

## MUSIC ACTIVITIES ON FACEBOOK, 1

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## MUSIC ACTIVITIES ON FACEBOOK, 2

### Music-related activities on Facebook

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Abstract

Despite the current prevalence of users performing musical activities on social media, and on Facebook in particular, little research has examined these behaviors from the perspective of consumer psychology. A cross-sectional, convenience sample of 400 participants ( $M_{age} = 22.56, SD_{age} = 7.79$ ) completed an online questionnaire. The findings illustrated that the constructs of opinion leadership, innovativeness, and self-efficacy within the consumer psychology literature were associated with performing music-related activities on Facebook, including the active creation/consumption of music content and use of music listening applications. Thus, music activities performed on Facebook have an overt consumer psychological component. These findings indicate that to understand music-related activities on social media, further research should consider psychological variables in explaining this common and economically-important activity.

Key words: digital music; listening; social network sites (SNS); Facebook; applications

Running head: Music Activities on Facebook

Music-related activities on Facebook

**1. Introduction**

Use of online social media is a common activity in the early 21<sup>st</sup> century. For instance, in 2016 79% of online Americans (or 68% of all US adults) reported using Facebook (Greenwood, Perrin & Duggan, 2016). With such widespread usage of social networking websites (SNS), people's experiences with music are being altered (Click, Lee, & Holladay, 2013; Leong & Wright, 2013; Mesnage, Rafiq, Dixon, & Brixtel, 2011; Salavuo, 2006; Tepper & Hargittai, 2009): and platforms support discovery, sharing, and purchasing of music, and also provide a means of advertising this consumption to others (Baym & Ledbetter, 2009; Krause, North, & Heritage, 2014; Rainie & Wellman, 2012). SNS increase opportunities for music fan activities, such as demonstrating preferences and recommendations (Avdeeff, 2014; Baym & Ledbetter, 2009; Mesnage et al., 2011), creating and supporting fan communities (Baym, 2007, August 6; Coppa, 2014), and facilitating musician-fan interactions (Baym, 2018; Click et al., 2013; Coppa, 2014; Jenkins, Ford, & Green, 2013; Krause, North, & Heritage, 2018; Usher, 2015). On Facebook, for instance, seven of the 20 most liked people are musicians (International Federation of the Phonographic Industry, 2016).

Research has established the prevailing uses and gratifications associated with social media in general (e.g., Freyne, Jacovi, Guy, & Geyer, 2009; Joinson, 2008); although different social media sites enable different activities (boyd & Ellison, 2007), and there is considerable variation between individuals in the degree and type of use associated with a particular SNS (Joinson, 2008; Smock, Ellison, Lampe, & Wohn, 2011). Researchers, thus, argue that a deeper understanding of SNS use would arise from consideration of usage of *specific* features of an SNS (Baek, Holton, Harp, & Yaschur,

2011; Krause et al., 2014; Smock et al., 2011). Therefore, the present study examined music-related activities performed on the popular social networking website, Facebook.

Facebook originally launched as a means for college students to interact (Baek, et al., 2011), and grew to an average of 1.47 billion daily active users as of June 2018 (<http://newsroom.fb.com/company-info/>). Users include information and links as a part of their 'profile' (a display of personal data associated with a certain user), post on people's 'walls' (a space on the profile where messages can be displayed), and send messages to other users. Many people share music through these means, using links to websites and videos (Mesnage et al., 2011). Moreover, in 2011, Facebook initiated their 'open graph', which allowed users to enable third-party applications ('apps') to publish activity on Facebook (San Pascual, 2013). With this development, users can easily share their music listening history as well as links to songs and playlists. Usage of this is widespread: 22 billion songs were played on Facebook in the year following the launch of its music-playing apps (Kirn, 2012). This type of access adds to the plethora of existing methods of interacting with music on SNS.

Understanding how central digital media, including social media websites like Facebook and music, are to Western everyday life today (Hepp, 2013) is important to contextualizing their place in our lives and their implications for ourselves and relationships with others (Baym, 2010; Leong, Vetere, & Howard, 2005; Leong & Wright, 2013; Mackay, 2005). For instance, while digital technology and SNSs are clearly not necessary to create and participate in music, they play an important role in how people interact with music (Tobias, 2013): the boundaries between creator, producer, consumer, and audience member have blurred in SNS's participatory culture (Avdeeff, 2014; Cayari, 2015; Fuchs, 2017; Jenkins et al., 2013; Michielise & Partti, 2015; North & Hargreaves, 2008; Van Dijck, 2009, 2013). As this makes clear, the array of

technologies available (Avdeeff, 2012; Nowak, 2014) means that engagement with music is “technologically dependent” (Avdeeff, 2012, p. 265) and contemporary means of music access and use since the proliferation of digital downloads have shifted consumption practices online (Avdeeff, 2014; Leong & Wright, 2011; Nuttall et al., 2011).

In reflection of this, recent research has considered the use of social media (and Facebook specifically) in music education/learning. For instance, researchers have considered the role of technology in musical communities of practice (e.g., Brewer & Rickels, 2014; Medvinsky, 2017; Mills, 2015; Palmquist & Barnes, 2015; Partti & Karlsen, 2010; Salavuo, 2006, 2008; Waldron, 2013, 2018; Waldron & Veblen, 2008); watching YouTube videos for teaching and learning (e.g., Kruse & Veblen, 2013; Waldron, 2013); engaging students in school music classrooms and programs (e.g., Salavuo, 2008; Tobias, 2013, 2015; Waldron, Mantie, Partti, & Tobias, 2018); and facilitating community development in conjunction with face-to-face interaction (e.g., O’Flynn, 2015) as well as composition and performance opportunities (e.g., Pepler, 2017). Other academics have considered the use of SNS in facilitating feedback processes, distributing and publishing music (e.g., Cayari, 2011; Salavuo, 2006), and remixing media (Michielise & Partti, 2015; Rainie & Wellman, 2012). However, as this brief review makes clear, although not exclusively, the focus of much of the existing research has been on music education practices of musicianship more generally, with relatively little attention paid to music listening and particularly music fan practices, and of that work which has been carried out in this context there has been little attention paid to the underlying psychological processes.

Similarly, a number of music listening activities and fan practices have also arguably shifted online in recent years. These include, but are not limited to, sharing

information concerning music and musicians, sharing listening history, and music listening app use within SNS contexts. These activities might all be grouped within a category termed 'SNS music fan activities', and arguably represent activities of growing importance to everyday music listening (Krause et al., 2014, 2018; Mesnage et al., 2011). Given that carrying out music-related activities on Facebook can be considered consumption behavior, the application of several concepts from consumer psychology (a discipline concerned with all aspects of purchasing and using goods) may be a fruitful approach to understanding SNS music-related behaviors. Previous researchers have used consumer psychology to explore digital music consumption (e.g., Nuttall et al., 2011; Tepper & Hargittai, 2009). Thus, it is highly plausible that music-driven SNS activities are related to variables commonly-identified in the consumer psychology literature as drivers of many consumption behaviors. For example, drivers such as opinion leadership (i.e., the extent to which individuals share domain-specific information with other consumers, so that the latter regard the former as reliable guides; Tepper & Hargittai, 2009), or innovativeness (i.e., the extent to which a consumer is willing to be among the first to try a new product; Lim & Lee, 2010) may well be relevant.

There are some early indications that this is indeed the case. For example, in the specific domain of music discovery, people considered opinion leaders were more likely to use peer-to-peer services than were those who are not opinion leaders (Tepper & Hargittai, 2009). Similarly, previous research shows that innovativeness relates to the ownership of new consumer electronic devices (Im, Bayus, & Mason, 2003; Lim & Lee, 2010) and that it moderates technology adoption (Agarwal & Prasad, 1998; Yi, Fiedler, & Park, 2006). Moreover, individual playfulness and personal innovativeness increase the frequency of using mobile telephone functions and applications (Mahatanankoon,

2007). Therefore, the present research considers opinion leadership, innovativeness, and related constructs (such as playfulness, defined by spontaneous and imaginative interactions (Mahatanankoon, 2007); and ease of use, defined as “an individual’s assessment that technology interaction will be relatively free of cognitive burden” (Agarwal & Karahanna, 2000, p. 674)) as potentially significant variables in explaining music activities on Facebook.

There may also be a role for self-efficacy in predicting Facebook music activities. Self-efficacy refers to one’s beliefs about being capable of performing certain tasks, and research shows that it is an important aspect of information seeking and exploration (Chiou & Wan, 2007; Mathwick & Rigdon, 2004), two activities common to SNS usage. Indeed, research has shown that self-efficacy is related positively to a person’s attitude toward SNS (Gangadharbatla, 2008), and that self-efficacy is related to the level of profile detail provided by an SNS user and style of profile picture (Krämer & Winter, 2008), indicating that it is related to how people present themselves when using social media. When comfortable with the basic means of operating a given SNS, users will explore and learn more of its functions (Kang & Yoon, 2008), which might well mean that they are more disposed to carrying out music-related activities on Facebook.

Of course, it is also plausible that Facebook music usage may be related to demographic characteristics, such as age and gender. For instance, Pettijohn II, LaPiene, Pettijohn, and Horting (2012) suggested that older individuals may use SNS to a lesser degree than younger individuals perhaps because of less familiarity with the technology or a focus on different social goals. Moreover, youth are more likely to use mobile devices and the internet to listen to music than adults (Avdeeff, 2011, 2014). SNS adoption rates by older individuals continue to increase (Greenwood, Perrin, & Duggan, 2016), although SNS sites are still most popular with 18-29-year-olds (Brenner & Smith,



2013; Greenwood et al., 2016; Smith & Anderson, 2018), corresponding to a period when music has been found to be very important to people (Tarrant, North, & Hargreaves, 2002). Moreover, men are more likely to listen to music, watch videos, and look for information about leisure activities online than are women (Jones, Johnson-Yale, Millermaier, & Pérez, 2009), and women are less likely to use technology to discover new music than are men (Tepper & Hargittai, 2009). Yet, other research indicates that women continue to use Facebook more than men (e.g., Greenwood et al., 2016); and women update their status more often than men (Hampton, Goulet, Marlow, & Rainie, 2012). Therefore, there may be age and gender differences with regard to performing SNS music activities.

In the light of this literature, the present research considers whether consumer psychology variables (i.e., opinion leadership, innovativeness, self-efficacy) can predict music-related activity on Facebook, with two guiding research questions:

RQ1: What consumer psychology variables are related to performing music-related activities on Facebook? Based on previous research, it is hypothesized that people who score highly for opinion leadership, innovativeness, and self-efficacy regarding listening technology will be more likely to perform music-related Facebook activities.

RQ2: What consumer psychology variables are related to the specific use of music applications via the Facebook platform? Again, it is hypothesized that individuals who score highly for opinion leadership and innovativeness, possess self-efficacy, and who are interested in music will be those individuals who do use Facebook music applications.

## **2. Method**

## 2.1 Participants

400 US, UK, and Australian residents (51.50% US, 20.75% UK, 27.75% Australia) completed the online questionnaire (data from an additional 74 participants was excluded as they resided in other countries). Mean responses to each item were calculated separately for the three datasets, and because the product-moment correlations between these three data sets were .996-.997 they were pooled for the subsequent analyses. Ages ranged from 16-70 years ( $M = 22.56$ ,  $Mdn = 20$ ,  $SD = 7.79$ ), 72.90% of the sample was female, and 19.80% of the participants had university qualifications. Participants were recruited via internet sources, including the author's website, the university's student research participation program, and dedicated research participation websites. Advertisement for the study stated that anyone aged 16 or older could participate in a study concerning how individuals access and listen to music within the context of social media. Participation was voluntary, although some university students received course credit for their participation.

## 2.2 Measures

Participants reported their age, gender, and their country of residence before completing Krause and North's (2016) "digital listening technology" measure, which addresses attitudes towards and usage of digital technology specifically regarding music listening. The items were developed to address opinion leadership, individual playfulness, perceived usefulness, self-efficacy and anxiety, and behavioral intentions to continue using digital listening technology (e.g., I usually provide information about new digital listening technology to others). Participants responded to the 26 items using a five-point scale (anchored by Not at all and Very well; all items appear in Table 1).

Bandura (1997) advocated that measuring self-efficacy accurately requires specificity to the behavior in question. Therefore, Spreitzer's (1995) measure was adapted to address self-efficacy in two particular technology domains, namely using web-based cloud music technology and general aspects of having and using a Facebook account. Participants marked their agreement with three statements concerning whether they felt they "were confident about their ability," "had mastered the skills necessary," and "believed in their capabilities" on a five-point scale (anchored by Not at all and Completely). The ratings were summed separately for each of using web-based cloud music technology and general aspects of having and using a Facebook account, resulting in two self-efficacy scores per participant. Cronbach's alpha values were .93 for web-based cloud music technology and .91 for general aspects of having and using a Facebook account.

Both Hampton et al. (2012) and Junco (2013) found that self-reported Facebook usage corresponded closely with actual Facebook activity, and so, as in previous research on Facebook use, participants self-reported on their usage behaviors. In particular, individuals indicated minutes spent on Facebook on average daily, the percentage of their leisure time spent on Facebook, and the average percentage of the time on Facebook spent using a music listening application. They also rated how often they performed 14 different tasks on Facebook on a seven-point scale (1 = *I never spend time doing this* and 7 = *All of my time on Facebook is spent doing this*). Tasks included a range of common Facebook behaviors, such as viewing and posting messages, uploading and viewing photos, posting and following links. These tasks also included music specific habits, such as posting and watching music videos, interacting with pages devoted to musicians or concerts, and listening to music via a dedicated application (all items appear in Table 2).

### **2.3 Procedure**

Individuals accessed the online questionnaire using a direct web link. After reading the participant information and indicating their consent, participants completed the questionnaire as a series of web pages in 10-15 minutes. Individuals were directed to a debriefing page upon completion of the questionnaire.

## **3. Results and Discussion**

### **3.1 Participants**

The majority of the sample reported that both music ( $M = 5.85$ ,  $Mdn = 6$ ,  $SD = 1.24$ ) and technology ( $M = 5.88$ ,  $Mdn = 6$ ,  $SD = 1.15$ ) were important in their lives. Similarly, on average, participants listened to music for 4.00 hours ( $Mdn = 3$ ,  $SD = 2.95$ ) and used technology for 8.25 hours ( $Mdn = 7$ ,  $SD = 4.28$ ) daily, indicating frequent use. Therefore, both music and technology featured as common daily activities for individuals.

### **3.2 Preliminary Principal Components Analyses**

**3.2.1 Consumer psychology variables.** Krause and North's (2016) "digital listening technology" measure addresses attitudes concerning opinion leadership, playfulness, innovativeness, perceived ease of use and usefulness, optimum stimulation level, and computer anxiety. However, because these concepts inevitably overlap to some extent, rather than employing the variables discretely, responses to the 26 items were entered into a principal components analysis with varimax rotation. This process was performed to generate factor scores for use in the main analyses, which (a) minimized the number of variables considered and (b) eliminated any overlap between

the constructs. The analysis revealed five factors regarding individuals' approaches to using digital listening technology (see Table 1), which accounted for 60.01% of the variance concerning how individuals approached digital listening technologies. Given the pattern of loadings in Table 1, the factors were labeled "trail blazer," "uninterested," "troubled," "simple," and "follower," respectively. Cronbach's alphas were .89, .88, .83, .55, and .55 respectively. While two of these values were low, the factors nonetheless represent meaningful dimensions to consider when exploring music-related social media behaviors. Given the exploratory nature of this research considering music practices on Facebook, Cronbach's alpha cut-offs were viewed more leniently, in alignment with Cho and Kim's (2014) argument against mechanically applying cutoff criteria. Similar to Krause and North's (2016) findings, rather than reflecting the consumer psychology constructs discretely, there appear to be higher-order factors which subsume the discrete consumer psychology constructs measured. The constructs of innovativeness, opinion leadership, and early adoption, for example, are subsumed by the trail blazer factor. Hereafter these factor scores are referred to as the "digital listening technology" factor scores.

-Table 1-

**3.2.2 Facebook use.** Varimax rotation of the principal components analysis of ratings of the 14 common Facebook behaviours revealed four factors (see Table 2), accounting for 68.10% of the variance. Factor 1 was labeled as "active creation/consumption of music content," factor 2 as "communication tasks," factor 3 as "passive browsing," and factor 4 as "apps use." Cronbach's alpha values for these factors were .88, .73, .76, and .62 respectively (again, in line with Cho and Kim (2014),

Cronbach's alpha cut-offs were viewed more leniently). Scores on these factors are referred to hereafter as the "Facebook task scores".

-Table 2-

### 3.3 RQ1: Performing Music Tasks on Facebook

Before conducting regression analyses, assumption testing was conducted. Univariate normality was lacking for several predictor variables; therefore, algebraic transformations were performed to improve univariate normality. Specifically, improvements dependent on the severity of the deviation were made such that we selected square root, log, and inverse transformations on a variable-by-variable basis. Following the transformations, the other assumptions pertaining to regression analyses were met.

As the first research question concerned performing music-related tasks on Facebook, a hierarchical multiple regression analysis ( $\alpha = .05$ ) was performed specifically on the "active creation/consumption of music content" Facebook task factor score (as it was the factor that *specifically* addressed performing music tasks). Age and gender were entered as predictor variables on the first block, and we entered the five digital listening technology scores and two self-efficacy scores on the second block to determine the contribution of consumer psychology variables beyond those demographic factors that have been considered in previous research.

The predictor variables in combination explained a significant 15.1% of the variance in the active creation/consumption of music content task score;  $R^2 = .15$ , adjusted  $R^2 = .13$ ,  $F(9, 371) = 7.31$ ,  $p < .001$ ,  $f^2 = .178$  (see details in Table 3).

Neither age nor gender was a significant predictor. Importantly, however, two of the digital listening technology scores and one of the self-efficacy scores were significant predictors. Thus, supporting the hypothesis, the results suggest that there is a psychological component to the active creation and consumption of music content on Facebook. Specifically, the positive association for self-efficacy specifically for web-based music technology suggests that confidence is needed to perform this type of task. Additionally, the trail blazer digital listening technology factor (which is indicative of consumer psychology constructs including opinion leadership, early adoption, and confident and fun use of digital listening technology) was positively associated with the creation and consumption of music content on Facebook. Again, this suggests that people who more generally embrace new ways to consume music are those who are doing so in the context of Facebook. Counter-intuitively, the troubled digital listening technology score was also a significant predictor of actively creating and consuming music content on Facebook. However, this may simply indicate that Facebook provides a simple platform on which to share and consume music content, so that it can be used without extensive technological know-how.

Therefore, to summarize in terms of RQ1 and the specific hypothesis associated with this, the results indicate that actively creating and consuming music on Facebook is predicted by self-efficacy with regard to web-based music technology, a trail-blazing approach to digital listening technology, and a troubled approach to digital listening technology. As such, these findings imply that accessing music via Facebook can be understood by considering psychological constructs often examined in consumer psychology. Facebook music use was not related to demographic factors, but instead by how the participants approached technology psychologically.

-Table 3-

### **3.4 RQ2: Use of Music Listening Applications on Facebook**

Of the total sample, 30.7% indicated that they used at least one Facebook music listening application (e.g., Spotify, Pandora). To address RQ2, a hierarchical logistic regression analysis was employed to predict the probability that a participant used a Facebook music application by age, gender, the four Facebook task scores, the five digital listening technology scores, and the two self-efficacy scores. The full model was statistically significant,  $X^2(13, N = 378) = 85.82, p < .001$ ; Cox & Snell  $R^2 = .203$ . Prediction success was 42.60% regarding those who used a Facebook music listening application and 88.60% for those who did not, with an overall success rate of 74.60%. Significant predictors ( $\alpha = .05$ ) are shown in Table 4, and due to the internal coding of the logistic regression, this pattern of results should be interpreted in terms of the model predicting non-use rather than use.

Two of the Facebook task scores, the music tasks and apps use scores (indicative of performing music- and apps-related tasks on Facebook), were positively associated with using a Facebook music application. With regard to the digital listening technology scores, the troubled factor score was positively associated with non-use, suggesting that those who used such apps have a more confident approach to using SNS. Similarly, as hypothesized, high self-efficacy for web-based music technology was indicative of their use also. Importantly, and in support of the hypothesis, these significant variables were psychological in nature rather than simply reflecting demographic characteristics (age and gender were non-significant predictors). It is also notable that the pattern of significant predictors mirrors that found when considering tasks performed on Facebook (RQ1). Taken together, more generally the present findings indicate that



performing music behaviors on Facebook has a psychological component (indicative of confident app use for music-related tasks specifically).

-Table 4-

#### **4. Conclusions**

While social media platforms facilitate a range of musical activities (Krause et al., 2014), little research has considered these activities from a consumer psychology perspective. Therefore, the present research explored music activities performed on the popular social media platform, Facebook. In summary, the present research provided evidence that constructs from consumer psychology are associated with the use of Facebook for music-related activities in a manner consistent with previous research concerning these constructs. In particular, the creation and consumption of music content on Facebook is positively associated with self-efficacy and the constructs of opinion leadership, early adoption, and confident and fun use pertaining to digital listening technology. This suggests that people who are embracing new ways to consume music are doing so in the context of Facebook. While previous research has linked self-efficacy to technology *adoption*, including one's attitude toward and engagement with social media (e.g., Gangadharbatla, 2008; Krämer & Winder, 2008), the present study demonstrates that the former is also related to the *ongoing* use of Facebook features concerning music. Consistent with previous research that linked opinion leadership with use of peer-to-peer music services (Tepper & Hargittai, 2009), the present study demonstrated an analogous relationship between performing music activities on Facebook and opinion leadership as well as early adoption. These findings, therefore, improve understanding of social media use (and, in this case, music-related

activities on Facebook specifically) from a psychological perspective. Further, the findings provide an impetus to consider how music-related activities may relate to sustained and varied platform usage and user engagement, with implications for promoting consumer retention in social media platforms.

There were also some notable limitations to the present findings and methodology employed. Firstly, it should be recognized that the sample indicated high involvement with music and technology, and so it may be difficult to generalize the findings to other populations with confidence. The sample contained a large proportion of females and university-aged individuals, and so it was less surprising that no age or gender effects were found: future research might employ a more balanced sample as well as consider a more nuanced usage of defined Facebook features. Further, while the present study employed two measures of self-efficacy, future research could consider self-efficacy with regard to different music-related activities. The variables included in the present research design accounted for 15% of the variance in performing music tasks on Facebook, which seems reasonable given the obvious complexity of the behaviour in question. Nonetheless, future research may consider additional psychological variables as a means of providing a more complete perspective on Facebook music-related behaviours: for example, the concept of involvement (Petty, Cacioppo, & Schumann, 1983) – which concerns the motivation, opportunity, and ability of consumers to engage in a particular behaviour, and which has been implicated in a number of consumer processes – represents a clear candidate for future research. This future research may also consider how more specifically-defined audiences make use of certain social media features to perform certain music behaviors. For instance, can the variables considered here explain particular patterns of usage by fans of specific genres or individual bands; and can consideration of personality add to this, given the

association between liking for music genres and personality (Chamorro-Premuzic, Swami, & Cermakova, 2012; North, 2010; Rentfrow et al., 2012)?

From a methodological perspective, although the more general evidence indicates that self-reports in an online context are accurate, future researchers may wish to confirm this in specifically a musical context. Diary studies and data logs could provide information on a range of specific behaviors and usage patterns among specific audiences. As researchers have argued (e.g., Hine, 2005), naturalistic and ethnographic methodologies can be useful to understand online activities. Given the encouraging results here, future research should also consider the growing prevalence of music streaming over the internet from a psychological perspective. As social media features and digital listening technologies allow ever greater flexibility, usage will likely become correspondingly sophisticated and complex: this will likely require a thorough understanding of individual difference factors that drive idiosyncratic usage patterns. In future years, it will be important to consider how and why individuals make use of the new tools for music listening that are at their disposal. While our research presents preliminary findings in this regard, there is clear potential to consider online music consumption from a psychological perspective.

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Table 1.  
*Loadings for Principal Components Analysis With Varimax Rotation of the Digital Listening Technology (DLT) Items*

Statements	Factors <sup>a</sup>				
	1	2	3	4	5
I regularly seek new DLT experiences.	0.77				
I usually provide information about new DLT to others.	0.76				
I often influence people's opinions about DLT.	0.73				
I know about new DLT before other people.	0.72				
I like to find some new ways to use DLT.	0.69				
Even if I haven't heard about it before, I will consider trying a new DLT.	0.66				
When using DLT, I am playful and spontaneous.	0.63				
I have fun interacting with DLT.	0.58	-0.55			
I find DLT useful.	0.47	-0.63			
I feel confident using DLT.	0.44	-0.38	-0.38	0.38	
I find DLT easy to use.	0.41	-0.34	-0.50	0.43	
I plan to use DLT in the future.	0.32	-0.69		0.36	
I do not intend to use DLT in the future.		0.70			
Using DLT bores me.		0.69			
DLT is not beneficial to me.		0.67			
I can use DLT only with help		0.49	0.56		
I find using DLT frustrating.		0.30	0.68		
I find DLT intimidating.			0.80		
In general, I am hesitant to try new DLT.			0.64	0.37	
The range of DLT options available to me are overwhelming at times.			0.57		
In general, I am the last in my circle of friends to know about the latest DLT.			0.53		0.32
I can figure out DLT without help.			-0.38	0.52	
I view DLT only as a tool to access music.				0.76	
I like to keep things simple when using DLT.				0.63	
Other people rarely come to be for advice about DLT.					0.72
My opinions about DLT do not seem to count with others.					0.56
Eigenvalue	4.87	3.66	3.32	2.16	1.61
% of Variance	18.72	14.06	12.75	8.30	6.18

<sup>a</sup>Factors 1-5 were labelled as: trail blazer, uninterested, troubled, simple, and follower, respectively.

*Note.* Digital listening technology (DLT) was defined for the participants as: Technology, applications, and devices that allow you to listen to music digitally. These include, but are not limited to, computer applications (such as iTunes, Winamp, etc.), mobile devices (such as MP3 players, phones, and tablets), Internet streaming applications (such as Internet radio stations, YouTube, Vevo, Pandora, etc.), and cloud-based applications (such as Spotify, Amazon, iCloud, etc.).

Loadings < .3 are suppressed.

Table 2.

*Loadings for Principal Components Analysis With Varimax Rotation of the Facebook Actions*

Statement	Factors <sup>a</sup>			
	1	2	3	4
Clicking on links/watching videos related to music that friends have posted as a part of their status	0.86		0.33	
Following links/watching videos related to music that friends have posted on your wall/ others' walls	0.84		0.32	
Posting videos/links related to music/musicians on people's walls	0.79			
Posting videos/links related to music/musicians as part of your status	0.78	0.36		
Interacting with pages/groups/events that pertain to musicians/bands/concerts	0.69			
Reading posts by friends regarding the music they've listened to on an app within Facebook	0.69			0.43
Listening to music via a Facebook app (i.e., Spotify, Pandora)	0.31			0.69
Changing your status update		0.83		
Posting on friends' walls		0.75		
Uploading/ creating photo albums		0.64		0.38
Playing Facebook games		0.33		0.69
Reading your newsfeed			0.79	
Viewing others' profile pages/ walls			0.72	
Sending private messages			0.69	
Eigenvalue	3.87	2.11	2.07	1.49
% of Variance	27.65	15.06	14.77	10.62

<sup>a</sup> Factors 1-4 were labelled as active, active creation/consumption of music content, communication tasks, passive browsing, and apps use, respectively.

*Note.* Loadings < .3 are suppressed.

Table 3.  
*Hierarchical Multiple Regression Analysis Predicting the Active Creation/Consumption of Music Content Task Score*

Model	Predictor variable	Beta	95% CI		sr <sup>2</sup>
1	Age	-0.014	-3.404	2.589	0.000
	Gender	0.100	0.000	0.133	0.010
<i>R</i> <sup>2</sup>	0.010				
<i>F</i>	(2, 378) = 1.984, <i>p</i> = .139				
2	Age	0.037	-1.763	3.968	0.001
	Gender	0.054	-0.029	0.101	0.003
	DLT trail blazer (factor 1) score	0.293***	0.057	0.119	0.071
	DLT uninterested (factor 2) score	-0.036	-0.141	0.065	0.001
	DLT troubled (factor 3) score	0.186**	0.095	0.353	0.027
	DLT simple (factor 4) score	-0.008	-0.117	0.099	0.000
	DLT follower (factor 5) score	0.007	-0.026	0.031	0.000
	Self-efficacy: web-based cloud music technology	0.127*	0.003	0.084	0.010
	Self-efficacy: general Facebook account	0.060	-0.038	0.134	0.003
$\Delta R^2$	0.140				
$\Delta F$	(7, 371) = 8.756, <i>p</i> < .001				

*Note.* CI = confidence interval; DLT = Digital listening technology.

\* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

Table 4.

*Summary of Logistic Regression Analysis for Variables Predicting Facebook Music Application Use*

Predictor	B	S.E.	Wald	Exp(B)
Age	6.839	14.329	0.218	807.221
Gender	-0.294	0.291	1.091	0.738
Active creation/consumption of music content score	-1.771***	0.494	12.760	0.171
Communication tasks score	0.090	0.139	0.448	1.097
Passive browsing score	-0.398	0.498	0.629	0.674
Apps use score	-2.848***	0.503	32.125	0.058
DLT trail blazer (factor 1) score	-0.193	0.153	1.566	0.826
DLT uninterested (factor 2) score	0.565	0.495	1.062	1.665
DLT troubled (factor 3) score	1.516*	0.641	6.210	4.943
DLT simple (factor 4) score	-0.126	0.526	0.104	0.844
DLT follower (factor 5) score	-0.096	0.136	0.494	0.909
Self-efficacy: web-based cloud music technology	-0.037*	0.181	0.02	0.975
Self-efficacy: general Facebook account	-0.850	0.426	3.775	0.437

*Note.* DLT = Digital listening technology; Exp(B) = exponentiated B.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$