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ARAŞTIRMA MAKALESİ / RESEARCH ARTICLE

The Role of Digital Feedback on the Self-Esteem of Digital Natives

Dijital Yerlilerin Benlik Saygısı Üzerinde Dijital Geribildirimlerin Rolü

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Abstract

The development of web technologies makes virtual platforms as an inseparable part of human life. This situation makes digital feedback highly effective on the self-esteem of individuals. For this reason, the present research explores the relationship between the self-esteem of digital natives and their feedback from digital platforms. The participants of this study include 310 high school students in Isparta, Turkey and the study adopts Rosenberg's Self-Esteem Scale (RSES), Digital Feedback Form (DFF), and Personal Information Form (PIF) in order to demonstrate the role of digital feedback on the self-esteem of digital natives. The previous studies in the literature were carried out on specific social media platforms, therefore they could not include all of the interaction opportunities. Since this research considers different types of feedback on social media, it provides a comprehensive knowledge in the field. This research demonstrates that there is a significant relation between the self-esteem levels of digital natives and the feedback that they receive in terms of "friend requests they send" and "posts they share being retweeted/reposted". Thus, the results reveal that the self-esteem levels of adolescents vary based on the feedback that is related to the friendship requests, direct messages, reception of positive comments on posts and their tweets being retweeted/reposted.

Keywords: Self-Esteem, Social Media, Digital Feedback, Digital Natives, Adolescents

Öz

Web teknolojilerinin gelişimiyle sanal platformlar, insan yaşamının ayrılmaz bir parçası haline gelmiştir. Bu sebeple, günümüzde bireylerin öz-saygıları üzerinde dijital geribildirimlerin oldukça etkili olduğu

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düşünülmektedir. Bu araştırmada, dijital yerlilerin 'benlik saygıları' ile 'dijital platformlardan aldıkları geribildirimler' arasındaki ilişki incelenmektedir. Çalışma, Türkiye'nin Isparta ilinde, 310 lise öğrencisi üzerinde gerçekleştirilmiştir. Araştırma anketi, Rosenberg'in Benlik Saygısı Ölçeği (RBSÖ), Dijital Geribildirim Formu (DGF) ve Kişisel Bilgi Formu'ndan (KBF) oluşmaktadır. Literatürde yer alan önceki çalışmaların, spesifik sosyal medya platformları özelinde gerçekleştirildiği, bu nedenle etkileşim olanaklarının tümüne yer veremedikleri görülmektedir. Bu araştırmada ise dijital geribildirimlerin tümü benlik saygısıyla ilişkilendirilmektedir. Geribildirim olanaklarının geneline yer vermesi açısından araştırma literatür için önem taşımaktadır. Araştırma sonunda ulaşılan bulgularda, dijital yerlilerin "arkadaşlık isteği" ve "gönderilerin retweet/repost edilmesi" konularında aldıkları geribildirimlerle benlik saygıları arasında bir ilişki olduğu tespit edilmiştir. Öte yandan ergenlerin, arkadaşlık isteği, direkt mesaj (DM), gönderilere pozitif yorum alma, retweet/repost edilme konularında aldıkları dijital geribildirimler doğrultusunda benlik saygısı düzeylerinin farklılaştığı görülmüştür.
Anahtar Kelimeler: Benlik Saygısı, Sosyal Medya, Dijital Geribildirim, Dijital Yerliler, Ergenler

Introduction

As of 2018, 4 billion of the world's population of 7.5 billion are internet users while more than 3 billion are active social media users (We are Social, 2018). Therefore, today's digital platforms are a significant part of human life, including social life as well (Turel, He, Brevers & Bechara, 2018, pp. 11-12). As a matter of fact, the new generation born into these web technologies (digital natives) takes a more active role in social platforms and spends more time than previous generations (Prensky, 2001, p. 2). According to the researches, 24% of digital natives are online at any time and 56% are online at least once a day (Lenhart, Smith, Anderson, Duggan & Perrin, 2015). As a result of this situation, many adolescents face many positive and adverse comments in the online platforms that might have an impact on their personal life in terms of attitudes, behavior and psychology (Williams & Moody, 2019).

Generations are divided into digital native and digital immigrant categories. The concept of digital natives refers to the generation that live into the technological age. This age includes the internet, video games and many other digital platforms. Digital immigrants term refers to the generation involved in digital innovation after a certain phase of their lives (Prensky, 2001, pp. 1-2). The digital world also influences the self-esteem (Andreassen, Pallesen, & Griffiths, 2017, p. 288) which expresses the attitudes of individual that he develops towards himself (Rosenberg, 1965, p. 5). Digital feedback plays a critical role in this influence process because digital feedback affects adolescents' self-esteem positively or negatively. For example, an adolescent who gets a very positive comment on their photo feels more beautiful/handsome and happier (Valkenburg, Schouten & Peter, 2006, p. 589). In the early years of social media, virtual platforms offered interaction opportunities different from each other (Herdağdelen, Zuo, Gard-Murray & Bar-Yam, 2013), but in the late period of the 2010s these interaction opportunities have become increasingly similar. Consequently, researches addressing the impact of digital feedback on self-esteem, including general interaction possibilities such as sharing stories, live broadcastings, friendship requests, post likings, retweets / reposts, DMs are important for the literature because digital natives have increased in number in the 2010s.

In this study, we examined the relation between digital feedback and self-esteem with the participation of 310 high school students. We adopted a random sampling approach and selected participants from high school located in Turkey's Isparta. This study utilized three different data collection instruments as Rosenberg's Self-Esteem Scale (RSES), a Digital Feedback Form (DFF) and a Personal Information Form (PIF) including 26 questions in total. Based on the relational screening model we design the research. DFF was built within the scope of the research considering the interaction opportunities offered by social platforms. Therefore, the scope of this research includes the overall digital feedback provided by widely used social platforms. Previous studies (e.g. Valkenburg, Schouten & Peter, 2006; Krämer & Winter, 2008; Vogel, Rose, Roberts, & Eckles, 2014) indirectly include digital feedback in particular social media platforms.

Study results show that a significant relationship was found between the self-esteem levels of adolescents and the feedback they receive in terms of "friend requests they send" and "posts they share being retweeted/reposted". Moreover, self-esteem levels of adolescents were observed to vary based on feedback regarding friend requests, direct messages, receiving positive comments on posts and their tweets being retweeted/reposted.

The research consists of six main sections including the introduction section. In the second, third and fourth sections, the conceptual backgrounds of self-esteem and digital feedback are mentioned. The basic concepts of research such as digital natives, digital feedback and self-esteem are discussed in these sections. In the fifth section, the research method is given. The research model, data collection tools, data analysis and the main findings are presented in this section. In the sixth section, the findings are discussed in the context of the literature and the research is concluded.

The Digital Generation of a World Founded on Bytes: Digital Natives

The digital world is superior to the real world in some respects, while it threatens social relationships in some others (Buckingham, 2008, p. 11). This virtual reality that refers to the aforementioned digital world consists of zeros and ones and is experienced through various virtual spaces (Robins, 1996, p. 38). As such an experience takes place via the virtual world, an individual can screen external threats and disconnect from that world when needed (Gasser, Maclay & Palfrey, 2010; Davidson & Martellozzo, 2013). Although an individual has a control on disconnection of interaction, as seen in previous studies (e.g. Robins, 1996), the effects of the virtual world on an individual continue in some dimensions such as self-esteem and reality perception (Tonta, 2009; Valkenburg, Schouten & Peter, 2006, p. 589; Barker, 2009, p. 212; Gasser, Maclay & Palfrey, 2010; Perloff, 2014, p. 364). For this reason, the understanding of reality (Robins, 1996, p. 38) and way of learning (Tonta, 2009, p. 746) change the life of a person who experiences this world founded on bytes.

Social platforms such as Instagram, Facebook and Twitter are also virtual environments which mediate the transformation of the understanding of reality in the digital world (Vural & Bat, 2010). By being involved in the digital world with their unique styles, users have entered

into an intercultural integration process (Karabulut, 2015, p. 12) and have been classified under different generations based on various reasons such as accepting the change or not, being born into change or not (Gürbüz, 2015, p. 41). Among these classifications, one of the highly accepted definitions is the division of "digital natives" and "digital immigrants" made by Marc Prensky (2001). While the term 'digital natives' refers to the generation that was born into the internet age, video games and many other innovations, the term 'digital immigrants' corresponds to the generations that are involved in digital innovations after a particular period of their lives. Moreover, as they were born into the virtual world, differences occur in both the ways of thinking and behaviors of digital natives. Prensky, who argued that different experiences lead to different brain structures, associated the different minds of digital natives with this argument (pp. 1-2). The situation of experiencing the world founded on bytes transforms the person's understanding of reality and life-related values (Robins, 1996, p. 38). One of such values is self-esteem, which refers to the attitudes an individual has towards their self (Hawi & Samaha, 2019; Kaya & Saçkes, 2004, p. 49).

Based on the research of Kennedy, Judd, Churchward, Gray and Krause (2008), as well as Helsper and Eynon (2010), digital natives are profoundly affected by the virtual world. In this sense, there are relations formed in several fields between the reality of the aforementioned virtual world and the lives of digital natives (Kaplan & Haenlein, 2010; Williams, Crittenden, Keo & McCarty, 2012). Thus, the feedback received from digital environments and the self-esteem of digital natives are related (Valkenburg, Schouten & Peter, 2006, p. 589; Barker, 2009, pp. 212-213; Zywica & Danowski, 2008, p. 3). As the study discusses "digital feedback" that is thought to have a role in the self-esteem of young users as a variable, it would be appropriate to describe such a variable in the next section.

Digital Notification and Digital Feedback Opportunities

With the development of web-based technologies, users have gained the experience of two-way communication by interaction with the virtual world of which they were previously mere viewers. As one-way communication gained a two-way aspect, it became possible to exchange ideas, views and impressions among individuals (Goodchild, 2007, p. 27; Reuter & Kaufhold, 2018). Following this process, social media platforms have emerged. The concept of social media refers to groups of applications that allow individuals to produce content and share the produced content and are based on the ideological and technological structure of Web 2.0 (Kaplan & Haenlein, 2010, p. 61). Such platforms have created their own norms and values of the digital world by providing opportunities of interaction among users based on certain principles that are unique to them (Herdağdelen, Zuo, Gard-Murray & Bar-Yam, 2013). These norms and values take form by starting with the types of interaction the new media platforms have. By taking the relevant forms as a basis, social media platforms become prominent and gain an identity of a platform with their unique characteristics (Raacke & Bonds-Raacke, 2008). For example, Instagram comes to the fore as a social media platform where photos are shared (Hu, Manikonda & Kambhampati, 2014), and it is positioned as a social platform that has higher rates of usage

among young people (We are social, 2018). Twitter, on the other hand, was designed as a micro-blog that shares momentary actions, and it is more text-oriented (Sagolla, 2009, pp. xxiv-xxv). Nowadays, characteristics of platforms are increasingly becoming similar to each other. For example, the feature of sharing stories that became popular with the Snapchat application has also been added to Instagram, Facebook and WhatsApp. The feature that allows live broadcasts is another element that may exemplify this trend. On the other hand, although opportunities for similar interactions have increased among platforms, it is still possible to make clear distinctions among social media platforms in terms of their interaction opportunities. To materialize the issue more, an example may be the asymmetrical "following" model of Twitter (Comunello & Anzera, 2012, p. 466). Facebook is different because the interaction is provided only after both sides approve the friend requests mutually (being friends on Facebook). For the issue to be comprehended more easily, it is beneficial to discuss the interaction opportunities provided by social media platforms. Some of the most prevalent social media interaction opportunities that gain acceptance today may be listed as follows:

Table 1. Social Media Interaction Opportunities

• Sending Friend Requests / Receiving Friend Requests	
• Commenting / Receiving Comments,	• Following / Being Followed,
• Retweeting / Being Retweeted,	• Sending a Message / Receiving a Message,
• Tagging / Being Tagged,	• Sharing Posts / Viewing Posts
• Liking / Being Liked,	• Live Streaming / Watching Live Streams,
• Sharing Instant Stories / Watching Instant Stories,	• Video Chatting

The interaction opportunities that are mentioned above may differ based on the type of social media platforms. Nevertheless, these interaction opportunities provided by platforms of different types have started to become similar to each other. Considering social platforms as useful communication tools in the self-presentation and self-achievement of digital natives (Valkenburg, Schouten & Peter, 2005; Valkenburg, Schouten & Peter, 2006; Raacke & Bonds-Raacke, 2008; Valkenburg & Peter, 2008), the share of the aforementioned interaction opportunities as it is seen in Table 1 is very large in this matter. Previous studies in the literature reviewed self-esteem in the concepts of particular social media platforms (Valkenburg, Schouten & Peter, 2006; Krämer & Winter, 2008; Vogel, Rose, Roberts, & Eckles 2014). Consequently, they were not able to include all types of interactions. Studies on social networking sites (SNS) in general have not been founded on digital feedback regarding their variables (Barker, 2009; Zhou & Leung, 2012). As interaction opportunities in social ecosystems are increasingly becoming similar to each other and as adolescents use multiple of these simultaneously, the literature needs to discuss the

feedback received from digital platforms as a whole. For this reason, the first hypothesis of our study (H1) was created on this basis.

H1: There is a significant relationship between the feedback received from the digital world and the self-esteem of digital natives.

The term digital feedback used frequently in this paper, refers to feedback received as a result of digital interaction elements. Thus, the role of the received feedback on self-esteem will be analyzed.

Self-Esteem

People gain convictions by developing attitudes towards the objects, actions and other individuals in their environment. While such a conviction may consist of positive judgements, it may also be concerned with contrary opinions. The attitudes the individual develops towards their own are known as self-esteem (SE) (Rosenberg, 1965, p. 5). The concept of self-esteem was used for the first time by William James (1983) to understand the effects of desires and goals on self (p. 193). Later, several studies were carried out on this concept, the variables related to the concept were examined, and this topic has preserved its popularity so far (Mruk, 2006, p. 1; Cvencek, Fryberg, Covarrubias & Meltzoff, 2018). Self-esteem exists through the balance between the desires of an individual and his/her realization of these desires. In other words, the more the individuals achieve the outcomes they desire the more self-esteem they have (James, 1983, p. 193). Therefore, studies have shown relationships between self-esteem and several factors such as education, age, economic status, health, gender, upbringing (O'dea & Caputi, 2001, p. 528), academic success (Tremblay, Inman, & Willms, 2000, pp. 318-319), feelings of guilt (Rosenberg, Schooler & Schoenbach 1989, pp. 1013-1015), genetics (Neiss, Stevenson & Sedikides, 2003, pp. 63-65) and socioeconomic status (Balat & Akman, 2004, p. 179). There are also studies which have demonstrated that social media platforms that have become a part of people's lives through web technologies are also related to self-esteem (Valkenburg, Schouten & Peter, 2006, p. 589). However, to the best of our knowledge, there has been no study on whether or not self-esteem changes based on the level of feedback received from the digital world.

H2: The self-esteem levels of users vary based on the level of feedback that is received from the digital world.

Methodology

In the implementation of this study, the survey technique which is one of the quantitative research methods was utilized. The study was carried out in the province of Isparta in Turkey. Previous studies show that secondary school and high school students were frequently included in studies on self-esteem and digital natives (Valkenburg, Peter & Schouten, 2006; Agosto & Abbas 2010; Johnson, 2011; Wang, Hsu, Campbell, Coster & Longhurst, 2014; Salmela-Aro, Muotka, Alho, Hakkarainen & Lonka, 2016). Therefore, high school students were chosen to

represent digital natives in this study. From among nine high schools that were selected with the "method of cluster sampling" (Neuman, 2014, p. 263), 310 students who were selected by simple randomization participated in the study. In this context, factors such as easiness of access, budget, population and sample selection constitute the limitations of the study. For this reason, the results of the study cannot be generalized for all individuals who are described to be digital natives.

Research Model

Within the scope of the study, the relational screening model was utilized. Relational screening models are research models that aim to describe the state or degree of simultaneous change in two or more variables (Punch, 2013, p. 216; Neuman, 2014, p. 79).

- H1: There is a significant relationship between the feedback received from the digital world (DF) and the self-esteem (SE) of digital natives.
- H2: The self-esteem (SE) levels of users vary based on the level of feedback that is received from the digital world (DF).

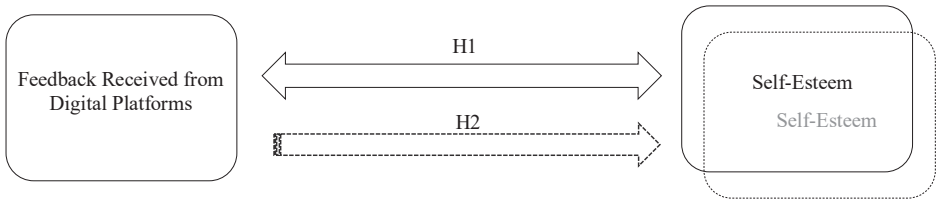

Figure 1. Research Modelling

Data Collection Tools

This study utilized three different data collection instruments as Rosenberg's Self-Esteem Scale (RSES), a Digital Feedback Form (DFF) and a Personal Information Form (PIF) including a total of 26 questions.

RSES was developed in 1965 by Morris Rosenberg and tested for validity and reliability in the United States on 5024 high school students (*Cronbach's alpha: 0.71 – Test-Retest reliability: 0.75*), while it was tested for validity and reliability in Turkey by Füsun Çuhadaroğlu in 1986 on 205 high school students (*Cronbach's alpha: 0.71 – Test-Retest reliability: 0.79)*. RSES has gained significance as a universal scale by being tested in 53 different countries with the participation of 16,998 individuals (Schmitt & Allik, 2005). Within the context of the study, the first ten items of the scale that measure self-esteem were utilized. The reliability coefficient (Cronbach's alpha) within this study was calculated as 0.79 and the items that were used from RSES are shown in Table 2.

Table 2. Items That Are in the Self-Esteem Dimension of Rosenberg's Self-Esteem Scale

SE1.	On the whole, I am satisfied with myself.
SE2.	At times I think I am no good at all.
SE3.	I feel that I have a number of good qualities.
SE4.	I am able to do things as well as most other people.
SE5.	I feel I do not have much to be proud of.
SE6.	I certainly feel useless at times.
SE7.	I feel that I am a person of worth, at least on an equal plane with others.
SE8.	I wish I could have more respect for myself.
SE9.	All in all, I am inclined to feel that I am a failure.
SE10.	I take a positive attitude toward myself.

DFF was the data collection tool that was used to determine the negative or positive nature of the feedback the participants received from the digital world (DF). DFF, designed as a 5-point Likert-type scale, consists of 12 items that are scored from 1 to 5 towards the positive direction. In this study for the general of DFF, reliability coefficient (Cronbach's alpha) was calculated as 0.77. To be able to discover the types of related feedback in the analyses, each item was separately analyzed. The items in the form are shown in Table 3.

Table 3. Items in the Digital Feedback Form (DFF)

DF1.	The posts I share on social media receive many likes.
DF2.	People to whom I send friend (or following) requests on social media accept my requests.
DF3.	I receive too many friend (or following) requests on social media from the opposite sex.
DF4.	People to whom I send a direct message (DM) on social media respond to my message.
DF5.	I receive too many direct messages (DM) on social media.
DF6.	The number of my followers is much higher than those of my peers.
DF7.	There are more positive comments for my posts.
DF8.	My posts on social media are shared (retweeted) by others.
DF9.	The instant stories I share are watched by many people.
DF10.	My live broadcasts are watched by many people.
DF11.	People with whom I want to have a video chat accept my request.
DF12.	I am tagged a lot under various posts or in various photos on social media.

PIF included questions on the participants' gender, daily frequency of using social media and the social media platform they prioritized the most in terms of self-presentation. The items in PIF are given in Table 4.

Table 4. Personal Information Form

PIF1. Your gender:
PIF2. What is your daily average time of using social media?
PIF3. Which social media platform is more important for you in terms of self-presentation?

Data Analysis

The data obtained in the study were analyzed by the SPSS 24.0 software. Pearson correlation coefficients were calculated to investigate the relationship between the responses of the participants to the items in DFF and their SE levels. ANOVA was carried out to understand whether or not the reactions of the participants to DFF varied based on their SE levels. In addition to these tests, a frequency analysis was carried out to determine the participants' gender, social media usage frequency and the social media platform they prioritized in terms of self-presentation.

Results

Among the 310 high school students, 155 were female and 155 were male. 177 had high SE levels, 133 had medium SE levels, and interestingly, no one was categorized to have a low SE level. 44.8% of the participants stated that they use social media for 1 to 3 hours a day, 34.2% use it for 3 to 5 hours, 11.3% use it for less than 1 hour, and 9.7% use it for more than 5 hours. The findings that were obtained on the rates of social media usage were very much in agreement with the findings in the literature (Çalışır, 2015, p. 126; Tezci & İçen, 2017, p. 100). The data collected in this study on "the platforms the participants prioritized the most in terms of self-presentation" were as shown in Table 5.

Table 5. Priority Ranking of Social Media Platforms in Terms of Self-Presentation

Platform	Number of Participants	Percentage
Instagram	130	41.9
Twitter	55	17.7
Facebook	18	5.8
YouTube	16	5.2
Snapchat	1	0.3
WhatsApp	87	28.1
Tumblr	2	0.6
Other	1	0.3
Total	310	100.0

As seen in Table 5, the participants mostly prioritized Instagram among all social media platforms in terms of self-presentation. Moreover, according to the 2018 report of We Are Social, Instagram had the 4th place following YouTube, Facebook and WhatsApp among the most actively used social media platforms (We are Social, 2018). Correspondingly, it may be argued that Instagram is the most pioneering platform in terms of self-presentation for digital natives although it had the 4th place in terms of active usage. It is seen that Instagram is preferred mostly in the literature about self-presentation on social media (Lee, Lee, Moon & Sung, 2015; Smith & Sanderson, 2015).

A Pearson correlation analysis was carried out to examine the relationship between the responses of the students to RSES and DFF. Among the 12 feedback items in DFF, only two items (DF2, DF8) were found to be related to SE. These data show that, acceptance of friend (or

following) requests sent by the high school students that were included in the study as digital natives had a low-level, positive and significant relationship with SE (r= 0.152; p<0.01). Another item in DFF that had a significant relationship with SE (r= 0.116; p<0.05) was others' sharing (retweeting/reposting) of the posts the participants shared on social media. As the rate of the posts shared by the participants being shared by others increased, their SE levels also increased.

The results of the ANOVA test that was conducted to determine whether or not the SE levels of the participants varied based on their responses to DFF are given in Table 6.

Table 6. DFF results of the participants based on their SE levels

No	Items	P	SE Levels	N	$\bar{x}$	σ
1	The posts I share on social media receive many likes	0.052	Medium	133	2.44	0.856
			High	177	2.64	0.882
			Total	310	2.55	0.875
2	People to whom I send friend (or following) requests on social media accept my requests	0.034	Medium	133	3.08	0.675
			High	177	3.25	0.721
			Total	310	3.18	0.706
3	I receive too many friend (or following) requests on social media from the opposite sex	0.103	Medium	133	2.50	0.958
			High	177	2.68	0.960
			Total	310	2.61	0.962
4	People to whom I send a direct message (DM) on social media respond to my message	0.040	Medium	133	2.87	0.916
			High	177	3.08	0.885
			Total	310	2.99	0.903
5	I receive too many direct messages (DM) on social media	0.747	Medium	133	2.29	0.894
			High	177	2.33	0.956
			Total	310	2.31	0.929
6	The number of my followers is much higher than those of my peers	0.970	Medium	133	2.14	0.955
			High	177	2.15	0.899
			Total	310	2.15	0.922
7	There are more positive comments for my posts	0.017	Medium	133	2.83	0.818
			High	177	3.07	0.870
			Total	310	2.97	0.855
8	My posts on social media are shared (retweeted) by others	0.036	Medium	133	1.98	0.929
			High	177	2.20	0.944
			Total	310	2.07	0.940
9	The instant stories I share are watched by many people	0.523	Medium	133	2.61	0.936
			High	177	2.68	0.943
			Total	310	2.65	0.939
10	My live broadcasts are watched by many people	0.681	Medium	133	1.80	0.900
			High	177	1.76	0.873
			Total	310	1.78	0.883
11	People with whom I want to have a video chat accept my request	0.932	Medium	133	2.56	0.987
			High	177	2.55	1.076
			Total	310	2.56	1.037
12	I am tagged a lot under various posts or in various photos on social media	0.865	Medium	133	2.41	0.914
			High	177	2.40	0.936
			Total	310	2.40	0.925

As seen in Table 6, SE levels of participants varied significantly (p<0,05) according to 2,4,7 and 8 items in DFF. The following interpretations may be made based on the data.

The acceptance status of the friend or following requests sent by the participants varied based on their SE levels. The requests of the participants with high SE levels ($\bar{X}$=3.25; p<0.05) were accepted by a higher rate than those with medium SE levels ($\bar{X}$=3.08; p<0.05). This finding of the study was in agreement with the results obtained by Valkenburg, Peter and Schouten (2006).

The response status of direct messages sent by the participants on social platforms varied based on their SE levels. The participants with high SE levels ($\bar{X}$=3.08; p<0.05) received responses to their DMs more in comparison to those with medium SE levels ($\bar{X}$=2.87; p<0.05). In this case, it may be argued that most of the individuals who received responses to their DMs had high SE levels.

SE levels of participants varied based on their status of receiving positive feedback from their shared posts. The participants with medium SE levels ($\bar{X}$=2.83; p<0.05) received less positive feedback in comparison to those with high SE levels ($\bar{X}$=3.07; p<0.05). Again, in this case, it may be argued that most of the individuals who received positive feedback for their posts have high SE levels.

Another DF where the participants differed based on their SE levels was the "status of being shared or being retweeted for the posts sent by the participants on social media." In this context, the individuals whose posts were shared by others were mostly those who had high SE levels ($\bar{X}$=2.20; p<0.05).

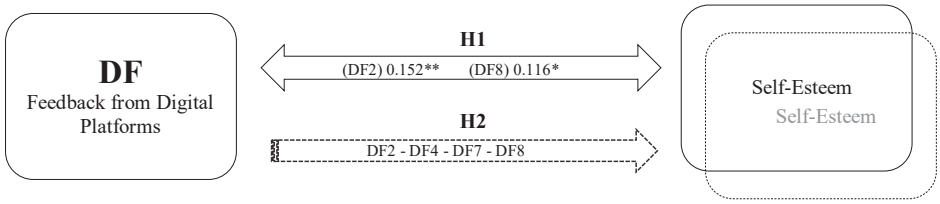

Figure 2. Testing the Research Model

Discussion and Conclusion

More than half of the people in the world is in interaction with the digital world via the internet. Almost half of them are active social media users. Similarly, according to the report by We Are Social provided for the year 2018, the number of social media users increased by 362 million people from 2017 to 2018, and today, 3.196 billion people are actively using social media (We are social, 2018). This increase is repeated every year in regular periods. This way, the "digital generation" that was born into technology is increasingly transforming the population of the world, and the number of digital immigrants is constantly decreasing.

On the other hand, population is not the only area this transformation is experienced. There are also changes experienced in web-based digital areas. Social platforms may be considered to be at the top of such areas. The fact that digital interaction opportunities become more similar to each other day by day may be given as an example of the changes experienced on social platforms. This is why digital feedback also represents an important context in studies that links self-esteem and social ecosystems. In the direction of the aforementioned developments, it was seen that the number of studies where self-esteem and social platforms are associated fell short. On the other hand, there is no study found in the literature which directly associated digital feedback as a variable with self-esteem. The study is an early empirical attempt that examines the relation between digital feedbacks received from social platforms and self-esteem of digital natives in a developing country.

The research data in general showed that the SE levels of high school students who were included as digital natives in this study were related to digital feedback, even though these relations were on a low-level. Finding this relationship in the dimensions of "feedback related to friend requests" and "sharing of posts by others" was noteworthy. Previous studies have stated that the phenomenon of friendship is important for self-esteem in the real world (Keefe & Berndt, 1996; Berndt, 2002; Thomas & Daubman, 2001). However, as the level of this relationship is low, Bishop and Inderbitzen (1995) recommends the number of studies with this theme to be increased to make better sense of the relationship between friendship relations and SE (pp. 485-487). Therefore, as a result of the findings obtained here, it was seen that digital natives also paid importance to the phenomenon of "being friends", and it was concluded that the concept of "being friends" was related to the SE levels of individuals in the virtual world, too. Thus, the outputs of this study were in agreement with the literature in terms finding the relationship between "friendship" and "self-esteem" to be significant (Bishop & Inderbitzen, 1995; Raboteg-Saric & Sakic, 2014).

As also seen in the studies in the literature, adolescents use social platforms in romantic relationships (Valkenburg, Schouten & Peter, 2006; Elphinston & Noller, 2011), friendship relationships (Lenhart, Smith, Anderson, Duggan & Perrin, 2015), self-presentation (Mehdizadeh, 2010) and many other important aspects related to their identity development. In this context, Best, Manktelow and Taylor (2014) states that young individuals are influenced by social media platforms in a mixed way including both positive and negative dimensions (pp. 31-33). According to the data obtained in this study, it was seen that the feedback items of DF2 and DF8 had a positive relationship with SE levels.

Another output obtained as a result of the study was that the SE levels of the digital natives varied based on their scores in DFF. Accordingly, it may be seen that the participants differed based on their SE levels in terms of "acceptance of the friend requests they sent", "getting responses to their DMs", "receiving positive comments for their posts" and "sharing of their posts by others." This difference in question takes place in the sense that the participants with higher SE levels received more positive feedback than their counterparts with lower SE levels. Based on these data, it is thought that studies that question the importance digital natives pay to virtual platforms

would be valuable. Furthermore, the low levels of relationships that were found indicate the possibility of other variables that affect the SE levels of digital natives.

Moreover, the study is a pioneering study in terms of the region and sociocultural structure from which the sample was selected. Likewise, according to the report by We Are Social for the year 2018, 54.33 million of the population of 81.33 in Turkey were active internet users, while 51 million were active social media users. Again, according to the same report, Turkish citizens use the internet by an average of 7 hours per day (We are Social, 2018). In Turkey, where 45 million people in the population consist of individuals younger than 34 years of age, there are 15 million people on the levels of secondary school and high school (Türkiye İstatistik Kurumu, 2019). Although the results of the study cannot be generalized to a broad population, these results are highly valuable as they allow comparison to the outputs of future studies and as the sample was selected from a region that is productive in terms of social media usage. In this context, it is recommended to compare the results of our study to those of studies that are conducted in other countries with population-based and cultural differences. Additionally, the role of DFs in understanding the self-esteem levels of digital natives may be revealed more comprehensively by comparing the results of this study to those of studies conducted in countries where daily internet usage times are shorter. Hence, it is anticipated that DFF, which was created as a Likert-type scale on the concept of digital feedback, will contribute to the literature. Finally, it is thought that scientific studies based on digital natives and social media are important considering that young people are the ones who will carry societies to the future.

End Note

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References

Agosto, D. E., & Abbas, J. (2010, October). High school seniors' social network and other ICT use preferences and concerns. In *Proceedings of the 73rd ASIS&T Annual Meeting On Navigating Streams Inin An Information Ecosystem-Volume 47*(1),1-10 American Society for Information Science.

Andreassen, C. S., Pallesen, S., & Griffiths, M. D. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addictive Behaviors*, 64, 287-293.

Balat, U. G. & Akman, B. (2004). Farklı sosyo-ekonomik düzeydeki lise öğrencilerinin benlik saygısı düzeylerinin incelenmesi. *Fırat Üniversitesi Sosyal Bilimler Dergisi, 14*(2), 175-183.

Barker, V. (2009). Older adolescents' motivations for social network site use: the influence of gender, group identity, and collective self-esteem. *Cyberpsychology & Behavior, 12*(2), 209-213.

Berndt, T. J. (2002). Friendship quality and social development. *Current Directions in Psychological Science, 11*(1), 7-10.

Best, P., Manktelow, R., & Taylor, B. (2014). Online communication, social media and adolescent wellbeing: a systematic narrative review. *Children and Youth Services Review, 41,* 27-36.

Bishop, J. A., & Inderbitzen, H. M. (1995). Peer acceptance and friendship: an investigation of their relation to self-esteem. *The Journal of Early Adolescence, 15*(4), 476-489.

Buckingham, D. (2008). "Introducing identity." youth, identity, and digital media. In (Ed.) David Buckingham, *The John D. and Catherine T. Macarthur foundation series on digital media and learning*. Cambridge, Ma: The MIT Press. 1–24. DOI: 10.1162/dmal.978.026.2524834.001.

Çalışır, G. (2015). Kişilerarası iletişimde kullanılan bir araç olarak sosyal medya: gümüşhane üniversitesi iletişim fakültesi öğrencilerine yönelik bir araştırma. *Humanities Sciences, 10*(3), 115-144.

Comunello, F., & Anzera, G. (2012). Will the revolution be tweeted? A conceptual framework for understanding the social media and the Arab Spring. *Islam And Christian–Muslim Relations, 23(4),* 453-470.

Çuhadaroğlu, F. (1986) *Adölesanlarda benlik saygısı. Hacettepe Üniversitesi Tıp Fakültesi Psikiyatri Anabilim Dalı,* Yayınlanmamış Uzmanlık Tezi, Ankara.

Cvencek, D., Fryberg, S. A., Covarrubias, R., & Meltzoff, A. N. (2018). Self-concepts, self-esteem, and academic achievement of minority and majority north American elementary school children. *Child Development, 89*(4), 1099-1109.

Davidson, J., & Martellozzo, E. (2013). Exploring young people's use of social networking sites and digital media in the internet safety context: a comparison of the UK and Bahrain. *Information, Communication & Society, 16*(9), 1456-1476.

Elphinston, R. A., & Noller, P. (2011). Time to face it! Facebook intrusion and the implications for romantic jealousy and relationship satisfaction. *Cyberpsychology, Behavior, and Social Networking, 14*(11), 631-635.

Gasser, U., Maclay, C. M., & Palfrey, J. G. (2010). Working towards a deeper understanding of digital safety for children and young people in developing nations. *Berkman Center Research Publication, (2010-7)*, 10-36.

Goodchild, M. F. (2007). Citizens as voluntary sensors: Spatial data infrastructure in the world of Web 2.0. *IJSDIR 2:* 24–32.

Gürbüz, S. (2015). Generational differences: A myth or reality? *The Journal of Human and Work, 2*(1), 39-57.

Hawi, N., & Samaha, M. (2019). Identifying commonalities and differences in personality characteristics of Internet and social media addiction profiles: Traits, self-esteem, and self-construal. *Behaviour & Information Technology, 38*(2), 110-119.

Helsper, E. J., & Eynon, R. (2010). Digital natives: Where is the evidence? *British Educational Research Journal, 36*(3), 503-520.

Herdağdelen, A., Zuo, W., Gard-Murray, A., & Bar-Yam, Y. (2013). An exploration of social identity: The geography and politics of news-sharing communities on Twitter. *Complexity, 19*(2), 10-20.

Hu, Y., Manikonda, L., & Kambhampati, S. (2014, May). *What we Instagram: A first analysis of Instagram photo content and user types*. In Eighth International AAAI Conference on Weblogs and Social Media.

Jackson, L. A., von Eye, A., Fitzgerald, H. E., Zhao, Y., & Witt, E. A. (2010). Self-concept, self-esteem, gender, race and information technology Use. *Computers in Human Behavior, 26*(3), 323-328.

James, W. (1983). *The principles of psychology*. Cambridge: Harvard University Press.

Johnson, G. M. (2011). Internet activities and developmental predictors: Gender differences among digital natives. *Journal of Interactive Online Learning, 10(2)*, 64-76.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons, 53*(1), 59-68.

Karabulut, B. (2015). Bilgi toplumu çağında dijital yerliler, göçmenler ve melezler. Pamukkale Üniversitesi. *Sosyal Bilimler Enstitüsü Dergisi, 21*, 11-23.

Kaya, A., & Saçkes, M. (2004). Benlik saygısı geliştirme programının ilköğretim 8. sınıf öğrencilerinin benlik saygısı düzeylerine etkisi. *Türk Psikolojik Danışma ve Rehberlik Dergisi, 21*(3), 49-56.

Keefe, K., & Berndt, T. J. (1996). Relations of friendship quality to self-esteem in early adolescence. *The Journal of Early Adolescence, 16*(1), 110-129.

Kennedy, G. E., Judd, T. S., Churchward, A., Gray, K., & Krause, K. L. (2008). First year students' experiences with technology: Are they really digital natives? *Australasian Journal of Educational Technology, 24*(1), 108-122.

Krämer, N. C., & Winter, S. (2008). Impression management 2.0: The relationship of self-esteem, extraversion, self-efficacy, and self-presentation within social networking sites. *Journal of Media Psychology, 20*(3), 106-116.

Lee, E., Lee, J. A., Moon, J. H., & Sung, Y. (2015). Pictures speak louder than words: Motivations for using Instagram. *Cyberpsychology, Behavior, And Social Networking, 18*(9), 552-556.

Lenhart, A., Smith, A., Anderson, M., Duggan, M. & Perrin, A. (2015). Teens, technology and friendships. Pew Research Center. Retrieved from: https://www.pewresearch.org/wp-content/uploads/sites/9/2015/08/Teens-and-Friendships-FINAL2.pdf

Mehdizadeh, S. (2010). Self-presentation 2.0: Narcissism and self-esteem on Facebook. *Cyberpsychology Behavior and Social Networking, 13*(4), 357-364.

Mruk, C. J. (2006). *Self-Esteem Research, theory, and practice: Toward a positive psychology of self-esteem.* New York: Springer Publishing Company.

Neiss, M. B., Stevenson, J., & Sedikides, C. (2003). The genetic bases of optimal self-esteem. *Psychological Inquiry, 14*(1), 63-65.

Neuman, L. W. (2014). *Social research methods: Qualitative and quantitative approaches.* U.S.A: Pearson.

O'dea, J. A., & Caputi, P. (2001). Association between socioeconomic status, weight, age and gender, and the body image and weight control practices of 6-to 19-year-old children and adolescents. *Health Education Research, 16*(5), 521-532.

Perloff, R. M. (2014). Social media effects on young women's body image concerns: Theoretical perspectives and an agenda for research. *Sex Roles, 71*(11-12), 363-377.

Prensky, M. (2001). Digital natives, digital immigrants, part 1. *On the Horizon, 9*(5), 1-6.

Punch, K. F. (2013). *Introduction to social research: Quantitative and qualitative approaches*. Sage.

Raacke, J., & Bonds-Raacke, J. (2008). Myspace and Facebook: Applying the uses and gratifications theory to exploring friend-networking sites. *Cyberpsychology & Behavior, 11*(2), 169-174.

Raboteg-Saric, Z., & Sakic, M. (2014). Relations of parenting styles and friendship quality to self-esteem, life satisfaction and happiness in adolescents. *Applied Research in Quality of Life, 9*(3), 749-765.

Reuter, C., & Kaufhold, M. A. (2018). Fifteen years of social media in emergencies: A retrospective review and future directions for crisis informatics. *Journal of Contingencies and Crisis Management, 26*(1), 41-57.

Robins, K. (1996). *Into the image culture and politics in the field of vision.* London: Routledge.

Rosenberg, M. (1965). *Society and the adolescent self-image*. NJ: Princeton University Press.

Rosenberg, M., Schooler, C. & Schoenbach, C. (1989). Self-esteem and adolescent problems: Modeling reciprocal effects. *American Sociological Review, 54*(6), 1004-1018.

Sagolla, D. (2009). *140 Characters a style guide for the short form.* New Jersey: John Wiley & Sons, Inc.

Salmela-Aro, K., Muotka, J., Alho, K., Hakkarainen, K., & Lonka, K. (2016). School burnout and engagement profiles among digital natives in Finland: A person-oriented approach. *European Journal of Developmental Psychology, 13(6),* 704-718.

Schmitt, D. P., & Allik, J. (2005). Simultaneous administration of the rosenberg self-esteem scale in 53 nations: Exploring the universal and culture-specific features of global self-esteem. *Journal Of Personality And Social Psychology, 89*(4), 623-642

Smith, L. R., & Sanderson, J. (2015). I'm going to Instagram it! An analysis of athlete self-presentation on Instagram. *Journal of Broadcasting & Electronic Media, 59*(2), 342-358.

Tezci, E., & İçen, M. (2017). High school students' social media usage habits. *Online Submission, 8(*27), 99-108.

Thomas, J. J., & Daubman, K. A. (2001). The relationship between friendship quality and self-esteem in adolescent girls and boys. *Sex Roles, 45*(1-2), 53-65.

Tonta, Y. (2009). Digital natives, social networks and the future of libraries. *Turkish Librarianship, 23*(4), 742-768.

Tremblay, M. S., Inman, J. W., & Willms, J. D. (2000). The relationship between physical activity, self-esteem, and academic achievement in 12-year-old children. *Pediatric Exercise Science, 12*(3), 312-323.

Turel, O., He, Q., Brevers, D., & Bechara, A. (2018). Social networking sites use and the morphology of a social-semantic brain network. *Social Neuroscience, 13*(5), 628-636.

Türkiye İstatistik Kurumu. (March 17, 2019). *Nüfus projeksiyonları, 2018-2080.* Retrieved from: http://www.tuik.gov.tr/PreHaberBultenleri.do?id=30567.

Valkenburg, P. M., & Peter, J. (2008). Adolescents' identity experiments on the internet: Consequences for social competence and self-concept unity. *Communication Research, 35*(2), 208-231.

Valkenburg, P. M., Peter, J., & Schouten, A. P. (2006). Friend networking sites and their relationship to adolescents' well-being and social self-esteem. *CyberPsychology & Behavior, 9*(5), 584-590.

Valkenburg, P. M., Schouten, A. P., & Peter, J. (2005). Adolescents' identity experiments on the internet. *New Media & Society, 7*(3), 383-402.

Vogel, E. A., Rose, J. P., Roberts, L. R., & Eckles, K. (2014). Social comparison, social media, and self-esteem. *Psychology of Popular Media Culture, 3(*4), 206-222

Vural, A. B. Z., & Bat, M. (2010). Yeni bir iletişim ortamı olarak sosyal medya: Ege Üniversitesi İletişim Fakültesi'ne yönelik bir araştırma. *Journal of Yasar University, 5(*20), 3348-3382.

Wang, S. K., Hsu, H. Y., Campbell, T., Coster, D. C., & Longhurst, M. (2014). An Investigation of middle school science teachers and students use of technology inside and outside of classrooms: Considering whether digital natives are more technology savvy than their teachers. *Educational Technology Research and Development, 62*(6), 637-662.

We are Social. (15.11.2018). *Digital in 2018: World's internet users pass the 4 billion mark*. Retrieved from: https://wearesocial.com/blog/2018/01/global-digital-report-2018.

Williams, D. L., Crittenden, V. L., Keo, T., & McCarty, P. (2012). The use of social media: An exploratory study of usage among digital natives. *Journal of Public Affairs, 12*(2), 127-136.

Williams, W. S., & Moody, A. L. (2019). Analyzed selfie: Stereotype enactment, projection, and identification among digitally native black girls. *Women & Therapy, 42*(3-4), 1-19.

Zhou, S. X., & Leung, L. (2012). Gratification, loneliness, leisure boredom, and self-esteem as predictors of SNS-game addiction and usage pattern among Chinese college students. *International Journal of Cyber Behavior, Psychology and Learning (IJCBPL), 2*(4), 34-48.

Zywica, J., & Danowski, J. (2008). The faces of Facebookers: Investigating social enhancement and social compensation hypotheses; predicting Facebook tm and offline popularity from sociability and self-esteem, and mapping the meanings of popularity with semantic networks. *Journal of Computer-Mediated Communication, 14*(1), 1-34.