistent</li> </ul>	<ul style="list-style-type: none"> <li>- blog based on Blogger</li> <li>- no terms of use available from the blogs' homepage</li> <li>- no comment on who owns the content - comments were related to the main blog post and the</li> </ul>

		treat blog owner as a source of information	and includes latest related news	topic of the blog
<p><b>Blog Article 3</b></p>	<ul style="list-style-type: none"> <li>- commenters quote one another to build off of</li> <li>- commenters agree and disagree with one another and provide support for their beliefs</li> <li>- when commenters try to change the topic, it gets some responses</li> </ul>	<ul style="list-style-type: none"> <li>- comment deemed inappropriate removed by blog owner</li> <li>- title of blog post indicates it is about tonight's game</li> <li>- body of blog post is more about the teams off-ice business issues</li> </ul>	<ul style="list-style-type: none"> <li>- Commenter quotes other commenter to question their opinion and supporting statistics</li> <li>- commenters attach links to other sites to support cases</li> <li>- commenters discuss topic heard on radio</li> </ul>	<ul style="list-style-type: none"> <li>- blog based on Blogger</li> <li>- no terms of use available from the blogs' homepage</li> <li>- no comment on who owns the content</li> <li>- comment deemed inappropriate removed by blog owner</li> <li>- topic title is about a single game, but the discussion is about the business aspect of the team</li> </ul>

