Analysis of Match-Related Information Seeking Behaviour During the Act of Watching Football Matches on TV

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ABSTRACT

This paper presents a study that investigates how, when, why people seek football match-related information via their second screens when they watch football matches on Television (TV). The study focuses on the type of match-related information that TV football audience seek during their act of football match viewing and whether this info seeking activity improves their TV experience in that context. In addition, triangulating the ideal second experience of the aforementioned group is another aspect of this study. In order to gather data, an online questionnaire was distributed and interviews were conducted. A total of 70 people completed the questionnaire and 12 participated in the interviews. The key findings indicate that, almost half of TV football audiences seek match-related information that is not provided by the TV broadcast, usually in the moments of any pause during the game, before kickoff or after the final whistle. On average, viewers seek four different types of aforementioned information on two media devices. Overall, second screen users believed that the match-related information seeking activity enhanced their perception of matches and socialisation. Lastly, they tended to have more tailored social media feeds, several of stats and all-in-one type of applications for better second screen experience in this sense.

Author Keywords

Football; second screen; TV; user experience.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

INTRODUCTION

'Second Screen', which is "the act of coupling a TV viewing activity with second screen interaction", is increasingly becoming an important area in human-computer interaction (HCI) [2]. Recent evidence suggests that sport supporters show an increased tendency to take advantage of second screens during their experience of watching sporting events on TV [8]. However, there is lack in the literature regarding to how, why and when TV football audience interact with their second screens during the act of watching football matches on TV. Moreover, researchers have not investigated in depth how second screen interaction affects experiences of football match viewers in much detail. In addition, the research to date has not tended to focus on expectations of them. Subsequently the paper has been organized in the following way: The first part includes a brief background of the current literature in this context. On second part, the methodology employed for the study is presented. After that, an analysis of the results of the online questionnaire that is also supported by the findings from interviews is reported. This part also reviews the

contribution of such interaction to viewers' experiences of TV football watching and their expectations. Finally, the conclusion provides a brief summary and suggests future work.

BACKGROUND

Among TV general sports audience, there has been an increasing trend of consuming broadcasted sport events related information that is not provided by TV broadcasts because mobile devices are become cheaper and easier to use as an increase of nearly 1.3 billion smartphones is reported in between 2009 and 2013 [7, 8]. Previous studies thus far have provided evidence that, TV sports audience utilise the additional media in order to seek relevant information regarding to what they watched on the 'main screen'. They also reported on the reactions, emotions and opinions of other people online regarding to the content presented on the main screen as well as sharing their feeling and thoughts, sometimes bantering with them [1, 5, 8].

METHODOLOGY

Initially, an online questionnaire was deployed in October 2013. The reason why this method was chosen was that it has been one of the most practical and cost/time effective methods to gather a large collection of data from different parts around the world [6]. Hence, seventy anonymous people who lived in the following countries completed the questionnaire: UK, India, Turkey, Brazil, Romania, Greece, France, US, Canada, UAE, Australia. Besides, the method allowed setting up a diverse type of questions such as single-choice, multi-choice and open-ended ones in order to acquire various data [3, 6]. However, there have been drawbacks associated with the use of online surveys as they might restrain further probing [3]. In order to tackle this issue, twelve people were interviewed in a conversational style to get a deeper understanding as to their match-related information seeking behavior on second screens [6]. The interviews were conducted in between February and March 2014.

The questionnaire consisted of three sections. The first part included only one question that was asked to every participant, on whether they looked for any kind of match-related information that was different from the ones provided by TV commentators and pundits when they watched football matches on TV. Only respondents who chose the option of 'Yes' (the other options were 'No' and 'Don't know') could proceed to the second section that included seven questions. They included details about the nature and ways of information seeking activities that people chose. The third section was common for every participant and composed of three questions regarding the age, gender and residency of the participant.

Six people were interviewed in person, one was over internet phone and five by email. During the interviews, thirteen questions were asked to participants. Six of them were for demographic and warm-up purposes. Participants were recruited participants on the basis of being second screen users who seek match-related information during their act of watching football matches on TV.

FINDINGS

The tables below provide a summary of some of the key findings.

Answer	Number of People	Percentage
No	36	51%
Yes	32	46%
Don't Know	2	3%

Table 1: Results for the First Question of The Questionnaire: 'When you watch a football match on TV, do you seek any kind of match-related information (e.g. in-game player & team stats, historical data of competition, comments of other people), apart from the kind provided by the commentary and TV graphics?'

Since the results indicate that almost half of the respondents (46%) actively look for extra information, this part of study corroborates the findings of previous work in this field that presented around half of American football and soccer audience use Internet and TV simultaneously when they watch matches [8].

Type of Match-Related Information

Type of Information	Number of Selections	Percentage
Player Info	20	15%
Team Stats	20	15%
Player Stats	16	12%
Match Preview/Background	15	11%
Comments of Other People	14	10%
Competition Stats	14	10%
Team Info	13	10%
Team Fixture	6	4%
Competition Fixture	6	4%
Competition Info	5	4%
Highlights	5	4%

Table 2: Results for the Second Question of The Questionnaire: 'What kind of match-related information do you seek when you watch a football match on TV?'

The study found that not a single type of match-related information dominated other types (Table 2) as the most selected entity composes 15% of whole.

Number of Different Type of Match-Related Information	Number of People	Percentage
Two	4	12.5%
Three	10	31.25%
Four	7	21.8%
Five	4	12.5%
Six	2	6.25%
Seven	3	9.3%
Ten	1	3.1%

Table 3: Distribution of Number of Types of Match-Related Information The Respondents Sought for

Another important finding was that none of the respondents contented themselves with a single type of match-related information and almost one third of them preferred three different types of data (Table 3). The results also revealed that 26 people (81.25%) were interested in at least one kind of 'stats' while 29 participants (90%) were interested in at least one type of team related information.

Type of Additional Medium

Type of Medium	Number of Selections	Percentage
Smartphone	23	37%
Laptop/Netbook	19	30%
Tablet	9	14%
Mobile Phone	8	13%
Newspaper	3	5%
Other	1	2%

Table 4: Results for the Third Question of The Questionnaire: 'What sort of medium do you use to seek information when you watch a football match on TV?'

According to the report of *BusinessInsider* brings out the fact number of tablet users are less than the number of smartphone users in worldwide scale [7]. The study results reflected the report in that the number of people who used tablet as second screen in this context was remarkably less than smartphone favourers (Table 4).

Number of Media	Number of People	Percentage
One	9	28%
Two	15	46.8%
Three	7	21.8%
Five	1	18.75%

Table 5: Distribution of Number of Media The Respondents Used to Seek Match-Related Information

One of the interesting findings was 7 of 9 second screen users who rely on a single type of second screen were smartphone users. A possible explanation for this result, which could also be applied for the results shown by Table 4, could be the relative practicality and smaller size of smartphones compared to tablets and laptops. It was also interesting to note that, almost half of the respondents utilised two types of second screen media. This result could be explained by the fact that the socio-economic level of participants was perhaps higher than the world average. It might also be that some people used a single device for both as the main screen and second screen whilst using another device solely for the purpose of second screen.

Type of Information Source

Source of Information	Number of Selections	Percentage
Mobile Apps	21	23%
Sports Portals/Websites	19	21%
Newspaper Websites	13	14%
Social Media	12	13%
Competition Websites	10	11%
TV Websites	4	4%
Other	4	4%

Source of Information	Number of Selections	Percentage
Official Team Websites	3	3%
Forums	3	3%
Fan Websites	1	1%

Table 6: Results for the Fourth Question of The Questionnaire: 'If you use desktop PC/laptop/tablet/smartphone to seek information when you watch a football match on TV, what do you use as source of information?'

Table 6 illustrates 'mobile apps' as the most popular source of information. This result correlates with the number of people who at least use smartphone or tablets: 25. It was somewhat surprising that forum usage appeared as the second least preferred source of information. This result can be explained by the fact that many forums dated back before the emergence of smartphones and tablets and were designed for larger screens; therefore, their non-responsive layouts might cause difficulties for users in terms of accessing and reading the threads.

Number of Types of Information Sources	Number of People	Percentage
One	2	6.25%
Two	13	40.6%
Three	8	25%
Four	7	21.8%
Five	2	6.25%

Table 7: Distribution of Number of Types of Information Sources The Respondents Used

Table 7 shows that around two-third of respondents relied on two or three different data sources. The reason for this was not clear but it might have something to do with acquiring different aspects of matches as well as avoiding potential danger of distraction that might be caused by a large number of sources. Another important finding regarding the source of information was that almost every participant, except one, used at least one website as information source.

One remarkable finding was the popularity of Twitter among the interviewees who, seven of them, stated that they used it. It seemed possible that this result was due to the briefness of the aforementioned micro-blog as an interviewee put it: "I like the 160 characters… I like the short, pity comments."

Time of Activity on Additional Medium

Time Period	Number of Selections	Percentage
When The Game Pauses for Any Reason	16	30%
Just Before Kick-Off	13	25%
During Half Time	8	15%
Just After Final Whistle	8	15%
Other	8	15%

Table 8: Results for the Fifth Question of The Questionnaire: 'In which moments of a football match do you seek information when you watch it on TV?'

One-third of the participants who answered the question above (Table 8) reported that they sought match-related information when the game pauses for any cause. Four interviewees explained the moments of pause as:

"Whenever the ball's go out for throw-in or someone's… …down injured…"
"…If there is an injury or there is a pause or there is a sloppy play…"
"…Especially when there is like a free-kick that is taking too long…"
"I guess if somebody's injured and there is a spell where the game is paused then I might sort of go through…"

Some authors speculated that sports fans hate to be distracted when they watch matches on TV [2]. Three interviewees felt that the distraction was an issue:

"I don't want to interrupt the view of the game just in case something happens while I'm sort of checking…"
"If the game is exciting, you forget about that."
"…only as long as its a quick check - I'd still want to be watching a game most of all rather than being overwhelmed with statistics."

Number of Different Time Periods	Number of People	Percentage
One	17	53.1%
Two	10	31.25%
Three	4	12.5%
Four	1	3.1%

Table 9: Distribution of Number of Different Time Periods The Respondents Seek Match-Related Information

The reason why the frequency percentage of 'When the game stops for a reason' (30%) was lower than the percentage of people favouring it (50%) was because 11 were in search of information in other periods of time, too.

Frequency of Activity on Additional Medium

Frequency	Number of People	Percentage
Not Regularly	17	53%
Periodically	11	34%
Once per Half	2	6%
Other	2	6%

Table 10: Results for the Sixth Question of The Questionnaire: 'How often do you regularly use any kind of medium (e.g. laptop, tablet, smartphone or other) to get information when you watch a football match on TV?'

Since the frequency of irregular pattern of second screen usage (Table 10) was the leading figure, an implication of this was the possibility of pauses that happened randomly due to injuries, bookings and other events that takes place in the matches.

Reasons of Seeking Match-Related Information
The analysis of this section is solely based on the interviews. Some participants pointed out that they use a second screen in order to see whether their thoughts about matches, players, teams and so on are reflected by others or not:

"…I want to know are other people seeing at the same way I am or is everyone disagreeing with me…"
"…You wanna share your views with other to see if they resonate..."
"…to compare my opinions on the game/specific incidents to that of certain journalists/bloggers."

Some participants mentioned the reason as improving their knowledge and understanding of the game:

"…Reinforce the perceptions of the game…"
"…[J]ust [to] have more understanding of what's actually going on…"
"…it is also good to see how the game is panning out…"

Reason of Using Second Screen to Seek Match-Related Information

As in the previous section, the data is only based on the interviews. The only reason given by the participants to use of an additional device was avoiding the disturbance of viewing the content on the main screen:

"I don't switch my tabs on my sort of tablet to start looking at something else and I miss a goal cause often can happen…"
"…Twitter on my telly… would disturb my viewing."
"On my cellphone I can still pay more attention to the match… if I divide the screen in two, …it is a bit easier for me to get distracted… The time it takes for me to look from the screen to my cellphone screen it's… very little so it sort of reduces the time so I can pay attention to both things…"
"…it's the most efficient (or the only) way of accessing the information I want without missing any of the match."

Rank	Number of People	Percentage
Strongly Agree	9	28%
Agree	7	21%
Neutral	9	28%
Disagree	5	15%
Strongly Disagree	2	6%

Table 11: Results for the Seventh Question of The Questionnaire: 'When you watch a football match on TV, do you agree that any additional medium which you use to seek information help you to improve your understanding of game, performance of players & teams?'

Only one interviewee disagreed with the statement that seeking match-related information on additional media improved his experience of watching football matches on TV.

Participants of the questionnaire and interviewees argued that second media enhanced their watching experience in certain ways such as their boosted perception of matches:

"…it's good to see how he's performing individually well actually he might not look he's doing anything…"
"…It is interesting to see how the statistics line up with your qualitative assessment…"
"It helps me get a more complete view of the match."
"it allows for a more in-depth view on the game."
"…it helps you imagine what might unfold."

Comments below were regarding to social experience:

"I like… viewing the different way people responding to certain instances…"
"You can replicate some of the experience of watching it in the stadium or pub…"
"…Social lubricant… [S]omething to laugh about…"
"…I'm frequently amused by what people say."

Ideal Second Screen Experience

Three interviewees suggested that they would like to have 'football-specific social media feed' as their ideal second screen experience:

"Maybe it can bring some live tweets about the game… I would want to use it, for example, to see what [some commentators are] saying about the game…"
"With Twitter you get everything about everything… Make it more tailored to more specific areas you look at…"

"Something like Twitter but it's dedicated entirely to football…"

Some considered 'in-game stats' specifically:

"…additional statistics…"
"…the features should be in some way related more to player stats."
"…basic stats, instantaneous player rankings…"

Others described 'all-in-one' apps as their favoured ones:

"Something that pulls together different types of resources…"
"…an app combined sources in intelligent ways…"
"…updates from other matches, table positions, next matches coming…"

CONCLUSION

The study revealed details regarding to second screen usage with live TV football match watching which has not been examined much by the current literature. In summary, active second screen users who follow football matches on TV stated that they looked for multiple types of match-related information mainly via apps installed on their laptops and smartphones usually during the moments when the play was not 'on' in matches. Besides, many participants believed that extra information on second screen helped them to understand the structure of matches and performance of players and teams as well as offered them a simulated socialisation experience similar to the atmosphere and fun they typically have when watching games with other people. They also described that their ideal second screen experience should have had tailored social media feeds, various stats and combined types of match-related information. The analysis could be extended in the future with the support of some ethnography studies such as observations of people regarding how they interact with their mobile devices when they watch football matches on TV as well as probing it by making and testing prototypes.

ACKNOWLEDGMENTS

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