How Mobile Apps Are Changing Consumer Behavior:

A Case of the Alberta Culture Events Mobile App.

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By the end of this year, the Alberta Culture Events app will be decommissioned. It was an attempt to provide Albertans with a contemporary way to search for and engage in Alberta's culture. Alberta is rich in culture and history, and I hope that with this study, future professionals can find ways to further integrate Albertans into the cultural fabric of our province.

Abstract

Smartphones and mobile applications (apps) are permeating modern culture. Mobile app development is steadily increasing and becoming customized to meet individual user needs. Private and public organizations are designing apps to make products and services more easily consumable. The Government of Alberta has developed a website and mobile app as part of its marketing effort for the Alberta Culture Days festival and uses it year-round to promote community based arts and cultural events. The usage of the mobile app is the focus of this study and specifically if it is influencing its user's behaviors towards attending more arts and cultural events. Understanding how mobile apps are being developed to entice consumer usage and make consumer decisions is the central goal of this study. The study draws insight from a focus group of Alberta Culture Events mobile app users and uses the theory of planned behavior to analyze the user's behavior. It also uses the stages identified in the model of consumer behavior to understand how the mobile app supports users through their decision making process about attending events they discover. This study is supported by extensive literature review on this topic which identifies attributes such as security, brand strength and design as ones which positively influence app usage. The results of the focus group confirmed that many of the app attributes identified in the literature review positively support the use of the Alberta Culture Events app. However, further study and analysis needs to be done of the types of events delivered through this app to better understand if it can influence Albertans' consumer behavior of attending arts and cultural events.

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Introduction

The explosion of mobile applications (apps) has led to a significant change in how consumers are using technology to interact with companies and brands. Canadian smartphone and mobile app usage is growing:

> The use of mobile apps is really driving the spike in Canadians' online time, comScore says. It's estimated that Canadians who own smartphones and tablets are now spending about 43 per cent of their overall online time within an app. And app usage accounts for over 80 per cent of the time Canadians spend online with a mobile device, versus just 20 per cent spent using a web browser. (Oliveira, 2014)

Mobile devices have become cultural objects which consumers readily use for "…searching for information, conducting transactions, managing daily schedules, and socializing."(Shankar, Venkatesh, Hofacker & Naik, 2010, p.112) Consumer focused mobile apps are designed in ways to make the consumer experience easier and intuitive for influencing behavior. The challenge for organizations looking to incorporate mobile apps into their marketing mix is determining the attributes of apps which will lead users to download and use them. Understanding why behavior change has shifted towards mobile apps, and what features make apps popular is an important topic to marketers as they evaluate this technology for their organizations goals.

For this study, I will be looking at the case of the Alberta Culture Events mobile app. This app was developed by the Alberta government to promote the annual Alberta Culture Days festival when community groups across the province are encouraged to run arts and cultural events in their communities to promote the important contributions of culture to a prosperous, vibrant society. Community groups are invited to organize events and to submit event details for

inclusion into a website and mobile app which is promoted to Albertans. The mobile app has had approximately 4000 downloads and the team leading its development questions if it is effective in getting more people to attend events. The problem for this research project is to understand how the mobile app has been influencing user's behavior towards using the app and attending (or not) more Alberta arts and cultural events. The literature review supporting this study will take a holistic view of consumer behavior and the use of mobile apps to inform this research problem.

This study begins with a literature review which explored the consumer decision model and the stages consumers go through as they are consuming products and services. Then, it will turn to research which has been done on consumers' use of mobile apps and the conditions under which users find mobile apps useful in influencing the decision process. From here, I will look closer at research that has been done on technical features and visual design within apps which can be employed to create more useable apps. Finally, the review will look at some research which is emerging in the area of behavior change and mobile apps. The literature review looked for studies which have been done to understand which features and conditions make mobile apps more or less used. These elements help to inform the research problem, because it helps us to understand what conditions have been identified as necessary for mobile app usage. This paper will then outline the methodological approach devised for the study of the Alberta Culture Events mobile app and the decision to use a focus group. Finally, the paper will outline and analyze the results of the focus group. The analysis of findings will apply the lens provided by the theory of planned behavior and identify those features which appear to form intent for users of the app. The results will be analyzed, with use of the framework, to help understand how the app is influencing Albertans in their consumer decision of event attendance. The theory of

planned behavior and the consumer decision model will provide insight into the feedback from users and provide recommendations for future development of the app.

Theoretical Approach

The approach to this literature discussion and research question will be framed by the theory of planned behavior (Figure 1) and consumer decision making model (Figure 2). The explosion of smartphone usage and mobile app development has introduced significant behavior change in our society as smartphone users depend heavily on mobile apps which assist them with everyday tasks. Central to the question of whether the Alberta Culture Events app has been influential in getting more users to attend arts and cultural events is whether the app has been designed in a way that users find useful. The mobile app allows consumers to search for information and make decisions about entertainment activities which they engage in. Understanding the criteria for planned behavior is central to this research project as the theory provides the framework this research project will apply to understanding the problem.

The theory of planned behavior postulates that, for a given behavior to occur, intention to perform that behavior must exist. Intentions "…are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior." (Ajzen, 1991, p.181) The theory identifies three elements which, when combined, work to form intention; attitude towards the behavior, subjective norm and perceived behavioral control (see Figure 1).

Figure 1 Theory of Planned Behavior - Azjen, pg.118, 2005
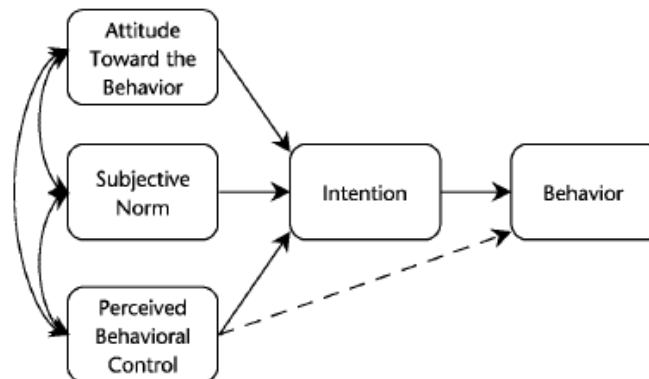
For this research, the behavior I am investigating is the user's use of the mobile app and whether it is leading to attendance at events. To best analyze the problem, the research questions draw from these three elements. Primary questions include: Do app users have a positive or negative attitude towards using the app? Is there social pressure to warrant using the app for its purpose? How easy or difficult is it to use the app? The consumer decision model will help us understand the stages consumers go through in making decisions to purchase a good or service. However, the theory of planned behavior provides this study the framework through which we analyze the individual behaviors supporting the use of the app and attendance at events. This will ultimately lead to the questions asked in the focus group which will provide the evidence needed for analyzing the problem.

Literature Review

The literature review process involved searches of the more popular Communications and Technology library databases including Business Source Complete, ABI Inform Complete, Factiva, Academic Search Complete and CBCA Complete. Searching for information closely related to this topic was a challenge as this field is rapidly evolving. While the number of studies around mobile usage and app usage is growing, there are not many studies related directly to the

usability of a particular mobile app. Searching for literature on this topic began with searches of

mobile apps and consumer behavior, behavior change, branding, privacy, mobile usability,

marketing and advertising. Many resources found during this search came from the business and

marketing discipline. Journals such as the International Journal of Mobile Marketing, Journal of

Consumer Research, Journal of Interactive Marketing, Journal of Consumer Behavior, Journal of

Consumer Marketing and International Journal of Business and Management became primary

resources for finding articles and links to other publications. These searches allowed for a broad

view of the literature available, and further refined searching came from following the

bibliographies of various papers to further identify sources which inform this topic.

The Consumer Purchasing Decision Process

In order to begin examining how mobile apps can influence consumer behavior, it is

important to look at literature in the field of consumer behavior. In particular when examining

how the mobile environment is influencing consumers to make decisions in favor of the

company or organization offering the app it is insightful to understand the process consumers go

through in decision making. The buyer decision process, see Figure 2, is frequently referred to in

the literature around consumer behavior and mobile apps or mobile marketing.

Figure 2 3Model of Consumer Behavior - Kotler & Armstrong, pg.152, 2012
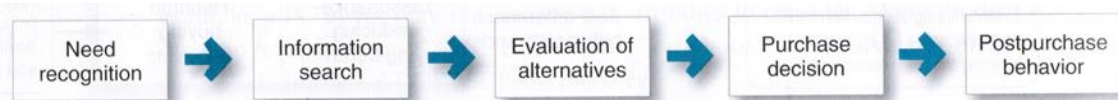
The process begins with a consumer identifying a need. A consumer will determine a

need such as hunger, or need for clothing, or interest in purchasing a new car. The consumer will

then go to the second stage which is information search. Here the consumer "…may store the

need in memory or undertake an information search related to the need." (Kotler & Armstrong, 2012, p.153) Consumers collect information related to their need from various sources including friends and family, advertising and internet searches. Once information has been gathered, consumers move to the third stage which is evaluation of alternatives. At this stage, every consumer will use a different method of evaluating purchase alternatives. Some consumers "…use careful calculations and logical thinking. At other times, the same consumers do little or no evaluating; instead they buy on impulse and rely on intuition."(Kotler & Armstrong, 2012, p.153) The fourth stage of consumer behavior is purchase decision where the consumer makes a final choice on which product or service to invest in. The fifth and final stage of the buyer decision process is post purchase behavior. After making a purchase, consumers will either be satisfied or not with the product. The experience the consumer expected from the product and the actual performance will determine the consumer's satisfaction with their decision and future willingness to choose this product again and or recommend it to others.

It's important to understand the buyer decision process as it affects consumers in any medium they make consumer decisions in. In testing of the online shopping environment, Teo and Yeoung conducted an online survey of 1133 online shoppers in Singapore to determine if the consumers external search effort when researching a product online had an impact on their decision purchase. The study found that there was a "…significant positive relationship between consumers' overall evaluation of the deal and their willingness to purchase."(Teo & Yeoung, 2003, p.360) The consumer's information search about a product has significant influence on their decisions. However, each step along this model is a complex one, laden with different variables. In a study conducted by Hoyer of 120 grocery shoppers in a metropolitan centre, consumers were studied regarding their detergent decision making process. The study found that

consumer took an average of "…13 seconds from the time they entered the aisle to complete their in-store decision."(Hoyer, 1984, p.826) What this study identifies is that "…when decision making occurs, a large portion of the process may occur outside the immediate in-store decision context."(Hoyer, 1984, p.826)

Understanding the five stage decision-making process is important in this study when examining how mobile apps are influencing consumer behavior. Identifying the various stages that consumers go through when making a decision, and understanding what mobile app properties can support decision making at each step is important to understand when developing a mobile app.

Mobile Apps and Consumer Behavior

Much of the literature on mobile app usage for marketing purposes looks to the field of consumer behavior to understand why people would use a mobile app to support purchasing decisions. A study by Wozniak, identifies that "…mobile apps for mobile marketing purposes may be tailored to affect different stages of the consumer decision-making process, namely need recognition, information search, and evaluation of alternatives, purchase decision, and post-purchase behavior." (Wozniak, 2013, p.33) The research study conducted a literature review, case study analysis and model development to understand why firms use mobile apps for marketing purposes and to predict mobile app acceptance by consumers. The case study research in particular found that firms use mobile apps to strengthen their brand and raise product awareness. The online questionnaire of 139 iPhone users in Germany, Switzerland and Austria affirmed that consumers':

…behavioral intention to use an app was found to be positively affected by motivational, social and consumer-based antecedents as well as system characteristics. The behavioral intention to recommend an app was found to be positively affected by both motivational and social antecedents as well as by the attitude toward recommending an app. (Wozniak, 2013, p.189)

As consumers in this study found apps to be useful to them, and recommended the app through iTunes, the more likely they were to use them in their purchasing process. Supporting this, a study of 30 senior executives of major mobile and media companies reaffirmed that mobile development is attractive because mobile technologies allow marketers to provide very targeted information relevant to that consumer based on "…demographics, communication, and social patterns, and…geographic movement patterns." (Friedrich, Gröne, Hölbling & Peterson, 2009, pg.55)

A study of consumers using mobile apps in low involvement grocery shopping situations and high involvement luxury goods situation found that apps can get in the way of daily purchasing decisions. Low involvement purchases can be described as quick, fast decisions made on lower price point goods such as detergent, where high involvement involves more complex purchases done less frequently, such as vehicles. The study by Kalnikaite, Bird and Rogers followed 10 consumers during a shopping trip who used mobile apps and were asked to speak out their thought patterns and technology usage as they thought through their decision making process. The study found consumers burdened by the mobile apps when buying basic everyday items at the grocery store, but that for higher end purchases consumers found "…review information and star ratings valuable and are willing to invest time in accessing these data using

a mobile shopping app." (Kalnikaite, Bird & Rogers, 2013, p.1258) Utility of the mobile app., or

usefulness in the users' daily life, again played an important role in the decision-purchasing

process. A similar study by survey of 289 college-aged consumers in the north eastern United

States evaluated mobile shopping experiences and found that while consumers may be using

mobile apps to shop, select personality traits and high usage of technology lead to greater

purchases. Researchers found that "Optimism, innovativeness and insecurity have a direct impact

on perceptions and an indirect impact on attitudes and purchase intentions."(Kumar &

Mukherjee, 2013, p.33) This type of knowledge can help marketers understand why consumers

may or may not complete the transaction stage on the buyer decision process.

A recent study by Taylor and Levin which surveyed 345 women who were customers of

a US fashion retailer, found a strong correlation between the retailer offering a mobile app. and

intent to purchase. Interestingly, the survey found that "…the customer who has recently visited

the store remains more likely to then use the app. to engage in purchasing or information-sharing

activities than the customer who has not recently visited the store." (Taylor & Levin, 2015, p.

769) This brings to light additional behavioral traits that may lead consumers to complete the

buyer-decision process via a mobile app.

Consumer behavior is a broad category and of particular interest to marketers is the

behavior specific to millennials, those born between 1980 and 2000. Millennials have grown up

around mobile technologies and for marketers they are seen as "…having a high level of

spending power."(Eastman, Iyer, Liao-Troth, Williams & Griffen, 2014, p.455) A survey of 243

freshman through graduate business students found that this market segment views mobile

technologies more as a necessity than a luxury. This group has a strong need for outcome-

relevant technology and innovation plays an important role; "…they need to continue to develop new models and stress their innovativeness." (Eastman, Iyer, Liao-Troth, Williams & Griffen, 2014, p.466) This is similar to findings from a study of 637 Finnish, 16-20 year olds where youth were surveyed to understand consumption styles, use of mobile phones and attitudes towards technology. Results indicate that while there are users with heavy consumption styles or use the devices because they are trendy, "…most young consumers are rather cautious or even thrifty (or just short of money), and this is also reflected by their rather instrumental relationship to mobile communication."(Wilska, 2003, p.459) In a study of 169 US college and 215 Pakistani college students, researchers looked for factors affecting the consumer acceptance of mobile marketing. This study found that the more personal attachment there was to the device, the more likely individuals are to access and share content. This is important to mobile adoption research as "…it further illustrates the role of social acceptance within certain consumer groups as an indicator of technology acceptance." (Sultan, F., Rohm, A. & Gao, T., 2009, p.317)

Understanding consumer behavior and mobile technology use is relevant to this study as it helps to inform how technology is influencing the consumer buying process. This helps us to understand the relationship between users and their phones/apps to help inform our research on usage of the Alberta Culture Events app. As more consumer marketing is done through mobile apps, understanding technology and consumer behavior helps us to understand how the technology is influencing our purchasing decisions.

Mobile App Features

There is much discussion in the literature about particular features built into mobile apps which are seen as favorable to consumers which can help to understand the conditions under

which a mobile app. will be more or less used by a consumer. An analysis of the sustainability overtime of 300 mobile apps in an app store was conducted by Lee and Raghu. Their findings indicate that offering "…continuous updates on features and price…" (Lee & Raghu, 2014, p.161) led to increased sales performance indicating that features are an incredibly important asset to high performing mobile apps. The following section will look at evidence that personalization and utility drive mobile app usage for consumers.

Personalization. The literature identifies particular features built into mobile apps which are seen as favorable to consumers. In a survey of 678 southwestern US college students who were mobile app users, researchers found the "…ability to personalize or personalization is a new use that only apps consistently provide over other media outlets." (Apps, Apps and More Apps, 2012, p. 8) In a 2013 Appalachian State University survey distributed to 2900 randomly selected 18-35 year-old Americans from a mid-sized public university found that they are "…more likely to prefer and to use mobile apps designed to improve efficiency, to connect people instantly and ubiquitously, and to provide timely, exclusive and personalized information." (Yang, 2013, p. 92) A 2013 study from UCSI University in Kuala Lumpur of 550 mobile app users at a private university in Kuala Lumpur found through questionnaires that consumer return on investment, the benefit or utility a consumer received from an exchange, had a positive relationship with the usage attitude towards a mobile app. (Maghnati & Ling, 2013, p.6)

Some of the literature points to the value of personalization within mobile apps because "… people use apps because apps are available to answer questions, perform various tasks, and provide quick access to entertainment whenever the user wants to use them." (Apps, Apps and

More Apps, 2012, p.14) A mobile app developed to control televisions and set-top boxes was studied in 15 French and 56 Austrian households. Here too the researcher's recommendations included a focus on personalization. Developers should allow users to "…flexibly generate 'quick access pages' for the most often used controls, devices, functions and services." (Bernhaupt, R. & Pirker, 2013, p.797) Personalization in the mobile space is not a new concept. A 2006 field survey of 137 mobile users in China looked at what factors influence mobile advertising and found that personalization is a key element to success. The study cites "Entertainment, credibility and personalization…" (Jingjun Xu, 2006/2007, p.17) as important to influencing attitude and that personalization is "…an important element that will improve consumer attitude toward mobile advertising."(Jingjun Xu, 2006/2007, p.17) Not specifically found in the literature, but would have been valuable, is what percentage of mobile app users personalize their apps. The instant availability of apps tailored to a user's individual needs adds additional insight into the types of mobile apps which can influence the consumer decision process.

     Utility. Utility or usefulness of a mobile app appears strong throughout the literature as a tenant for use by consumers. Utility can be described as the mobile app providing some data or functionality which enhances the user's lifestyle. An online survey of 282 users of mobile apps found through popular networking sites and campus bulletin board systems found that "…functional, social, emotional, and epistemic values have significant effects on behavioral intentions to use mobile apps."(Wang, Liao &Yang, 2013, p.19) The researchers indicate that marketers can develop apps that are "…truly supporting customers throughout their day and serving as a trusted companion…"(Wang, Liao &Yang, 2013, p.19) In a study of a mobile apps designed to track home appliance energy consumption, 25 interviews and questionnaires were

conducted with students, marketers and industry experts who had used the app. Users indicated that they liked "…the fact that feedback was available when needed, together with the straightforward measurement functionality. Users reported that this enabled them to satisfy their initial curiosity to discover more, not only about their overall consumption, but also more specifically about the consumption of individual devices." (Weiss, Staake, Mattern, & Fleisch, 2011, p. 662)

A 2009 study conducted by researchers from the Helsinki University of Technology, University of Murica (Spain) and Delft University of Technology (Netherland) on app users combined measured app usage with surveys of 579 Finnish smartphone users. The study looked at perceived enjoyment and usefulness of apps and found that with respect to mobile app games "Clearly, perceived enjoyment is not relevant to users, while it is certainly relevant to non-users. This more or less implies that smartphone users are driven more by the utility of the service with regard to utilitarian services." (Verkasalo, López-Nicolás, Molina-Castillo & Bouwman, 2009, p. 251) In contrast, a study conducted to test a model developed for explaining consumers' intentions to use mobile services found that "Perceived enjoyment has a significant and positive effect on intention to use both goal-directed and experiential mobile services, although enjoyment appears to be particularly important as a driver for using experiential services…"(Nysveen, Pedersen & Thorbjørnsen, 2005, p.343) The study surveyed users to understand usage of text messaging, contact, payment and gaming mobile services, and while results indicated strong influence of perceived enjoyment, "…basic threshold levels of usefulness must be present for all mobile services…in order for consumers to develop positive attitudes and intention to use the services."(Nysveen, Pedersen & Thorbjørnsen, 2005, p.343)

In an online survey of 291 mobile app. users, utility again emerged as a major motivating factor for mobile purchase decisions. The survey results found that while in a mobile environment, "Trust effects flow, which further effects perceived usefulness. These three factors predict mobile purchase intention."(Zhou, 2013, p.191) In-depth interviews in 2011 by a researcher from Andhra University in India with four German and four British early-adopter smartphone users used the Zaltman Metaphor Elicitation Technique to study users. The research provides additional support into how the mobile allows consumers to "…access almost limitless information anywhere and at anytime…" (Wagner, 2011, p.39) This results in "…constant access to situation-relevant information making the smartphone an invaluable device that can transform consumer behavior." (Wagner, 2011, p.39)

Usefulness of the mobile app in a consumer's life is again reiterated in a study of 196 mobile application users in Rotuaari. The questionnaire identifies how applications can impact consumer behavior. The study found that the strong "…significance of usefulness stresses the importance of intensive and continuous market research to find out what consumers really consider valuable mobile services in different use situations."(Koivumaki, Ristola & Kestip, 2006, p.431)

Personalization and usefulness are key ingredients to a unique mobile experience. This research illustrates that users are looking for their devices and apps to provide them with timely, personally useful information to help guide them through daily activities. Where the field lacks research is around users' removal of apps or abandonment. This would help to better understand how long it takes users to determine an apps personal fit before removing it from their device. This research does support the question posed in that the Alberta Culture Events app needs to

provide a service useful to individual Albertans in their daily lives. Understanding this ultimately

helps us understand the criteria necessary for a successful mobile app.

Privacy and Trust

Another theme which is touched on throughout the literature review is trust and security

when using mobile devices and applications. This topic refers to trust in the security of the

mobile app in terms of data transfer and personal information usage, but also in terms of the

company producing the app and their brand trustworthiness. Some of the extant research

identifies that "…consumers' lack of trust in mobile services is the main obstacle that prevents

consumers from using the mobile services. Therefore building consumer trust is critical for

helping new mobile services become more accepted and thus ensuring the success of the web-

mobile service extension."(Yang, Chen & Wei, 2015, p.78) This particular study in China of 309

online shoppers of JD.com's found that trust in a retailer's web based storefront translates into

trust in the mobile space. Results showed that "…trust in mobile shopping services displayed a

strong direct effect on behaviors toward mobile shopping extension." (Yang, Chen & Wei, 2015,

p.84) Trust in the online environment has been studied and a literature review by Darley,

Blankson, & Luethge found that "Trust is found to be pivotal in internet buying behavior, and it

affects behavioral intentions. This is because low trust or apprehensiveness regarding web

security is less likely to affect behavioral intentions." (Darley, Blankson & Luethge, 2010, p.109)

A study of 746 students in the southwestern United States tested a model of consumer

innovativeness to determine which factors influence innovation adoption and which factors can

deter it. The study found "…that perceived risk, which is theorized as instigating resistance to

the adoption of innovation, also significantly impacts the innovation adoption. Perceived risk

seems to possess a pull force where newness leads to uncertainty and thus holds back consumers'

adoption."(Hirunyawipada & Paswan, 2006, p.193)

In a 2009 study by Sultan, Rohm and Gao, researchers surveyed 169 US and 215

Pakistani youth to determine factors influencing mobile marketing acceptance among this

demographic. The results showed that "…risk acceptance and personal attachment influenced

mobile activities such as providing information, sharing content, and accessing content, which in

turn led to acceptance of mobile marketing practice."(Sultan, Rohm & Gao, 2009, p.316) An

additional interesting finding by these researchers was that "…the relationship between risk

acceptance and accessing content was not significant for the Pakistan sample. One explanation

for this might be that in individual oriented societies such as the U.S., risk acceptance related to

privacy concerns may have a greater impact because individual freedoms are

sacrosanct."(Sultan, Rohm & Gao, 2009, p.317) Privacy and trust are elements which can

influence or deter users in using a mobile app to make purchasing decisions.

Privacy and trust are important elements to consider in this study as the Alberta Culture

Events Calendar app is developed by the Alberta government, therefore it will be important to

know if this has any impact on the users' intention to use the app. Does the government bring

credibility to the trust question of the app or does the government identity deter users from an

app positioned for entertainment purposes? The literature review exercise was not successful in

identifying government developed apps which would have helped support, positively or

negatively, an argument for a government sponsored mobile initiative.

Visual Design of Mobile Apps

Consumers using mobile apps for purchasing decisions will encounter various features and data options which are provided to help encourage the consumer to transact with that company's mobile offerings. The challenge with mobile marketing is the sheer lack of space available to deliver messages in. Mobile usability researchers, Jakob Nielsen and Raluca Badiu conducted 27 diary studies and 159 telephone usability surveys with mobile users from across the USA, Australia, Europe and Singapore to identify design elements which optimize the mobile user experience. Their results show that mobile users must "…rely on their short term memory to build understanding of an online information space…"(Nielsen & Badiu, 2013, p.50) as mobile users are challenged by the small space and designers need to consider "…making content and navigation salient so that people don't have to work too hard to get there…" (Nielsen & Badiu, 2013, p.50) Ensuring the users are not working too hard is important to the user experience. In *Designing for Behavior Change,* the author states that "…half our daily lives are spent executing habits and other intuitive behaviors…" (Wendel, 2013, Chapter. 1) Further to this he writes "Our minds avoid work wherever possible." (Wendel, 2013, Chapter. 1) Designing a mobile marketing space which is intuitive and easy to use will work in the marketer's favor. Nielsen and Badiu recommend disclosing features progressively and not overwhelming the user because "…they don't have time to learn a profusion of features in enough depth to select the few that are optimal for their needs."(Nielsen & Badiu, 2013, p. 60)

A study done of 60 mobile users in a large Western Canadian city was conducted to better understand the relationship between design aesthetics and loyalty in the mobile space. The results of the survey supported elements of the technology acceptance model which identified

perceived ease of use and usefulness as elements necessary for technology adoption. This

Canadian study found "…that design aesthetics do in fact have a significant impact on perceived

usefulness, ease of use, and enjoyment." (Cyr, D., Head, M. & Ivanov, A., 2006, p.957)

Supporting this are results from a neuromarketing study of 25 iPhone users, ages 25-45, using

EEG headsets (electroencephalography) to record brain activity. The study recorded users as

they used a mobile app to search for and purchase a product. Results identified that

"…participants were more responsive to images than text, and were often emotionally and

attentionally engaged when presented with high fidelity imagery." (Adhami, 2013, p.98) Results

of the study found users more engaged with imagery and price than descriptions of the products

being searched.

Further support for the focus on imagery is a literature review done of online and mobile

design elements which identified an 18-point framework for effective retail fashion mobile

marketing. This review further supported the need for high quality imagery and interactivity to

aide in the consumer purchasing process and states that incorporating "…interactivity design

elements may enhance the experience for the user and lead to satisfaction, directly leading to

mobile consumer trust and purchase intentions." (Magrath, & McCormick, 2013, p.122) A

similar literature review done of 23 sources on understanding the drivers behind mobile banking

adoption point to the importance of designing easy to use interfaces and cites that even though

"…smartphones are capable of visualizing and accessing basically every website or content, they

are frequently difficult to manage through a small screen."(Ha, Canedoli, Baur, & Bick, 2012,

p.224)

Visual design elements are one aspect of the usability of a mobile app which can cause a

consumer to find it more or less user friendly and lead to increased consumption activity. A

review of cholesterol tracking mobile apps actually found a major difference between paid and

free apps to be language, and suggests this element can persuade mobile users towards a desired

behavior. The study rated 19 paid and 15 free mobile apps and rated them according to the

Nielsen-Schneiderman Heuristic framework. The paid and free apps ranked similarly across

categories, except for language where paid apps scored stronger for clearer instructions and

assistance. The researcher notes that "If an app is harder to use, the consumer can put

information in wrong sections, inaccurately track their cholesterol results, or even be misled

about their medication. These mistakes can severely decrease the consumer's health status."

(Amberson, 2014, p.33) Focus on design elements is important in understanding how the mobile

app can be developed in a way to influence a consumer through the purchase decision process. A

case study research project of 700 mobile app users in Finland, Spain and the USA between 2007

and 2011 further supports the need for user centered design. The study looked at customer values

including personalization, socialization, benevolence, hedonic value and more and identified the

roles these played in the 7 mobile use cases. Researchers indicate understanding these needs

before developing solutions to allow companies to "…steer and improve their development work

before launching their service on the market, using the framework to optimize the customer

value experience."(Ervasti, 2013, p.152)

The visual design of the Alberta Culture Events app is an important focus for this study

because it can further assist in understanding how the app can be successful in influencing user's

attitudes towards using the app. If the design elements and flow between screens to retrieve data

is confusing, users will not be motivated to put effort into using the app, therefore it will not be

successful in influencing behavior. An area of study not found during the review is whether design can be overlooked for utility and instances where design was identified as poor, but the utility of the information in the app was strong.

Brand

The topic of brand and branded mobile apps is found in this literature review and worth exploring as brands help define consumers; "…we are what we have – what we buy, own and consume, define us to others as well as to ourselves." (Stokburger-Sauer, N., Ratneshwar, S., & Sen, S., 2012, p. 406) A study of consumer brand identification analyzing survey results from 796 German households finds that brand managers must find ways to serve consumer's interpersonal goals "…through a myriad of approaches, from event marketing to product co-creation, but also through interactions among consumers around a brand, through brand communities, both physical and virtual."(Stokburger-Sauer, Ratneshwar, & Sen, 2012, p. 416) Branded mobile apps show good potential for helping influence consumers through the product decision process.

A 2011 Murdoch (Australia) and Indiana University study looked at branded mobile apps which used an informational style versus experiential (magazine or game functionality) with 228 American and Western Australian mobile app users between the ages of 18-74. Through the use of surveys and observed app usage, researchers found "Branded apps have a large effect on the favorability of brand attitude, but only a small effect on purchase intention." (Bellman, Potter, Treleaven-Hassard, Robinson & Varan, 2011, p.198) The results showed that "Apps that used an informational style were more effective at shifting purchase intention, compared to apps that used an experiential style." (Bellman, Potter, Treleaven-Hassard, Robinson & Varan, 2011,

p.198) While branding of an app may support the consumer's trust in the application if the consumer experience has been positive, the underlying utility of the actual data and capabilities of the app. will determine whether it's successful in supporting purchasing decisions.

In a study of 245 mobile users, the consumer-brand relationship was studied using the apps of three of Taiwan's large banks. The survey found that utility of the app was still important and that in order to increase consumption value "…branded apps need to satisfy consumers' functional needs such as efficiency and emotional needs such as joy."(Peng, Chen & Wen, 2014, p.1140) A study of 793 university students from across three continents looked at branded mobile app usage and found "…branded apps are extremely useful in building customer loyalty strategies."(Ruiz-Del-Olmo & Belmonte-Jimenez , 2014, p.79) The researchers point out that the interaction with the branded app goes beyond the consumer transaction if social networking is incorporated and that the '…added social value was significant….belonging to and identifying with brand values are essential elements for the youth group."(Ruiz-Del-Olmo & Belmonte-Jimenez , 2014, p. 79) The mobile app environment can support brand development for companies and utilizing additional technology features can further deepen the consumer's interaction with the brand.

For the Alberta Culture Events mobile app, branded as Government of Alberta, the recognition of the government may invoke a sense of trust and security with users and therefore strongly influence usage of the app. However, given that the app has an entertainment purpose, the question may arise as to whether a government app can be influential in entertainment decision making. As previously stated, little research was uncovered which focused on

government developed apps which would help inform the question of whether government developing apps is positive or negative for consumers.

Behavior Change

In the literature on this topic, an area of growing research is in the field of mobile apps and behavior change, specifically in the area of health and wellness apps which are extremely popular. This literature is worth exploring as research points to the need for greater social support and inclusion of behavioral theory in app development, but that research driven apps "…do not benefit from the customer feedback-driven iterations that fine-tune design and functionality."(Pagoto, S. & Bennett G.G , 2013, p.273) A content analysis of 127 apps in the iTunes Health & Fitness category by researchers from Brigham Young University found that most apps did not incorporate health-behavior change theories which "…have been shown effective in changing behavior." (Cowan et al., 2012, p.135) When developers know that changing health behavior requires incorporating "… important theoretical constructs such as social support" (Cowan et al., 2012, p.138), they can build applications which can better help users. Many of the topics touched on in the mobile app adoption literature is also found in mobile health research. A study of 326 diabetic patients in Bangladesh regarding mobile health adoption and results showed findings similar to others in this literature review. "Perception of ease of use, usefulness, reliability, and security and privacy are the significant beliefs in pursuit of adoption behavior…"(Shareef,M.A., Kumar,V. & Kumar,U., 2014, p.199)

In a discursive review of paternalistic thinking on social change policy and how to influence people's behavior, French coins the term 'nudging', or gentle suggestions towards a different behavior because an individual's typical decision process is done by an "…"automatic"

mental system, in a process that they term "mindless choosing." (French, 2011, p.156) Trying to influence people's behavior, the author states, is more about influencing the individual to make their own decision to change, as opposed to inflicting penalty or social consequence on them. (French, 2011, p. 156) A 2012 behavior change study, conducted by researchers from Walt Disney Research and University of California at a California hotel looked at participation in an environmental program introduced to 2416 hotel guests. The study found that when "…guests made a brief but specific commitment at check-in, and received a lapel pin to symbolize their commitment, they were over 25% more likely to hang at least one towel for reuse, and this increased the total number of towels hung by over 40%." (Baca-Motes, Brown, Gneezy, Keenan & Nelson, 2013, p.1070) The field of literature specific to behavior change and mobile apps is in a real infancy. Governments tend to delve more into social marketing with behavior change as an outcome. As more governments adopt mobile to support these types of initiatives this field of study will grow.

Research Question Proposal

The primary research problem that this project introduces is how does the Alberta Culture Calendar mobile app influence consumers in their search for arts and cultural events. The literature review has uncovered a number of factors which appear to positively affect smartphone users' usage of mobile apps. The ability to personalize, usefulness of the information, trust of the developer, design and brand elements appear to be influential in determining app usage. These factors will be explored in the focus group as they support the theory of planned behavior and influence the users along the consumer behavior continuum. Each of these factors can be linked to one of the three elements from the theory of planned behavior and discussed during the focus

group session. Additional factors may be uncovered by nature of the focus group process. Not found in the literature review are studies done on specific ecommerce or entertainment apps (similar to the Alberta Culture Events app) to understand their particular usage and benefits/challenges and if the five features also apply to them. Much of the literature is survey based and looks at general usage of mobile apps. The decision to base this research on a qualitative methodology is to more directly examine the individual usage of the mobile app to determine if the elements found in literature review apply, but to also discover if there are additional factors which inform the behavior of using a mobile app. Qualitative methods allow users to describe their behavior, which is not as possible in quantitative studies.

This study's focus group will aim to understand what causes the users to use the app and if the app is influential in their event attendance decision making process. Questions will focus on the design, usability and attitudes towards the app, but also look for additional themes. Research indicates that designing for the small screen is extremely challenging and to better inform this research question, it will be valuable to know from users how user friendly they find the app and what other features should be considered for inclusion to make it more appealing and useful in the decision process. This literature review has uncovered many factors which can influence a user's decision to use a mobile app and they will be analyzed during the research phase along with additional factors discovered during the focus group allowing for greater exploration of this topic.

Research Design and Methodology

This pursuit of knowledge on the topic of how mobile apps can influence consumer behavior is taking an exploratory, qualitative approach. Much of the research in this field is

based on quantitative studies of broader communities. The literature review search has helped to identify key factors of successful mobile apps. This chapter will provide an overview of the methodological approach I chose to use and the approach to conducting the focus group.

Exploratory Research

This study will take an exploratory approach to the topic of mobile app usage and influence on consumer behavior. Exploratory research has characteristics which include investigating "…little-understood phenomena."(Marshall & Rossman, 2011, p.69) The research into mobile app use, and influencing consumer behavior in particular, is in its infancy. Therefore, exploratory research and use of a qualitative method, such as focus groups, is well-suited to this topic as "…qualitative studies are descriptive and exploratory: They build rich descriptions of complex circumstances that are unexplored in the literature."(Marshall & Rossman, 2011, p.68) The literature identifies throughout that this growing trend of mobile app use is driven by the individual users' needs and the application acting as a personal assistant. This characteristic, and the factors which cause individual need, is a complex area to understand. Therefore, the use of a qualitative method is appropriate, as Creswell outlines:

> Interactions among people, for example, are difficult to capture with existing measures, and these measures, may not be sensitive to issues such as gender differences, race, economic status, and individual differences. To level all individuals to a statistical mean overlooks the uniqueness of individuals in our studies. Qualitative approaches are simply a better fit for our research problem. (Creswell, 2013, p.48)

To better understand the individual needs which result in use of the Alberta Culture Calendar app, a qualitative approach can best examine this phenomenon.

Inductive Approach

The design of this qualitative study takes an inductive approach as it will allow for observation of Alberta Culture Events mobile app users, to help understand the users' patterns of usage, and develop a hypothesis towards, how an app influences consumer behavior. The responses from the focus group session identified patterns which helped inform a theory as to how the app influenced the behavior of the participants. Participants were able to discuss their personal reasons for using or not using this mobile app. From this, I am able to synthesize the data to form the "…information into categories or themes. These themes are developed into broad patterns, theories, or generalizations that are then compared with personal experiences or with existing literature on the topic." (Creswell, 2014, p. 65)

The focus group gave the participants an opportunity to discuss their usage patterns of this particular mobile app and allowed me to probe for how the participants make decisions on how they consume entertainment activities and what other apps may influence their entertainment choices. As part of the inductive reasoning process, the categorization of the themes which emerged allowed for analysis and development of a hypothesis. A hypothesis of what types of characteristics of mobile apps influence people's behavior towards using them and a theory for how consumer behavior can be influenced by mobile apps.

This method to researching consumer behavior applies a discovery paradigm approach. The discovery paradigm holds that knowledge is gained through a process of discovery. Part of the research approach will assume that a theory for mobile app usage exists which is discoverable through interviews with mobile app users. From the focus group results the content of the discussions were classified into "…categories based on observed similarities and

differences. Grouping objects together based on their similarities allows you to generalize based

on their common properties." (Merrigan, Huston & Johnston, 2012, p. 36-37) Themes for this

research incorporated those found in the literature review; usefulness, ease of use, privacy and

security. These were then organized against the framework provided by the theory of planned

behavior. However, the choice of focus groups will allow for more free form discussion which

the researcher anticipates could expand the scope and depth of themes users identify for why the

app is or is not effective in their decision making process. The grouping of discovered

knowledge allows this study to analyze the findings and ultimately draw conclusions/form a

hypothesis.

Focus Group Method

Use of a focus group for this study has allowed me to probe for meaning around the

attitudes, intentions and subsequent behaviors the participants displayed in choosing to use the

mobile app for searching for entertainment information. Focus groups are a form of qualitative

research and "…are composed of 6 to 12 people. Fewer than 6 participants makes for a rather

dull discussion, and more than 12 participants are difficult for the moderator to manage."

(Stewart, Shamdasani & Rook, 2007, p.58) In a focus group "The interviewer creates a

supportive environment, asking focused questions to encourage discussion and the expression of

differing opinions and points of view." (Marshall & Rossman, 2011, p.147) Using a focus group

allowed users of the Alberta Culture Events mobile app to share their experiences in using this

app and helped me better understand the attributes of the app which may be influencing their

behavior. A focus group will have benefit for this particular topic because it allows me to probe

for deeper understanding of the complex conditions under which the mobile app is influencing

the users' behavior.

> The strength of focus-group interviews are that this method is socially oriented, studying
>
> participants in an atmosphere more natural than artificial experimental circumstances and
>
> more relaxed than a one-to-one interview. When combined with participant observation,
>
> focus-group interviews can be especially useful for gaining access, focusing selection and
>
> sampling, and even for checking tentative conclusion. (Marshall & Rossman, 2011,
>
> p.159)

For the focus group guide, I prepared questions which started broad based and then

focused in more towards the different elements presented through the theory of planned

behavior. For each of the three areas of the theory, I started broad with general questions about

attitudes towards using the app, the conditions under which they find themselves using it and

what features or functionality they found favorable. The broad based questions allowed the

participants to start the discussion where they wanted, and allowed me to probe for particular

ideas which came out. When a participant indicated that because the app was managed by the

government they trusted it more, I was able to ask them to discuss the idea of whether a

privately-managed app is not as trust worthy. A focus group setting allows the moderator to

direct the conversation, but equally allows the participants to take the discussion into different

areas. The challenge throughout is for the moderator to ensure no one individual dominates and

that everyone has an opportunity to contribute.

The focus-group setting also allowed participants the ability to use their iPhone and

describe features of the app or others which they use. As this occurred, new insights were

exposed and participants built on each other's ideas and discussion occurred which would not have if a quantitative method were used. As the moderator, I worked to identify which types of characteristics appeared to influence consumer behavior. As new themes or ideas emerged, I was able to probe these topics for deeper understanding and capture new knowledge not revealed during the literature review.

> Focus groups have an advantage over other methods of research as:
>
> Focus groups allow respondents to react to and build on the responses of other group members. This synergistic effect of the group setting may result in the production of data or ideas that might not have been uncovered in individual interviews. Differences of opinion among group members also help researchers identify how and why individuals embrace or reject particular ideas, communications, or products. (Stewart, Shamdasani & Rook, 2007, p.9)

Disadvantages to focus groups include "If participants are selected using non random sampling methods, the sample obtained may be less representative and may lack external validity." (Merrigan, Huston & Johnston, 2012, p.112) The limitation for this study is the small sample size and convenience sample, discussed later in this chapter, which will not allow for results to be generalized beyond this study. The study identifies ideas which contribute to the growing body of knowledge around the conditions needed to support successful mobile app development. This type of exploration is less attainable through qualitative methods such a survey because there is less opportunity for respondents to express thoughts or comment on others' ideas. Survey methods, and in particular digitally administered surveys "…face certain disadvantages not associated with face-to-face techniques. For example, respondents may become less willing to

disclose information to a machine than to a person." (Merrigan, Huston & Johnston, 2012, p.113) Focus group methods for an evolving area of knowledge allow researchers to better explore unknown territory and for this particular study allowed me to contribute new insights to this emerging field.

Focus Group Moderator

During the focus group session, I performed the function of the moderator. While I started this research study as an employee of the Ministry which developed the app, by the time of the focus group, I was employed with a new Ministry. While my interest in the app usage was of a professional nature, I was further removed from the day-to-day operations of it once this study was underway. I prepared the interview guide with 14 questions pertaining to the topic (See Appendix A). The guide was developed with this number of questions even though "…most interview guides consist of fewer than a dozen questions." (Stewart, Shamdasani, & Rook, 2007, p.17) During the focus group, I used my guide to provide opening remarks to the participants and guide them through questioning, and used my guide to make one notation when a participant turned on their iPhone to show us a feature of the app. As I anticipated the size of the focus group to be small given the difficulty in finding users, I prepared slightly more than 12 questions, knowing that if the session went long, I could scale the number of questions asked. As researcher and moderator, Creswell defines my role as a complete participant where the "…researcher is fully engaged with the people he or she is observing. This may help him or her establish greater rapport with the people being observed."(Creswell, 2013, p.166) This allowed me to be further removed from the day to day operations, and take a more objective view of the data. I also prepared an audio recording of the discussion during the focus group to support further analysis.

The moderator plays a key role not only in managing the movement of the discussion and identifying points where further questioning or probing should occur, but the moderator must also manage the participants effectively throughout the process. A noted disadvantage of focus groups includes:

The interaction of respondents with one another and with the moderator may have two undesirable effects. First, the responses from members of the group are not independent of one another, which restricts the generalizability of results. Second, the results obtained in a focus group may be biased by a very dominant or opinionated member. More reserved group members may be hesitant to talk. (Stewart, Shamdasani & Rook, 2007, p.10)

As I managed the focus group I was also mindful of the group dynamics developing. While the selection of participants were users of the Alberta Culture Events mobile app the individuals came from various backgrounds and personality styles. My role was to ensure all participants had equal opportunity to contribute and no one individual dominated the session, which meant ensuring that when one or more members were starting to dominate the conversation that I asked others in the group if they had anything additional to add. I also needed to ensure the focus group environment was considered safe for participants to vocalize their thoughts about the app and their consumer decision making processes.

As I orchestrated the participants during the session, the questions or script I worked from was equally important. Prior to conducting the focus group, I conducted a 'test' scenario with two acquaintances, one male aged 37 and one female aged 40, that are smartphone users and had at one time tried the Alberta Culture Events mobile app. Pretesting focus group scripts is

recommended as "Pretesting of the interview guide provides an opportunity to determine

whether wording of questions is appropriate, to determine whether questions elicit discussion,

and to identify questions that are not easily understood." (Stewart, Shamdasani & Rook, 2007,

p.22) In my original script I asked the users about any other apps that were used for

entertainment purposes. The first test user, male, identified that the use of the word

'entertainment' could be leading because for him entertainment apps triggered Cineplex Odeon

or Flixster to search for movie information. The tester suggested the use of 'planning free time'

as a more neutral reference to what the app under study was developed to assist people with. Test

user number two, female, suggested that early in the interview, I ask for general feedback on the

app to start discussion. The original script started with discussion to understand users' attitudes

towards the app and questioning started with people's knowledge of who developed it and how

often it was used. This feedback was incorporated, as it would allow the conversation to go from

a broad discussion down to more focused. This structure is supported by literature in that

"…questions of the more general and unstructured nature should be placed early, and more

specific questions, which may suggest specific responses to the more general questions, should

be placed near the end of the guide." (Stewart, Shamdasani & Rook, 2007, p.16)

Testing the script gave me an indication of how the questions would flow, if the order

progressed naturally or if any additional, pertinent questions surfaced which should be

incorporated. The testing was valuable as it made me to think about the type of feedback I would

receive and made me question the language I was using.

Study Population and Sampling Method

The Alberta Culture Events app was launched in August 2013 and at the time of the study had received just under 4000 downloads from the iTunes store. In order to conduct the study I needed to connect with users who had downloaded and used the app at least once. The original intent for this study was to use the social networks of the Ministry in anticipation that some of the users of the app follow the Ministry accounts. However, at time of recruitment, a provincial election was called in Alberta and a moratorium on external communications was in place. As well, after the 2015 provincial budget, the Ministry determined that they would cut funding for the app, and decommission it in June 2015, a month after the study. I determined that the best way for me to recruit participants would be through my own social networks and also enlist the help of friends, family and colleagues by encouraging them to use their networks to share information about my study. I established a recruitment website with the study details and online form for potential recruits to use for registration. Recruits were asked to provide their name, phone and email address, and select a check box that they have downloaded and used the Alberta Culture Events mobile app. Recruits were also offered a $25 iTunes card incentive for participating. I then used my personal Facebook, Twitter and LinkedIn channels to promote the website. Over a three week period I successfully recruited 6 participants.

For this study a non-random, convenience sample was used. A non-random selection of participants infers that the sample is not generalizable to the general population because it does not take into account the various demographic, social and other characteristics the actual population would exhibit. A convenience sample is a "…nonrandom selection method in which data is selected because it is easily accessible to the researcher."(Merrigan, Huston & Johnston,

2012, p.290) The value of the incentive for the study was determined based on recommendations that "Commercial research organizations pay focus group participants a range of incentives depending on the nature of the group sought and how difficult they are to recruit. Compensation can range from $50 to several hundred dollars for participation." (Stewart, Shamdasani & Rook, 2007, p. 56) As I reviewed my proposed study questions, I determined that the session was not likely to go past one and a half hours and felt that lowering the incentive was adequate. On reflection, as the session was under an hour, but the response to the recruitment was low, a slightly higher incentive may have drawn more participants, however the overall sample size was small and difficult to reach. Future studies under these conditions should consider a higher compensation to try and attract more responses.

Validity and Reliability

Assessing the validity and reliability of a qualitative study is different than for a quantitative study. Qualitative validity "…means that the researcher checks for the accuracy of the findings by employing certain procedures…"(Creswell, 2014, p.201) One of the procedures which Creswell recommends is peer debriefing. Here the researcher identifies:

> …a person (a peer debriefer) who reviews and asks questions about the qualitative study so that the account will resonate with people other than the researcher. This strategy – involving an interpretation beyond the researcher and invested in another person – adds validity to an account. (Creswell, 2014, p.202)

For this study I consulted with an acquaintance who is a graduate of the Master of Social Work program from the University of Toronto. My acquaintance completed her thesis in elder holocaust victim care and employed a qualitative study for her final thesis and was therefore

familiar with my methodology. She reviewed my research design, focus group findings and first final draft and questioned me about the research questions, study design and proceedings of the session. Her feedback was valuable as she immediately questioned which behavior I was trying to evaluate; the use of the mobile app or the attendance at events. She indicated that the research question and resulting focus group feedback were very much in-line, but may not have completely targeted the central question. She also indicated that while 4 individuals at a focus group wasn't ideal, she would have liked to see a more distributed representation across age groups. And finally, she questioned whether we would see similar behavior if this technique were applied to a different mobile app, one for banking as an example. The opportunity to engage in peer debriefing was valuable as "Peer debriefing contributes to confirming that the findings and interpretations are worthy, honest and believable." (Spall, 1998, p. 280) As well, I contacted the study participants with the opportunity to read a first final draft of the paper to review comments and provide their feedback. This approach can provide further reinforcement to the findings, however none of the participants responded with interest in doing so. The peer debrief feedback, compiled with overall findings from this study will be discussed in the conclusion.

Data Collection

The focus group was held on Saturday, June 6th, 2015 at the University of Alberta Enterprise Square location in downtown Edmonton, Alberta, Canada. Through the recruitment process described in the methodology section, I recruited 6 participants who volunteered to take part in the study and indicated that they had downloaded and used the Alberta Culture Events mobile app. Participants were emailed a week prior to the focus group to confirm their

attendance, and phoned two days before the event as a reminder. On the day of the focus group, one participant cancelled due to an injury and one participant did not arrive at the session in time and later apologized for their absence. In discussion with my academic supervisor, I determined that even with a smaller sample size than recommended through literature review, that I would complete the analysis. There were 4 focus group attendees, two male and two female (see Table 1). All had downloaded and used the mobile app between one day and a month. The focus group session lasted approximately one hour and provided interesting insights into the usage of the mobile app.

Table 1 Participant Overview

Participant	Gender	Age Range	Marital Status	Children (ages)
P1	Male	41-50	Yes	2 (ages 5 and 3)
P2	Female	31-40	Yes	1 (aged 3)
P3	Female	21-30	No	No
P4	Male	21-30	No	No

The main method of recording the session was audio recording while I lead the participants through the pre-defined questions. Participants were informed that the session was being digitally recorded and that I would later use this to transcribe their feedback to use for my paper. I let the participants know that their personal information would not be used in my final paper, and that they would be referred to anonymously. All participants signed an *Information Letter and Consent Form for Personal Interview*, see Appendix B, with these details outlined. Participants were informed that if at any time they did not feel comfortable about being at the

session, they could leave. Also, if they needed to step out for a moment or required any

assistance, or campus security, they could inform me.

After completing the session, I began transcribing the feedback manually and recorded

the information in Microsoft Word. From here, I reviewed the transcript again, against the

recording and my notes to ensure all details were accurately captured. Participants' comments

have been captured verbatim in order to preserve the authenticity of the users experiences with

the app. Practitioners Macnaghten and Myers support this approach because of "…the sense of

authenticity conveyed by the colloquial words on the page and their contrast with the register of

the academic argument going on around them." (Barbour, 2004, p. 77) The power of focus group

data is partly a function of its ready appeal and partly a result of the rhetorical devices employed

by authors (Seale, 1999). Macnaghten and Myers's comment serves to remind us of the

implications of preserving our focus group participants' inarticulacy." (Barbour, 2008, p.148)

Coding

From this point I embarked on a process of coding the results and applying a more

structured approach to classifying the data in a way that can reveal supporting and new meaning.

Creswell outlines a six step process for analyzing and interpreting qualitative research results.

This begins with the transcripts of the results of the session. Second, the researcher must review

the data to reflect on the participant discussion, and add any additional information captured by

the moderator during the session. Third, the researcher must apply codes to the data. "Coding is

the process of organizing the data in bracketing chunks (or text or image segments) and writing a

word representing a category in the margins."(Creswell, 2014, p.197-198) Coding the data into

different topics, then progresses into the fourth stage which is looking across all topics to find

themes. Themes emerge when topics share some similarities and the themes then naturally flow into sections of the final research findings. The fifth stage is where the researcher can take themes and prepare a narrative which describes in more detail the themes, the elements of it and how it came to be. The sixth and final stage, is where the researcher develops some interpretation of the results from these stages based on their own experiences and understanding of the subject. The researcher will also impart "...meaning derived from a comparison of the findings with the information gleaned from the literature or theories."(Creswell, 2014, p.200)

For my analysis I chose to employ a process which involved "…generating categories of information (open coding), selecting one of the categories and positioning it within a theoretical model (axial coding), and then explicating a story from the interconnection of these categories (selective coding)." (Creswell, 2014, p. 196) The open coding stage is where I went through the input from the participants and began to identify labels for people's statement. Moving to axial coding refers to "…grouping the codes according to conceptual categories that reflect commonalities among codes." (Marshall & Rossman, 2011, p.215) For my coding, I first used the key themes that were identified in the literature review phase including trust, brand, utility, personalization, and visual design (See Table 2). Since many of the questions focused on these elements many pieces of the focus group conversation naturally coded against these themes because they used those words. For example, when coding for 'ease of use', passages which used the words 'easy' or 'easiest' naturally coded to this. However, a passage which used language referring to the functionality such as "it makes sense to me, the back buttons are in the right place" also coded to ease of use. However, the feedback during the session uncovered numerous other topics which resulted in additional coding topics. This is a direct benefit to the focus group methodology as it allows the participants to use their own words to describe why the mobile app

served as influential in searching out arts and cultural events. Secondly, I coded for new topics

outside of those found in the literature review. For instance, one passage discussed 'personal

safety' regarding government reviewing and publishing event information. I then coded this

passage as personal safety.

I then progressed to looking for logical groupings between the codes. For instance, a

passage that refers to trusting information from government and another coded for personal

safety at events reviewed by government were grouped together as they related to the idea of

trust and confidence. Developing groupings of information needs to speak to the views expressed

during the focus group: "Here, the researcher does not search for the exhaustive and mutually

exclusive categories of the statistician but, instead, identifies the salient, grounded categories of

meaning held by participants in the setting." (Marshall & Rossman, 2011, p.215) I needed to

examine each passage to determine the core meaning and interpret meaning from the language

used during the focus group session. Coding in qualitative research can "…come from varied

sources, including the literature review, the actual words and behaviors in the data, and the

creative insight of the researcher." (Marshall & Rossman, 2011, p.213) As I completed these

stages of coding, I then proceeded to organizing my categories against the elements of the theory

of planned behavior; attitude, subjective norm and perceived behavioral control.

Table 2 Coding Themes

Theory of Planned Behavior element	Literature review categories	Additional categories
Attitude towards the behavior	Trust, brand (Government of Alberta), utility	Data neutrality, personal safety, local developer, individual developer, information accuracy, personal information, Anti-government, information currency, calendar view
Subjective norm		Free-time, children's needs, friend's needs, date, teachers curriculum
Perceived behavioral control	Personalization, visual design,	Subject categories, ease of use, regions, navigation

The theory of planned behavior is the lens through which we will next analyze how mobile apps can influence consumer behavior. The theory postulates that behaviors are performed when intention is formed. Intentions are developed through a combination of attitude towards the behavior, subjective norm (social pressure to perform the behavior) and perceived behavioral control (the ease or difficulty of performing the behavior). All the codes generated during this phase were linked to one of the three elements of the theory of planned behavior to show how attributes of the mobile app usage supported the theoretical frame.

Results and Analysis

This study is undertaking the analysis of how mobile apps are influencing consumer behavior by examining users of the Alberta Culture Events mobile app. Usage of mobile apps is growing, and consumers' behavior is changing accordingly and this study is looking closely at what factors influence behavior. In the approach to this research question, this study is taking an inductive reasoning approach. This analysis is adopting the theory of planned behavior as the frame through which we will observe the usage of the Alberta Culture Events mobile app. I will start with the broad theory of what elements need to be in place in order for a behavior to occur. I then analyze the feedback provided from the participants to confirm whether the framework provided through the theory consistently leads to reported behavior – use of the Alberta Culture Events mobile app and attendance at Alberta arts and cultural events. The hypothesis in this study is that when the three main elements of the theory of planned behavior are present for a given behavior, intention is formed, which leads to behavioral achievement, see Figure 3. This analysis will look at how the focus group informed the three main elements of the theory and what the resulting behavior was.

Figure 3 Adaptation of the theory of planned behavior framework to illustrate formation of intention to use mobile apps
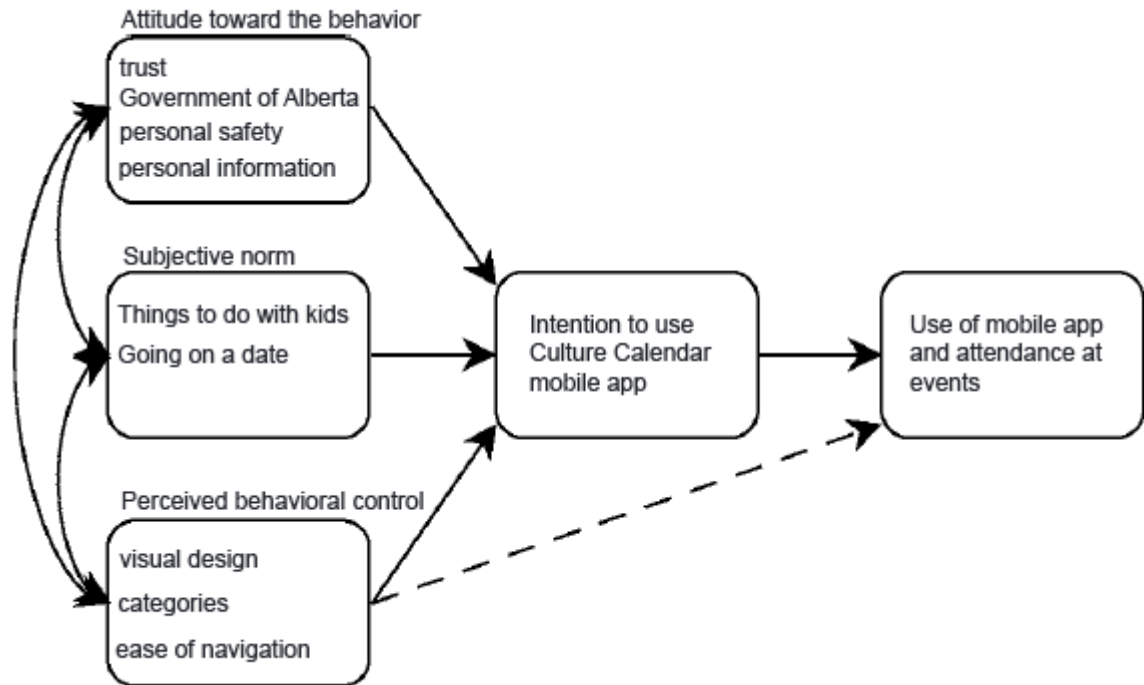
Attitude Towards the Behavior

The theory of planned behavior identifies three elements which when combined form to create intention to perform a behavior. The first of the three elements is attitude towards a behavior. The behavior under investigation in this study is use of the Alberta Culture Events mobile app and attendance at events. The theory postulates this determinant as attitude "…towards the behavior and refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question." (Ajzen, 1991, p. 188) Focus group questioning about attitude asked the participants for their overall thoughts and impressions of the mobile app and reasons for downloading it. More directed probing was done of their knowledge about who developed the app and what role the Government of Alberta as the developer had in their attitudes towards the app. These questions were selected to determine if there was supporting evidence towards trust and brand elements found in the literature review.

During the focus group, trust (towards the app) and usefulness (utility) emerged as strong influencers, and both were identified through the literature review as important features for positive mobile app usage. During the coding stage, feedback identified with these constructs were labelled accordingly. However, additional themes emerged which were identified as sub-themes under each. For this assessment, attitude must be looked at as:

> …a hypothetical construct that, being inaccessible to direct observation, must be inferred from measurable responses. Given the nature of the construct, these responses must reflect positive or negative evaluations of the attitude object. Beyond this requirement, however, there is virtually no limitation on the kinds of responses that can be considered. To simplify matters, it is useful to categorize attitude-relevant responses into various subgroups. (Ajzen, 2005, p. 3)

Both positive and negative feedback were coded against attitude towards the app and sub themes related to trust and utility naturally emerged.

Trust. Trust was identified in the literature review as a feature which can deter users from using a mobile app. Of note is the Sultan, Rohm & Gao (2009) study which identified that in North America, individual security is extremely important and may be of greater concern to users when using newer technologies. Participant feedback indicated that by being a government app, there was more trust towards it even though only one participant responded knowing that the app was developed by the Government of Alberta. Participant 2 (P-2) indicated that some event organizers would add their events to the app because there was trust that it was run by government, but that others wouldn't. P-1 supported this comment but indicated that more '…culturally trendy…' events might not appear as those types of organizations wouldn't seek

out a government sponsored tool. This type of feedback was coded as 'anti-government'. P-4 stated, "I trust it more (the app), just for information availability, times, everything. It's as far as I know you don't have to put any of your information into it. Even if I did, I would definitely be more trusting towards the app." This comment introduced a new angle (coded personal safety) into the trust analysis as P-1 then stated:

> Even personal safety, I guess, if I'm checking out apps that are for my family, and the government isn't going to send me somewhere that maybe is maybe mis-representing themselves, maybe it's a concert and it turns out to be a fundraiser for an organization that I don't approve of – hopefully they have done that step before me that and if it's done by a private person and not the government they can mis-represent themselves and say no – and I do like that aspect of safety. (P-1)

P-1 also stated that "You would think the gov't wouldn't have any biases towards one type of art, one type of concert or one type of festival." This statement indicating an opinion that government would be neutral towards the types of events promoted through the app.

The discussion of trust during the session confirmed that the government brand instills a sense of confidence in the users, not only in the technical development and possible management of personal information (even though this app doesn't ask for any personally identifiable information) but also in the method of selection of the events listed in the app. Being sponsored by the Government of Alberta, citizens may assume government is checking the credibility of the organizations and the content being submitted to ensure citizens' safety. While some event coordinators may not want to make use of a government run event app, the type of events submitted would appeal to audiences that find the government brand a positive attribute. In other

words, trust is identified in this study as an attribute which promotes favorable attitude towards

use of the app.

Utility. The second area which showed favorable attitude towards the app was utility or

usefulness of the app. Utility of mobile apps was a feature prominent in the literature review.

How useful the app is in the user's everyday life, specifically the data provided through the app,

helps build a stronger relationship between the user and the app. P-3 stated that "I like the ability

to see it on an app – and no longer rely on word of mouth for what's going on, or checking

Facebook or checking, you know, Twitter. Cause sometimes they get it wrong." This statement

indicates that the participant has a favorable attitude towards the app and could be argued that the

content found on Twitter/Facebook may not be as reliable as that provided through this app

(support for the government brand). P-4's experience with the app included "…I was always

trying to locate events to go to, on like the Edmonton webpage and it's brutal – and I heard about

this and I was like, right away I like it and I'll definitely be keeping it on my phone." The app

appears to be a one-stop location for finding event information which makes it more convenient

for the users to complete steps 2 and 3 on the consumer behavior model; information search and

evaluation of alternatives.

A new angle on utility emerged during this discussion when P-2 stated "I just wish I

would have had it when I was single and had more time to check out some of the really cool

things that are on there – it makes me really sad because there are a lot of stuff I would like to try

and check out – but reality says no." in response to the fact that P-2 has a young child and not as

much free time to attend events of personal interest. P-1 and P-2 began a theme that the app

should provide more information for families to plan their time, which will be examined more,

later in this chapter, however this statement by P-2 begins to insinuate that while they have a positive attitude towards the type of information found in the app, it did not immediately meet their day to day needs. The literature review identified the idea that mobile apps act as personal digital assistants which help the user throughout their day. The point by P-2 indicates that while the app may provide interesting information to them, it did not meet their exact needs at the time.

Further supporting some of the evidence found during the literature review were comments made by P-1 and P-2 regarding the value of the information provided about individual events. The literature review identified a study of paid versus free cholesterol tracking apps and found that the paid apps delivered clearer information and instructions – leading to a better user experience. In the focus group, P-1 stated that "…this one (the app) is nice too because it gives you little clips some, you know , the website, the Edmonton website doesn't give you a description it just gives you a date, you don't know what it is – you know. Art in the Park, well what does that mean? There is no explanation." P-2 supported this concept by stating that "And because it's culture it quite often they're trying to be cute." The quality of the information provided combined with the thoroughness appear to support the attitude towards the app. P-3 states "I would assume that this app because it a government app would be up to date with everything that's going on in Alberta so I wouldn't look if there was an art show going on sponsored by the government." P-4 further supported this idea of information currency with their statement "…you'd almost be like take it for granted that this is every event that is going on, that there isn't any that isn't included in there."

In this study, the usefulness of the app appears to be a strong factor in developing a favorable attitude of the app. Utility combined with trust of a government technology, appear to

serve as strong determinants towards usage of the app and supports these consumers during the information gathering stage of the consumer behavior model. The introduction of the statement about more information being needed to support a user with children, brings to light much of what is discussed with respect to subjective norm, and social pressure to use the app.

Subjective Norm

The second element of the theory of planned behavior which helps form intention to perform a behavior is subjective norm – or social pressure to perform a behavior. Subjective norm is described as "…the person's beliefs that specific individuals or groups approve or disapprove of performing the behavior; or that these social referents themselves engage or do not engage in it." (Azjen, 2005, p.124) During the focus group, a number of questions were aimed at trying to identify the conditions under which the participants would use the app. Questions included when do participants' use the app, how often do they use the app and if it has motivated the users to plan evening/weekend activities.

The results in this section were dominated by the two participants who have children, and found themselves using the app to look for information on activities for families. Some of the other questioning during the session raised this same issue for the app not having a category for family, or the ability to filter events by age suitability. While the feedback didn't indicate a particular person that applied social pressure to use the app, the responses indicated the influence of others needing something to occupy their time with. P-2 indicated that they used the app "First thing in the morning, when I'm desperate for something to keep my child occupied." P-1 then followed with "We have kids, so coming close to the weekend you know, you don't have kids (looking to younger participant in the room) when you have kids you're looking for things, to

occupy the Saturday and Sunday…" P-4 indicated their use was associated with pressure from friends/girlfriends, "…for me going into the weekend with like friends knowing what's going on in Edmonton, and you know dates to take girls…" The subjective norm component for this app use was clearly family and friend influences to try and find activities for entertainment purposes.

Later in the session when participants were asked if they had attended any of the events they looked up on the app, P-1 brought to light a scenario with clear subjective norm linked to family:

> I've sent family to one (event) in St. Albert….I just sent them, I try not to talk to them <laughter> It's my sister, I send her good ideas, and then I don't want to hear from them. But I read the reviews after of that museum display and it was very good – for a francophone, you know. (P-1)

This instance is the closest any of the participants came to performing the behavior of using the mobile app and going to an event. This participant also brought an additional angle into the discussion when they stated:

> I'm a teacher on top of that, so I'll have a lot of time to do things, and, if you know next year as a social teacher, this will help me plan stuff for my curriculum – which I've already started talking to other teachers about this for when they are looking for things. Yeah cause you know, the museum stuff, sometimes without them digging, they could just look here. (P-1)

P-1 is a teacher and has indicated that there is a need for them to use the app for a professional purpose. In support of their curriculum development, this teacher could use the app in a way that perhaps the Government of Alberta didn't intend or foresee.

While the focus group participants displayed favorable attitudes towards using the app, the subjective norm brings to light the reality that the app did not perform as needed for some members. Two of the participants used the app to look for family friendly events, but didn't find events of interest to them while the remaining participants also didn't find any events they would attend during at the time they used the app. To summarize, the responses indicate that all four participants had social pressure to use the app for information searching. However, at the point in time of usage, none were successful in finding events of interest.

Perceived Behavioral Control

Perceived behavioral control is the third element of the theory of planned behavior and refers to "…people's perception of the ease or difficulty of performing the behavior of interest." (Ajzen, 1991, p.183) Ajzen has even stated that perceived behavioral control when combined with intention can directly predict behavior. He states that "…even if two individuals have equally strong intentions to learn to ski, and both try to do so, the person who is confident that he can master this activity is more likely to persevere than is the person who doubts his ability." (Ajzen, 1991, p.184) The ease of use of the app was probed during the focus group with questioning about the users thoughts on how easy or difficult the app is to use, what features stood out and comments on personalization and visual design which came directly from the literature review.

Visual Design. Overall feedback about the visual design of the app was positive, however the focus group participants drilled down into some areas which provide additional insight into how useable the app is for users. One element of the design which stood out during the session was the 'Browse' tab in the app which provides the user with categories into which

events are filtered. Categories include dance, festivals, music and theatre. P-1 spoke about the

categories provided: "I like the icons, there is no similar icons, so it's there is no confusion, the

icons are different, there is no chance for tired parents, hungover teenagers or young people,

young adult making a mistake on what they are looking at." P-1 also stated that:

> I'm French, and the Francophone community has made its own little icon, and I've
>
> already done I've already earmarked something I'd like to do – something I didn't know
>
> existed before cause the French community doesn't have that newspaper that comes –
>
> you know come to my – not as prevalent as on the app. Where I can just turn on the app.
>
> That's why I downloaded it. (P-1)

The participants' remarks bring forth some important ideas for this study. The first

statement points out that the icons as wayfinding systems reduces the effort required to use the

app. They appear to appeal to this participant's understanding and helps them easily navigate to a

topic of interest. The second comment by P-1 further illustrates the importance of ease of use and

apps acting as personal digital assistants. The Francophone category for this user provides a

service which a newspaper might previously have done. However, this is also a user with a

young family and has stated that they are an avid user of apps, therefore this combination meets

some of their basic needs for locating events and activities of personal interest. P-4 also

supported this discussion by adding "The ability to sort through, uhm, the categories I really like

that so you know, francophone events, arts and festivals are - I like that." The categories and

their icons appear to make the information search stage on the consumer behavior model much

easier and therefore the participants are more confident that they will find the kind of

information they may be interested in. This is directly supported through the literature review

where Wendel indicates that "…half our daily lives are spent executing habits and other intuitive behaviors…Our minds avoid work wherever possible." (Wendel, 2013, Chapter. 1). The use of categories in this mobile app appears to strongly support the users' perceived behavioral control and has led to positive intention towards using the app for the information search stage in the consumer behavior model.

Personalization. Personalization is a theme which emerged from the literature review and was discussed during the focus group session. Three of the four participants indicated that they do personalize mobile apps that they use, but only one of the four had personalized the Culture Events app. P-2 personalized the app although found it difficult "…I had to stumble across that myself – in the settings section, I had no idea it was there, I was just poking around and thought 'Hey this is fantastic', but if I hadn't bothered to look I wouldn't have known it was there." The participant was asked what part of the app they were referring to and then they proceeded to show the group and comment "…this here – <showing the gears>, so when you first, so it shows you what's nearby and what not, which is great – but like I said if I was planning a trip to Calgary, if I hadn't gone looking because I was curious, I wouldn't have known that I could look ahead in advance." The personalization feature allows users to set which categories and cities (even font sizes) they would like to have events delivered for. By using an icon which isn't familiar it may be overlooked by users. Again, stressing the fact that users do not want to think too much in the small mobile space - intuitive, user-friendly features are crucial. A further comment by P-2 points out the nearby feature and the design with numerous pin points signifying events:

The only thing that I find frustrating, and this isn't unique to this app, is anything that

uses, the map and pins, when there is a lot happening, it's very hard to zero in, like right

now, <showing the app with the nearby feature on screen> that's what's awkward

together, so I have to zoom in several times over to be able to pick out which ones are of

interest. (See Figure 4)

*Figure 4 Alberta Culture Events Calendar App – Nearby Feature*
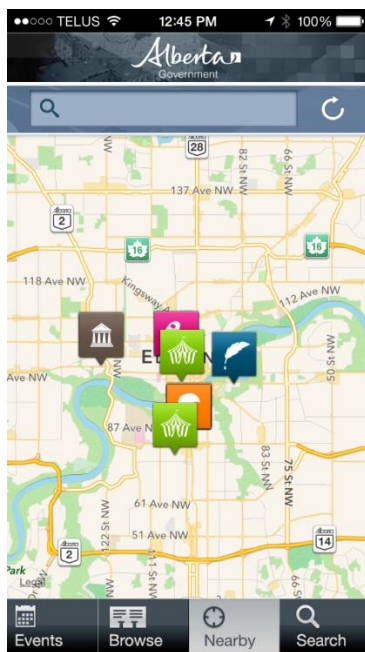
The ease of use of the app is the third element from the theory of planned behavior which

when combined with the other two can form intention to perform a behavior. The focus group

identified that visual design and user-friendliness combined with personalization can support the

views of a mobile app being easy to use. The discussion showed fairly positive attitudes towards

the ease of use, though some features such as the nearby and personalization could be made

clearer for users to navigate in the small screen space.

Analysis

This study has undertaken the question of how mobile apps are influencing consumer behavior. The specific behavior under investigation is the use of the Alberta Culture Events mobile app and attendance at arts and cultural events. This study finds that users of the Alberta Culture Events mobile app are using the app to search for information, however are not performing the behavior of attending events. The four participants reported using the app even though their feedback indicated that in some instances the app didn't contain events that they may have been looking for at the time. The theory of planned behavior helps us understand the conditions needed for behavioral outcomes and Ajzen further breaks this down by looking at the 'background factors' which influence and form attitude, subjective norm and perceived behavioral control. Figure 5 provides additional meaning to the factors which underpin the process by which we form intention to perform a behavior. Even though the participants did not attend any of the events they searched through the app, all identified that they have positive attitudes towards using the app and reported performing this behavior. Having a positive attitude towards using the app was supported in this study by background factors such as personality traits that enjoy using mobile apps and generally positive attitude towards the use of technology. As well, the background factors of age and ethnicity were identified in the study with the need to find things to do with small children and interest in Francophone events. This supports the subjective norm needed for forming intention to use the app. Finally, intention to use the app is further understood by the factors of experience and knowledge. The participants indicated that they found the app fairly easy to use and understandable, supporting the idea that the behavior of using the app is likely to occur because the participants find the behavior of using the app to search for information easy to achieve.

Figure 5 Background Factors to the Theory of Planned Behavior (Ajzen, 2005, p.135)
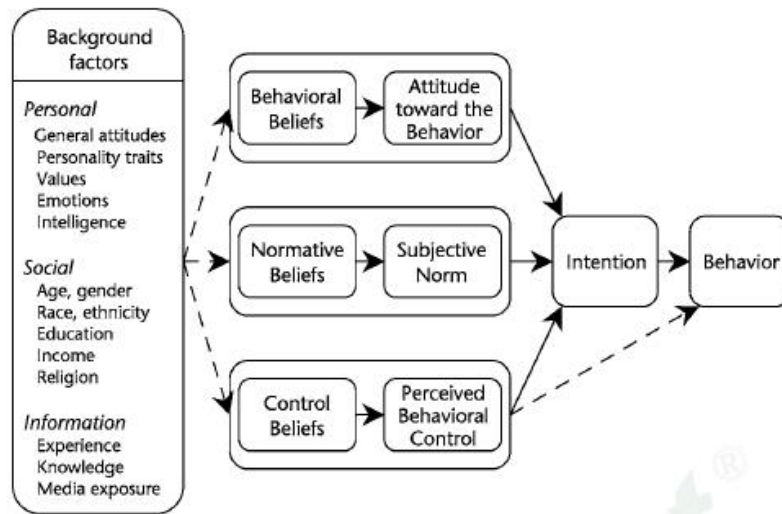
The concepts in Ajzen's theory of planned behavior and definition of background factors were seen throughout this focus group study, and help us to understand how intentions are formed and behavior towards using the app achieved. As some participants indicated, using the app was more convenient than searching numerous other sources for event information (ie. Facebook, Twitter, City of Edmonton website). In studying the use of the Alberta Culture Events app, the theory has supported the intention to use the app, however, at this point is not able to predict attendance at the events. The focus group participants reported the presence of the 3 elements from the theory of planned behavior, as they reportedly use the app for information searching. However, none of the participants attended events. This could have been better addressed through additional questioning during the focus group around the participants attitudes towards the types of events found in the app. The subjective norm needed for this theory to perform appeared to be present when users talked about needing to use the app to find events for their own personal purposes. However, more detailed questioning about the types of events found in the app, and even the users' prior history with attending Alberta-based arts and cultural

events could have helped to explain the lack of attendance at events searched. While the users of the app had favorable attitudes towards the technology and had social conditions under which they needed to use it, none of the participants found events which met their needs at the times they were using it. The participants reported positive attitudes towards the app when asked about star ratings indicating they would recommend it. Ajzen outline's criticism of his theory:

> A frequently voiced criticism of the TPB and other reasoned action models is that they are too 'rational,' not taking sufficient account of cognitive and affective processes that are known to bias human judgments and behavior. It is true, of course, that the TPB emphasizes the controlled aspects of human information processing and decision making. Its concern is primarily with behaviors that are goal-directed and steered by conscious self-regulatory processes. This focus has often been misinterpreted to mean that the theory posits an impassionate, rational actor who reviews all available information in an unbiased fashion to arrive at a behavioural decision. (Ajzen, 2011, p. 1115-1116)

During the peer review of the study results, it was raised that the initial research question is two-pronged; behavior towards using the app and behavior of attending arts and cultural events. In this study, the theory of planned behavior appears to predict the use of the mobile app. However, fully understanding the conditions required for increased event attendance would require further study. The assumption of users as rational actors is important here because the focus group members' positive recommendations for the app opens the question to whether the app will be used longer term by the individuals who didn't have their immediate information needs met. If users have a favorable attitude towards the app, but it doesn't meet their information needs over time, the question becomes, will there be a long term continued use of it?

As identified in the literature review, I did not find studies which looked at mobile app usage over time and criteria for which users decided to remove an app on their phone. More knowledge of this would help inform this field of study to better understand the criteria for prolonged usage of apps. And further, how do we predict when a user will actually attend an event. What conditions need to be present for this action to occur? More discovery of attitude towards the event available through this app would need to occur. Further understanding of the users' perceptions of the types of events offered through the mobile app, and whether they have a history of attending these types of events, can help in predicting the longer term success of the app. As identified in the literature review, existing shoppers of a clothing store are more likely than others to use the mobile app for that business, indicating a strong correlation between past consumer behaviors and future mobile app use.

Summary

In summary, this study looked at the behavior of mobile app users when searching Alberta-based arts and cultural events to investigate if it was successful in driving more attendance at events. Consumer behavior in this study is the use of the mobile apps to search for, find, and attend events. Through this study, we found that the participants primarily used this app during the early stages of the consumer behavior model; need recognition, information search and evaluation of alternatives (searching Twitter, Facebook, etc.). None of the participants identified an event, attended it and made a repeat attendance. The theory of planned behavior postulates that when there is a positive attitude towards an easy to achieve behavior combined with social pressure to perform it, intention is formed and a behavior can be predicted. In this study, these elements appeared to be present for usage of the app to search for information.

Participants relayed their favorable attitudes towards the app, social pressure to use it and its ease of use. Topics discovered through the literature review appeared to support these 3 elements of the theory and support use of the app through the information search and evaluation of alternatives stages of the model of consumer behavior. In analyzing the behaviors of using the mobile app, the theory of planned behavior appears to predict this behavior. However, this study would need to be further refined to focus on the conditions necessary for users to successfully identify an event and attend it. This would be achieved through additional focus group questioning, or as a separate study. The behavior addressed through this study was use of the app based on the design and development of the technology. The design and functionality of the app made it easy for consumers to use. The reputation of the Government of Alberta created a positive attitude towards the app, and the need to identify things to do with family and friends created the conditions necessary for accessing the app. However, this study does not go so far as to determine whether the nature of the events themselves are compelling enough, to warrant actual attendance. This would need further examination to determine whether the design of the app combined with events (which match the first stage of the consumer behavior model, need recognition) actually turn users into event-goers.

Conclusion

This study set out to determine how mobile apps influence consumer behavior. This study provides the growing field of literature with further affirmation that select features of mobile apps can support positive behavior of using an app. However, the data or information being delivered through the app must meet the needs of the users at the time they are using it for it be successful in driving users through all stages of the consumer behavior model. The primary

challenges for this study were the fact that it studied a small sample and participants had not used the app over a longer period of time. Because of these conditions, the results cannot be generalized to the greater population. As well, while the focus group methodology was well suited to the topic, the moderator as researcher had some limitations. As the researcher and former team member overseeing the technology implementation, more attention needed to be given to the analysis of the contents in the app. While the technology is changing behaviors in society, successful apps are delivering useful content and data which is at the heart of mobile consumer behavior. Future research into the field of mobile consumer behavior needs to focus more attention on the conditions under which a user actually purchases a product (or attends an event). This would include greater focus on the events being offered through the app.

During the focus group, participants were asked what changes or enhancements they would make. Two participants immediately pointed to adding a category for family events. As well, being able to share events on social networks such as Facebook and Twitter was raised. P-1 indicated continuing to focus on adding more events, and P-2 followed up with being able to submit events from the app. When asked what star rating of 1-5 (five being the highest) they would give the app on the iTunes store, three participants indicated 4 and one indicated 4.5. The points brought forth by P-1 and P-2 about wanting a category for family events would also be valuable to probe in the future. Even though both participants indicated favorable attitude towards the app, if the types of events offered through the app didn't meet their needs over a longer time period – would they remove the app from their phone? A drawback to this focus group is that participants had used the app for one month at most. Future research should identify a usage threshold to better predict ongoing app usage with existing features and data. The focus group methodology was appropriate for this study as it allowed for testing of the theory of

planned behavior conditions, in a way that uncovered additional characteristics which work to form intention to use an app. Future study of this topic should look at a longer term evaluation; a longer period of time with users to capture numerous instances of actual event attendance or removal of the app from their phone to determine app influence in consumer decision making.

This study provided an in-depth view into how a technology can be developed in ways to support consumers' daily needs. Key features such as personalization, design, brand and security, work in combination to provide an environment which positively influences a users' behavior towards using an app. This study has helped myself as a professional and can help future developers in understanding how technology needs to be developed in order to have greater public usage. Special attention needs to be given towards the data and information being delivered through the app as this provides the source which turns an app into a personal digital assistant. Understanding the app attributes and the data which consumers find useful, in combination, can provide a powerful technology solution for a marketing or technology professional.

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Appendix A. Focus Group Script

Hello everyone, thank you so much for coming out for today's focus group.

My name is Jennifer Mitok and I am going to be your moderator for today's focus group. I am a graduate student at the University of Alberta in the Master of Arts in Communications and Technology program. I am conducting this focus group as part of my research into how mobile apps are influencing consumer behavior. We are going to be talking about your use of the Alberta Culture Events mobile app to understand how you use it, if it is influencing your behavior towards attending more Alberta based arts and cultural events.

I will ask you several open ended questions. Your personal opinions and views are very important for me, so please feel free to discuss your thoughts/experiences during the session. There are no right or wrong answers.

This conversation will be digitally recorded. No names or personal information will be used in my final report. Some practical issues: the discussion will last for about one hour, depending on how much interaction and discussion we have.

I would normally ask that you switch off your mobile phones, so that we are not distracted by calls or texts. However, if you want to put them on vibrate, feel free to keep the phone handy as you may want to use the phone to access the app or other apps during the discussion today.

Please give everyone the chance to express their opinion during the conversation. You can address each other when expressing your opinion, we are only here to assist in the discussion.

If at any time you do not feel comfortable in the session, please feel free to stop. Also, if you need to get up and go to the washroom, please do, or if you feel you need medical attention please do ask for assistance.

Does anyone have any questions about our session? Is everyone okay if we get started?

Opening

Has everyone downloaded and used the Alberta Culture Events app?

How long have you had it on your phone?

Attitudes (Does the person have a favorable/unfavorable evaluation of the behavior in question)

What are your overall thoughts/impressions of the app?

Why did you download the AB Culture Events app?

Do you know who developed this mobile app?

How does this influence your usage of this app?

Does being Gov't help or hurt?

Why/Why not?

Trust

Brand

(Subjective Norm) Social Pressure/Opportunity to Use App

When do you find yourself using this app?

Describe the conditions.

Do you find it useful for this purpose?

Describe what useful means to you?

Is there any other app on your phone that you use for this purpose?

Has the mobile app motivated you to plan activities for your evenings or weekends?

Describe:

Did it provide the kind of information that you find useful for this task?

If no, what didn't it provide?

How often have you found yourself using it?

Perceived behavioral control (ease of use)

What aspects or features of using the Culture Events app are favorable for you? Describe.

Do you use the **Nearby** feature? Under what conditions would you use it?

What are your thoughts on the **visual design** of the app?

Have you **personalized** it to your city/categories?

Do you personalize any apps? Is this important?

Is it easy to **navigate**? Describe

Event Attendance

Have you attended any of the events you've used the app to look up?

Which ones?

Do you feel this app is influential in having you attend more arts and cultural events?

How many events do you think you have attended because of this?

Closing

If you were developing this app, what would you do with it? Changes, different features.

Would you or have you recommended the app?

What star rating would you give it on iTunes? (1-5)

Any final feedback on your use of the AB Culture Events mobile app?

Appendix B. Information Letter and Consent Form for Personal Interview

Study Title: How Mobile Apps Influence Consumer Behavior

Research Investigator: **Supervisor**

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Background

The Alberta Culture Events mobile app has been designed by the Alberta government Ministry of Culture and Tourism to encourage more Albertans to attend arts and cultural events in their communities. The focus group will be an opportunity for the researcher to better understand if the mobile app is successful in achieving this and what features of this app and others are influential in encouraging consumers' behavior. The results of the focus group will be used in support of the researcher's final capstone project. The results will be shared with the Ministry for use in future development.

Purpose

The purpose is to better understand how the app can influence people's attendance at Alberta arts and cultural events. The results will contribute to a growing body of literature which defines how mobile apps are influencing behavior.

Study Procedures

This research project will adopt a qualitative research method and use a focus group of 6-12 users of the Alberta Culture Events mobile app. The researcher will lead the focus group and anticipate it will run approximately 90-120 minutes. Recruitment will be done through social media networks of the Ministry of Culture and Tourism and will direct interested participants to a website with more detailed information. The proceedings will be recorded and transcribed by a third party. Transcripts and digital copies of the recording will be kept for 5 years and then destroyed.

Benefits

The benefits of this study are for the growing body of academic knowledge on the ability of mobile apps to influence behavior. Participants will be asked to share their experiences in using the app and may benefits from the interaction with other users. Participants will receive a $25 iTunes gift card for their participation.

Risk

There is little to no risk associated with this study. Users will be required to meet in a University of Alberta boardroom and participate in the focus group for 90-120 minutes.

Voluntary Participation

You are under no obligation to participate in this study. The participation is completely voluntary

Participant can opt out without penalty and can ask to have any collected data withdrawn from the data base and not included in the study. The researcher will remove your responses from the focus group transcript upon request, up until the report has been submitted for final review. The participants can contact the researcher after the study, up to August 1, 2015, to have their comments withdrawn from the study.

Confidentiality & Anonymity

The results of the focus group will be transcribed and used by the researcher to better understand how the mobile app influences user behavior towards attending more Alberta arts and cultural events. The transcription of the focus group will be kept secured by the researcher for five years after the study.

Once the first draft of the final report is prepared interested participants can review the results for accuracy and provide feedback to the researcher. The final report, after submission to the University of Alberta for completion of the Master of Arts in Communications and Technology, will be available through the University library system.

Further Information

The plan for this study has been reviewed for its adherence to ethical guidelines by a Research Ethics Board at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

Consent Statement

I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above and will receive a copy of this consent form. I will receive a copy of this consent form after I sign it.

_____   _____

Participant's Name (printed) and Signature   Date

_____ _____

Name (printed) and Signature of Person Obtaining Consent Date