
The impact of parasocial interaction toward

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Abstract: Nowadays, fierce competition among universities in acquiring prospective students is driving universities to make changes in their marketing activities. Inspired by the concept of parasocial interaction, the authors researched whether parasocial interaction could be used by universities to build a closer relationship with prospective students. Three different constructs of parasocial interaction were researched, to gauge their effect on a prospective student's intention to enrol in a university and share information by electronic word-of-mouth (eWOM): 1) perceived interactivity; 2) openness; 3) knowledge. Data collection was done by surveying 311, 12th grade students

in Indonesia, and processed using partial least square structural equation modelling (PLS SEM). The results showed that parasocial interaction has a positive and significant impact on prospective students' intention to enrol in universities and encourage information sharing through eWOM.

Keywords: parasocial interaction; prospective students; universities; PLS SEM; electronic word-of-mouth; eWOM.

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1 Introduction

The number of universities in Indonesia continues to grow. According to PD DIKTI (DIKTI, 2015), in 2014 there were 4,263 universities in the country. More universities means more competition to attract prospective students. One traditional marketing method universities have used to attract students is brochures which highlight the features and benefits of a particular university. But nowadays, almost all universities have a website providing an easier way for students to learn about universities they are interested in given that more people have access to internet connectivity. According to the Indonesia Internet Service Provider Association's data (APJII), Indonesia had 88.1 million internet users in 2014, 64.7% of which are high school students who are part of the millennial generation and use the internet to access social media (Puskakom, 2015).

Pew Research Center (2010) defines the millennial generation as anyone born after 1981, and describes millennial as 'technology enthusiasts' who take pride in their usage of technology to differentiate themselves from other generations. Technology provides the 'ecosystem' that glues their social life. The American Press Institute (2015) conducted a study of millennial's and found that, on average, younger millennial's (18–21 years old) are members of 3.7 social media platforms, as compared to only 2.9 social media platforms for older millennial's (30–34 years old). The popularity of social media platforms is such that, 88% of millennial's get their news from Facebook. Once on Facebook or other platforms, the millennial generation engages more actively with the news compared to other generations.

This shift in technology usage from one generation to the next means that companies, organisations, and, for this study, universities, will be at a loss if they do not find a way to communicate their messages in a way that matches the communication style of the millennial generation.

In the evolution of internet technology, Web 1.0 was mainly characterised as websites which provided information, but did not offer interactivity with the user. Web 2.0 brought about interactivity, giving users the ability to communicate with others. Websites became more social and hence the term 'social media' was born. Social media platforms are a group of internet-based applications built on top of Web 2.0 technology, that allows for user-generated content (Kaplan and Haenlein, 2010). Facebook, Twitter, YouTube and Instagram are some examples of social media platforms. Today, social media platforms are widely used for business activities. Companies are using social media for various reasons such as recruiting, communicating and adding value to customers, creating product and brand awareness, researching competitors, and product demonstrations. Parent et al. (2011) explain that companies who use social media to promote their products or services should focus on their communities willingness to participate. When communities willingly participate with brands by viewing, sharing, commenting, or creating content related to the brand or moderating and arbitrating discussions about the brand, communities will be more engaged with the brand.

Prior to social media, universities would use campus tours, printed materials, or conversations with faculty, admissions officers, counsellors, and alumni, as a way to market to prospective students (Rogers and Stoner, 2015). Now universities also use social media as one of their marketing tools to promote and brand to prospective students, and prospective students usually use social media to search for information and to interact socially (Constantinides and Stagno, 2012). Choosing a university is one of the most important decisions that a student will make in their lifetime. Therefore having

reliable and complete information about a university is extremely important. Social media can interactively answer questions prospective students may have about a university in a way that a brochure cannot. With social media, prospective students can become more familiar with a university by engaging in a two way interactive discussion (Hemsley-Brown and Oplatka, 2006; Constantinides and Stagno, 2012). According to Meyliana's (2015) research, universities in Indonesia have also been using social media as a marketing channel. Unfortunately, even though past research shows that social media can be used to form brand-customer relationships (Labrecque, 2014), universities have not really maximised their social media usage (Meyliana, 2015). Parasocial interaction (PSI) may help universities build closer relationships with prospective students using the university's social media platform.

PSI is a theory that originally comes from television studies where viewers develop 'intimacy at a distance' with media characters (Horton and Wohl, 1956). Recent research has indicated that PSI can be used to develop intimate relationships between social media users and companies, and thus increase brand loyalty (Labrecque, 2014). According to Labrecque (2014), there are two factors that encourage PSI in social media: perceived interactivity and openness. Lawry (2013), adds brand knowledge as another factor. The PSI relationship creates output in the form of loyalty and intention to spread information through electronic word-of-mouth (eWOM) (Labrecque, 2014; Lawry, 2013; Xiang et al., 2014).

Previous PSI research has focused on the relationship between customers and a product's brand (Xiang et al., 2014; Labrecque, 2014; Lawry, 2013), and also on the relationship between PSI and media personalities (Chung and Cho, 2014). However, little research has been done regarding PSIs role in the service sector. In this research, we focus on PSI theory's applicability in the service sector, specifically how it might apply to universities. We aim to understand whether PSI theory can be applied to build a relationship between universities and prospective students in order to encourage them to enrol in a university and share information through eWOM.

2 Theoretical foundation

2.1 Parasocial interaction

Social interaction is defined as the way in which people talk to and interact with each other. The emergence of visual media such as TV and movies brought about a new possible social interaction. Viewers were now building intimate relationships with TV and movie characters that they did not personally know, but with which they interacted on a regular basis. For example, when people watch their favourite TV shows they develop a liking for their favourite characters. In 1956, Horton and Wohl described this kind of interaction with media personalities such as presenters, actors, or celebrities, as 'parasocial', because relationships were not being built via face-to-face meetings, but through TV or movie images. Nordlund (1978) explained that PSI was a way for audiences to combat loneliness since they could interact with a media character in a way similar to interacting with their own friend(s).

Rubin and Perse (1987a) believed that there are three different forms of PSI: cognitively oriented, affectively oriented, and behaviourally oriented (Papa et al., 2000). Each form is defined as follows:

- Cognitively oriented PSI occurs when audience members analyse a media character's behaviour and actions and reflect upon their own. As an example a TV viewer may be encouraged to think about getting an education as a result of having a TV character discuss the importance of going to a university.
- When audience members believe that a media character shares similar values, beliefs, or interests, then the audience member is more likely to be influenced by the media character – this is known as affectively oriented PSI.
- Behaviourally oriented PSI occurs when the impact of the media character on the behaviour of the audience member is such that he/she takes action based on what he/she hears or sees. To illustrate, an audience member may decide to share with others what they have learned about in an educational program they have seen.

Research on computer mediated relationships has found that interacting online can be an equivalent substitute for face to face interaction (Giles, 2002). Giles (2002) also proposes different types of parasocial relationships-based among factors such as distance between the user and the figure and the type of relationship that can occur as a result of the encounter. For the purposes of our study and using Giles' framework we classify the encounter between a prospective student and the university's social media platform to range from an 'encounter with media figure' where the prospect only interacts with university administrators to 'small group' or 'large group' since the prospect could also interact with other prospective students. The type of relationship that could be formed as a result of these encounters can range from 'dyadic, but role bound' when the prospect deals with university administrators to 'future friend/colleague' when the prospect interacts with other prospects.

In the digital space, Labrecque (2016) found that parasocial relationships can affect a person's opinion, inspire, or influence a person's online and offline behaviour. Social media has transformed the way people communicate with one another, so marketers are eager to identify how to tap into social networks to increase brand awareness, brand loyalty, and customer satisfaction (Labrecque, 2014). Stever and Lawson (2013) analyse how a social media platform like Twitter is used by celebrities to promote their brand. Labrecque (2014) applies the principles of PSI to research how marketers can design effective social media strategies and concludes that stronger relationships between customers and a brand can successfully be achieved by building PSI with customers via social media (Labrecque, 2014).

In an educational setting, an intimate relationship is developed when by using social media prospective students can imagine themselves as students at the university. Social media can help students learn more about campus activities, the campus environment, and how to be successful in college. Prospective students can interact with university staff or chat with existing students to have their questions answered by using the university's social media platform. The original concept of parasocial relationship used TV and radio as the media for forming intimate relationships. In many cases these relationships were formed with fictional characters. However, in an educational context these relationships are not fictional. Prospects can form a parasocial relationship with real university staff or existing students who they could possibly meet on campus.

Labrecque (2014) found that there are two factors which she refers to as 'message components' that encourage PSI in social media:

- a perceived interactivity

b openness of the brand to customers.

Perceived interactivity is defined as “the user’s perception of taking part in a two-way communication with a mediated persona”, while openness is defined as establishing intimacy and trust (Labrecque, 2014). This research uses the same message components as in Labrecque’s model to determine the impact of PSI on educational institutions.

Lastly, the third factor analysed in this research is knowledge. We used the definition of subjective knowledge initially defined by Brucks (1985) as the knowledge a consumer thinks he/she has about a product. Selnes and Grønhaug (1986) went on to explain the importance of subjective knowledge in consumer purchase intent. More recently, Lawry (2013) defined knowledge as “how well informed an opinion leader is about brands, products, manufacturers, retailers or services within a given product class” and also looked at subjective knowledge in a study of how opinion leadership online influences purchasing decisions. He found that PSI and eWOM are positively related. The more knowledge a consumer has about a product the more likely he/she will spread that knowledge with others. Our focus is on universities, and we seek to understand how knowledge affects PSI and satisfaction when prospective students are choosing universities, and subsequently whether this affects intention to enrol and share information by eWOM.

2.2 Satisfaction

Kotler and Keller (2012) say that customer satisfaction occurs when a customer’s expectations of a product or service are met. When business is being conducted online, customer satisfaction is increased when users trust the online vendor, and when customers are satisfied with a product or service they feel it is more valuable (Alshibly, 2015). Hence, customer satisfaction influences purchase intention. Similarly, when a prospective student goes to a university’s website or social media platform and finds the information that he/she needs, then he/she will be more satisfied.

According to Rogers and Stoner (2015), 87% of prospective teens who visit a university’s website find it ‘extremely’ or ‘very’ helpful in researching colleges while 52% admit to following a university’s social media account. Social media influenced the decision to enrol of two-thirds of the prospective students. These prospects use a university’s digital platform to perform activities such as watching university related videos, participating in live chats, posting questions to university administrators or current students, and reading student blogs. 81% of prospective teens used their Smartphone to research universities with 79% claiming that the universities mobile website met their needs (17% rated the experience as ‘excellent’ and 62% as ‘ok’).

2.3 Intention to enrol in universities

Up & Up Agency (2015) a consulting agency that helps higher education institutions with branding strategy, lists five factors that influence a prospective student’s intention to enrol in a university: geographical location, financial aid, academic excellence and reputation, parents and peers, and marketing. For the purposes of this paper we will focus on how marketing, and specifically social media marketing affect a prospective students university selection.

Social media has brought about a new way to reach prospective students, so more universities are investing marketing dollars in creating or updating their social media platform. An admissions whitepaper published by college admissions company Zinch found that 68% of students used social media (Facebook ranked first) to learn more about a university, and 2/3 claimed that social media interaction contributed to their enrolment decision. This data supports the growing importance of universities using social media platforms to communicate with prospective students (Uversity & Zinch, 2014).

Ponte et al. (2015) examined how trust affects online travel purchase decisions. They found that information quality was a factor in influencing consumers decisions to purchase online. We believe this finding may be relevant to our study. In other words, the better the quality of information provided to prospective students on the university's social media platform, the more satisfied the prospective students will be, hence influencing their intention to enrol.

2.4 Electronic word-of-mouth

Hennig-Thurau et al. (2004) define eWOM communication as “any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the internet.” Popular social media platforms that allow eWOM communication include Facebook and Twitter. On these platforms users not only read news about products and/or services, but also provide feedback to the vendors by posting comments about the products or services on a social media platform. Users can also share information about these products and/or services with other members of their social media community. As an example, a user may learn about a university's open house event and share it with his/her friends who may also want to go. Or, he/she may ask the organiser of the event for more details about the event using the products or services social media platform.

3 Hypotheses development

3.1 Perceived interactivity, openness, and knowledge effect on PSI

One of the internet's differentiators with other traditional media is perceived interactivity. As an example, you can interact with a social media platform but you can not interact with a radio or television ad. This is an important factor in communication, especially in marketing communication. One way to measure perceived interactivity is to track speed of response between the university and the prospective students who are communicating using a social media platform (Labrecque, 2014). Another way would be by being able to post comments and receive feedback on those comments. The interaction between prospective students and a university will encourage a relationship between both of them. This interaction will create an idea that the media persona (in this case the university on the social media platform) listens and interacts with the prospective students, thus encouraging PSI.

Other than perceived interactivity, openness is also an important factor that influences or affects PSI. According to Perse and Rubin (1988), openness can encourage intimacy and reduce uncertainty in a relationship (Labrecque, 2014). Therefore, we could expect that the more open and informative universities are in social media, the stronger their

attachment with prospective students. A university's social media platform which allows users to find any kind of information about the university, and obtain answers to any question the prospective student may have, will likely be seen as more trustworthy and open. From the explanation, we can make the following hypothesis:

- H1 Perceived interactivity of prospective students with a university's social media platform encourages a PSI between the two of them.
- H2 Openness provided by a university's social media platform encourages a PSI relationship between the university and prospective students.

When prospective students interact with a university via a social media platform they gain more knowledge about the university. Prior research has shown that PSI can be predicted by knowledge gained by the audience (Lawry, 2013). From the explanation, we can make the following hypothesis:

- H3 Knowledge gained by prospective students communicating with a university using social media encourages a PSI between prospective students and a university.

3.2 Perceived interactivity, openness, and knowledge effect on satisfaction

Customers service satisfaction is often times affected by interpersonal interaction quality between the customers and the service provider. Service providers who can respond to customers requests and actions, treat them as active participants in communication, and make sure that their opinion is heard are likely to be viewed as having high interpersonal interaction (Lu, 2011; Labrecque, 2014). This in the end can create a more satisfying relationship with customers (Lu and Shrum in Lu, 2011). In addition, Alshibly (2015) says that information value is created when customers are provided with information that is valuable to them. When the information gained in online media is valuable, it allows customers to compare their options, make better choices, and thus increase their satisfaction.

Before social media platforms (Web 2.0) existed, prospective students would resort to catalogues, brochures, attend open houses, call the university, or use other means to get their questions answered. Obtaining information could be time consuming and/or frustrating if the information found or received was not exactly what the prospective student was looking/asking for. Web 1.0 with static (non-interactive) websites, made information easier to access for those who had internet connectivity, but could also lead students to struggle searching through the website to find what they needed.

By using the university's social media platform, prospective students can interact directly with the university to have their questions answered. There could be a chat or email option allowing students to directly ask for information regarding the university's registration, available majors, facilities, and more. Access to information is easier and direct. Prospective students will have the information that they need to make a more informed enrolment decision, and be more satisfied with the service provided by the university, and specifically the university's social media platform. From the explanation, we can make the following hypothesis:

- H4 Perceived interactivity by prospective students with the university's social media platform increases their satisfaction with the service provided by the university.

- H5 Openness provided by the university's social media platform increases perceived satisfaction of prospective students.

According to Brucks (1985), customer knowledge impacts satisfaction level. Ponte et al. (2015) found that online purchase intent in the travel industry depended on the satisfaction of users with the information provided online. In a university context, when prospective students search for information about a university, they expect their questions to be fully answered. If the information matches their need, their satisfaction level will increase. Therefore, we can formulate the following hypothesis:

- H6 Knowledge obtained by prospective students using the university's social media platform increases prospective students' satisfaction.

3.3 *PSI and satisfaction effect on intention to enrol in university*

According to Stephens et al. (1996), a host in a TV program holds an important role in creating a PSI relationship with viewers. The host's communication technique and personality can encourage a strong relationship with the viewers, making him/her able to grab a viewers' interest to buy more products offered in his/her program (Xiang et al., 2014). In a university context, the communication created by universities via social media can encourage a relationship between prospective students and universities. With communication via social media, universities can provide information according to prospective students' needs, and influence prospective students decision making. If a university's perceived interaction and openness level meets a prospective students' needs then a parasocial relationship will develop, and influence prospective students intention to enrol in the university.

Also, according to Azam et al. (2012), intention to make a purchase in online media can be affected by satisfaction. The satisfaction perceived by prospective students on the service provided by university's social media platform can encourage their intention to enrol in the university. If perceived interactivity and openness provided by a university fits the prospective students' needs, they will be more satisfied with the service provided by the social media platform and hence more likely to enrol in that university. With that explanation, we can come up with the following hypothesis:

- H7 PSI created between prospective students and a university encourages prospective students' intention to enrol in the university.
- H8 The satisfaction perceived by prospective students on the service provided by the university's social media platform can encourage their intention to enrol in the university.

3.4 *PSI and satisfaction effect on eWOM*

eWOM occurs when positive or negative feedback on a product or service is posted in online media (Hennig-Thurau et al. in Lawry, 2013). If universities, via their social media platform, are able to form a strong bond with prospective students as a result of PSI, then prospective students will be more likely to share information about the university via eWOM with their friends or relatives using social media. As an example, a prospective

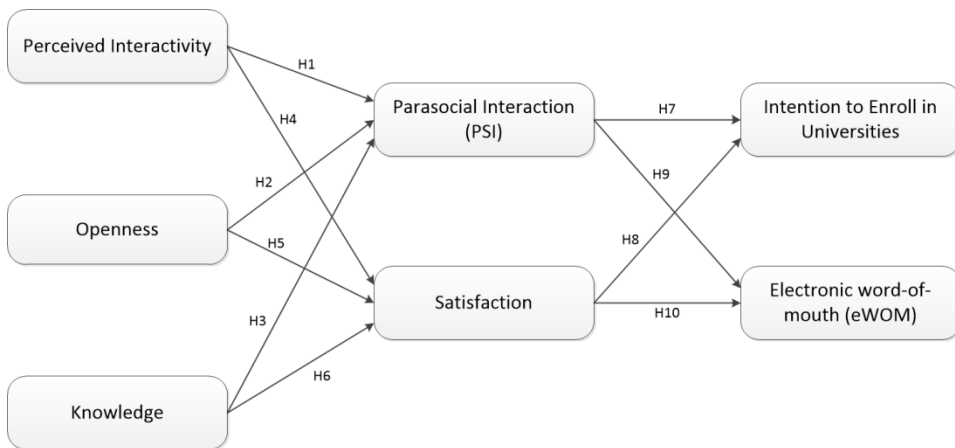
student who develops a parasocial relationship with the university, might share pictures of campus events with his/her social network.

Furthermore, Eun et al. (2013) also stated that the intention to share information via eWOM is affected by the satisfaction level in an interaction. If the service quality received by the prospective students meets or exceeds the prospective students' expectation, then the prospective student will be satisfied with the interaction which in turn can also encourage them to share positive information about the university via eWOM. With the explanation, we formulate the following hypothesis:

- H9 PSI formed between prospective students and universities encourages prospective students' intention to share information via eWOM.
- H10 Satisfaction perceived by the prospective students on the service provided by universities can encourage their intention to share information via eWOM.

According to the theories and previous research, we will propose a research model as shown in Figure 1.

Figure 1 Hypothesis and research model design



4 Methodology

4.1 Data collection

Respondents in this research are senior high school students who are close to graduating and are searching for a university. The data collection was performed by distributing a questionnaire link online, from 9 April 2015 until 9 May 2015. The questionnaire includes items and adapted items from prior research studies with attribution in parenthesis next to each hypothesis tested. The questionnaire was distributed through various social media platforms, such as Facebook, Twitter, WhatsApp, Line, and Blackberry Messenger.

4.2 Research instrument

The research instruments used in this research were close-ended questions written in Bahasa Indonesia. For the purposes of this research paper the questions have been translated into English. Forward-translation and double translation were used. Respondents were asked to express their agreement on the questions using a 5-level Likert scale, where scale 1 means really disagree, and scale 5 means completely agree. Table 1 breaks down the variables used in this research.

Table 1 Research variables

<i>Code</i>	<i>Description</i>
<i>Perceived interactivity (Labrecque, 2014)</i>	
Int1	All of my questions were answered using the university social media platform (Facebook or Twitter)
Int2	University has responded to my questions quickly and thoroughly
Int3	University allows me to communicate directly with them
Int4	University listens to what I have to say on their social media platform (Facebook or Twitter)
<i>Openness (Labrecque, 2014; Xiang et al., 2014)</i>	
Opn1	University is always open in providing their information to me (such as registration, faculty and study programs, curriculum), and pictures (photos or videos) about campus life or events in the university via their social media (Facebook or Twitter)
Opn2	University routinely provides me updates via their social media (Facebook or Twitter)
Opn3	University answers any question, either academic or non-academic, on their social media platform (Facebook or Twitter)
Opn4	University's social media platform (Facebook or Twitter) has met my needs
Opn5	University's social media platform (Facebook or Twitter) provides plenty of information about the university
<i>Knowledge (Lawry, 2013)</i>	
Know1	I know the university well
Know2	I know the programs offered in the university
Know3	I know the activities held in the university
Know4	Compared to most people, I know the university really well
<i>Parasocial interaction (PSI) (Labrecque, 2014)</i>	
PSI1	This university makes me feel comfortable, just like when I'm with my friend
PSI2	When interacting with this university, I always feel involved in any discussion in their social media (Facebook or Twitter)

Table 1 Research variables (continued)

<i>Code</i>	<i>Description</i>
<i>Parasocial interaction (PSI) (Labrecque, 2014)</i>	
PSI3	I can connect to this university via their social media platform (Facebook or Twitter)
PSI4	I love to listen to anything that is given by the university in their social media platform (Facebook or Twitter)
PSI5	I care about what is happening in this university
PSI6	I hope this university can reach their goals
<i>Satisfaction (Alshibly, 2015)</i>	
Sat1	This university's social media platform (Facebook or Twitter) meets my expectation
Sat2	Overall, I am satisfied with the information and service provided by this university's social media platform (Facebook or Twitter)
Sat3	I have had a positive experience with this university's social media platform (Facebook or Twitter)
Sat4	This university's social media platform (Facebook or Twitter) has provided everything I need
Sat5	Overall, I feel good using this university's social media platform (Facebook or Twitter)
<i>Intention to enrol in university (Ponte et al., 2015)</i>	
IEU1	The probability that I would consider to enrol in this university because of the information I received on its social media platform is high
IEU2	If I were to enrol in a university I would consider enrolling in this university because of the information I received on its social media platform
IEU3	The likelihood of me enrolling in this university because of information received on its social media platform is high
IEU4	My willingness to enrol in this university because of the information received on its social media platform is high
<i>eWOM (Xiang et al., 2014; Labrecque, 2014)</i>	
eWOM1	I intend to share my experience interacting with this university in my social media (Facebook or Twitter)
eWOM2	I will recommend this university as a good choice when someone wants to go to a university through my social media (Facebook or Twitter)
eWOM3	I will give positive information about this university to my friends and relatives in my social media (Facebook or Twitter)

4.3 Data analysis

The data collected from the respondents was processed using a variant-based structural equation model (SEM), partial least squares (PLS). PLS provides a variant-based structural equation analysis that simultaneously performs measurement model and structural model testing (Jogiyanto, 2011). A tool that is used to perform this statistical technique is SmartPLS version 3.0.

5 Results and discussion

5.1 Respondent demography

According to the Indonesian Ministry of Higher Education's website, there are 5.898.157 students attending Indonesian universities (DIKTI, 2018). Less than 1% (0.7%) of all university students study abroad (WENR, 2018).

Respondents in this research are high school students from Indonesia who are following a university's social media platform. The total number of respondents was 311. Table 2 shows the demographics of the respondents in this research.

Table 2 Respondents' demographics

<i>Sex</i>	<i>% age</i>
Male	68
Female	32
<i>Frequency</i>	<i>% age</i>
Every hour	10
Everyday	59
Every week	16
Every month	9
>1 month	6
<i>Reasons to follow universities social media account</i>	<i>% age</i>
Up-to-date in providing information	48
Provide interesting information	26
Wants to directly communicate with universities	20
Others	6
<i>Device</i>	<i>% age</i>
Smartphone	55
Laptop	27
Tablet	10
Desktop	8
<i>Main goal</i>	<i>% age</i>
Source of information	40
Establish friendship	19
To reduce stress	16
Follow social media community	13
Follow trends	8
Others	4
<i>Follows universities social media</i>	<i>% age</i>
Yes	93
No	7

From Table 2, we can see that the majority of the respondents in this research were male, with 213 respondents (68%), while 98 respondents (32%) were female. Most of the respondents accessed social media through their Smartphone (55%) and the rest accessed social media via laptop, tablet, or desktop. Their main goal in using social media was to gain information (40%). Among the 311 respondents, 93% of them follow universities via social media, primarily because universities provide up-to-date information in their social media (48%).

5.2 Measurement model test

Measurement model testing is done by performing convergent validity, discriminant, and reliability testing. A convergent validity test can be fulfilled if each measurement tool has a high correlation in a construct (Jogiyanto, 2011). To make a convergent validity, outer loading value has to be fulfilled (Hair et al., 2014). A high outer loading value on a construct shows that the indicators have a lot of similarities and can represent a construct (Hair et al., 2014). According to Chin (1998), the outer loading value has to be more than 0.7. From Table 3, we can see there are 5 indicators that have less than a 0.7. These indicators are OPN1 (0.662), OPN3 (0.678), PI1 (0.672), PI2 (0.625), and INT3 (0.699). According to Hair et al. (2014), an outer loading value from 0.4 to 0.7 in each indicator should not be deleted unless it can increase composite reliability. But if the outer value is lower than 0.4, the indicator has to be deleted. Therefore, the five values have to be kept until the next validity test.

The next convergent validity test looks at the average variance extracted (AVE) value on every latent variable (Hair et al., 2014). According to Chin (1998), the AVE value has to be higher than 0.5 (Jogiyanto, 2011). An AVE value greater than 0.5 shows that a construct can be defined by more than a half of the indicator variance (Hair et al., 2014). Table 3 shows that all latent constructs have higher than 0.5 AVE value, precisely between 0.504 to 0.791.

Table 3 Loading factor, AVE, CA and CR (see online version for colours)

	<i>Outer loading</i>	<i>AVE</i>	<i>CA</i>	<i>CR</i>
EWOM1	0.829	0.733	0.817	0.892
EWOM2	0.875			
EWOM3	0.863			
IEU1	0.798	0.791	0.91	0.938
IEU2	0.912			
IEU3	0.925			
IEU4	0.916			
OPN1	0.662	0.52	0.789	0.844
OPN2	0.717			
OPN3	0.678			
OPN4	0.768			
INT1	0.739	0.539	0.715	0.824
INT2	0.751			
INT3	0.699			

Table 3 Loading factor, AVE, CA and CR (continued) (see online version for colours)

	<i>Outer loading</i>	<i>AVE</i>	<i>CA</i>	<i>CR</i>
INT4	0.748	0.539	0.715	0.824
INT5	0.775			
KNOW1	0.781	0.639	0.812	0.876
KNOW2	0.807			
KNOW3	0.753			
KNOW4	0.853			
PSI1	0.672	0.504	0.805	0.858
PSI2	0.625			
PSI3	0.749			
PSI4	0.756			
PSI5	0.736			
PSI6	0.712			
SAT1	0.776	0.63	0.853	0.895
SAT2	0.837			
SAT3	0.797			
SAT4	0.807			
SAT5	0.75			

Discriminant validity shows how far a construct really differs from another construct (Hair et al., 2014). Discriminant validity can be seen by comparing the AVE root of every construct with the correlation between each construct in the model (Jogiyanto, 2011). The AVE root value has to be more than the inter-construct correlation value. As seen in Table 4, the AVE square root value (diagonal component) is higher than the inter-construct correlation. This shows that a construct has a strong correlation with itself. In addition, discriminant validity can also be evaluated by checking the cross loading value from each indicator. Cross loading value can be seen by comparing the outer loading value of each indicator in the construct, and has to be more than the outer loading value on the other construct (Hair et al., 2014). The calculation results show that the cross loading value of each indicator has a higher value in the construct column compared to the other construct. This means that the existing indicators have a strong correlation with the defined construct. Considering all of the above, we concluded that the instruments used in this research were valid and reliable.

Table 4 Inter-construct correlation and AVE square roots

	<i>eWOM</i>	<i>IEU</i>	<i>OPN</i>	<i>INT</i>	<i>KNOW</i>	<i>PSI</i>	<i>SAT</i>
eWOM	0.856						
IEU	0.573	0.889					
OPN	0.327	0.189	0.721				
INT	0.327	0.135	0.435	0.734			
KNOW	0.344	0.335	0.307	0.259	0.799		
PSI	0.548	0.392	0.474	0.437	0.526	0.709	
SAT	0.455	0.301	0.572	0.438	0.463	0.689	0.793

5.3 Structural model test

A structural model test is done to determine how well data from the findings can support the proposed theories or concepts to confirm whether the theories or concepts are acceptable or not (Hair et al., 2014). Structural model testing is done by measuring the determination coefficient (R2). The determination coefficient (R2) is used to measure the independent variable's change variation level compared to the dependent variable (Jogiyanto, 2011). A high R2 value shows that the dependent variable change can be explained by the existing independent variable, not by other variables outside the proposed research model (Jogiyanto, 2011). According to Ghozali and Latan (2012), the R2 value is categorised as high, average, or low if the value is 0.67, 0.33, and 0.19 respectively (Hair et al., 2014). Table 5 shows the R2 value for each endogen latent variable.

Table 5 R2 value for each endogen latent variable

<i>Variables</i>	<i>R-squared</i>	<i>Description</i>
eWOM	0.312	Average
IEU	0.156	Low
PSI	0.424	Average
SAT	0.446	Average

Table 6 shows the test result for each hypothesis in the research model. To analyse whether the hypothesis is accepted or not, the standard value used as a benchmark is a t-statistic value higher than 1.96 and coefficient path more than 0.1, which shows a significance level on each hypothesis test (Hair et al., 2014). Table 6 shows that of the ten hypotheses tested, nine of them are accepted, and one is not. Satisfaction is not proven to affect intention to enrol in a university, but affects intention to share by eWOM. On the other hand, PSI is proven to affect intention to enrol in a university and intention to share by eWOM. Perceived interactivity and openness, as well as knowledge is proven to be a determinant for PSI.

Table 6 Hypothesis test result

<i>Hypothesis</i>	<i>Path</i>	<i>Original sample (O)</i>	<i>T statistics (O/STERR)</i>	<i>Conclusion</i>
H1	INT → PSI	0.225	3.711	Significant
H2	OPN → PSI	0.257	4.44	Significant
H3	KNOW → PSI	0.389	8.969	Significant
H4	INT → SAT	0.188	3.086	Significant
H5	OPN → SAT	0.4	6.817	Significant
H6	KNOW → SAT	0.292	5.854	Significant
H7	PSI → IEU	0.352	4.594	Significant
H8	SAT → IEU	0.058	0.805	Not significant
H9	PSI → eWOM	0.447	6.89	Significant
H10	SAT → eWOM	0.147	2.188	Significant

5.4 Discussion

This research aims to explore how perceived interactivity, openness, and knowledge affect PSI and satisfaction of prospective students when these students use a university's social media platform. It then seeks to know whether PSI and satisfaction affect a prospective student's intention to enrol and share information about the university via eWOM. Of ten hypothesis test results, there is one rejected hypothesis, while the rest are accepted. The following is the discussion regarding the analysis results from the writers of this research.

5.4.1 *Perceived interactivity and openness, effect on PSI and satisfaction*

From the hypothesis test results in Table 6, we concluded that perceived interactivity and openness have an impact on PSI and prospective students' satisfaction using the university's social media platform. This shows that the more informative and interactive a university's social media platform, the higher the satisfaction and relationship level created between prospective students and universities. A positive experience with a university's social media platform can encourage prospective students to learn more about universities and make them feel that universities actually care and intend to fulfil their need for information. This then encourages PSI between prospective students and universities. The research result is in-line with the previous research by Labrecque (2014) which stated that perceived interactivity and openness have effects on PSI. This research also confirms the previous research by Alshibly (2015) which stated that perceived interactivity and openness influence satisfaction. Openness was proven to have more of an effect on PSI and satisfaction than perceived interactivity. This means prospective students are more concerned with the fulfilment of their information need such as how to register, curriculum, facilities, and so on.

5.4.2 *Knowledge effect on PSI and satisfaction*

From the hypothesis test in Table 6, we concluded that knowledge impacts PSI and prospective students' satisfaction. This research result agrees with Lawry's research (2013) in which he stated that there is an influence between knowledge and PSI, as well as Eun et al. (2013) which stated that there is an influence between knowledge and satisfaction. Compared to perceived interactivity and openness, knowledge has more influence on PSI. This means the higher the prospective students' knowledge about universities, the stronger the parasocial relationship between the prospect and the university. Also the prospective students' knowledge about universities increases their satisfaction with the university's social media platform.

5.4.3 *PSI and satisfaction's impact on intention to enrol in university and eWOM*

Based on the hypothesis test result in Table 6, we concluded that PSI affects intention to enrol in a university. This result is in-line with previous research by Xiang et al. (2014) which stated that PSI affects purchase intention. This shows that the better the relationship prospective students have with a university, the higher their intention to enrol in the university. Parasocial relationships help maintain an emotional connection with the university, so eventually prospects will want to enrol. On the other hand, the research

results showed that satisfaction does not influence intention to enrol in universities. This is not in-line with the research from Azam et al. (2012) which stated that e-satisfaction affects purchase intention.

Table 6 also shows that PSI and satisfaction affect eWOM. The research result parallels findings from Lawry (2013) and Eun et al. (2013) which stated that PSI and satisfaction affects eWOM. Compared to satisfaction, PSI has a stronger influence on eWOM. This means that the better the prospective students' experience with the university's social media platform, the more likely they will share information about the university with friends or relatives in social media. A close relationship between prospective students and a university's social media platform, encourages intimacy as if they are friends, making prospective students' indirectly encouraged to help the university in sharing the information with friends or relatives they have in social media.

Also, satisfaction on the service provided by a university's social media platform encourages eWOM. The higher the satisfaction on the service (due to perceived interactivity, openness, and knowledge) provided by the university's social media platform, the higher the prospective student's intention to share information with others via eWOM.

6 Conclusions

In this research, we wanted to know how PSI can help build relationships between prospective students and universities, which in the end impacts prospective students' intention to enrol in the universities and share information through eWOM. To determine the impact of PSI influence, the authors used perceived interactivity, openness, and knowledge as factors that encourage PSI. According to the results, we concluded that perceived interactivity, openness, and prospective students' knowledge about universities can encourage PSI in social media. These factors also influence the users satisfaction using the university's social media platform. Furthermore, our results show that PSI has a positive and significant impact on prospective students' intention to enrol in universities and share information about the university with friends and relatives in their social media. This confirms that PSI theory can be applied in social media, and specifically in an education service context.

This research focused on platforms using Facebook and Twitter, but with the rapid changes in technology it is possible that other platforms may become more popular in the future. As an example Path is becoming an increasingly popular social media platform in Indonesia.

A limitation of the study is that all of the respondents were prospective students in Jakarta. A future study could include prospective students from other provinces in Indonesia to determine if the universities digital platforms are used in the same way. For example, access to reliable connectivity in smaller provinces might show that digital platforms play a smaller role in influencing a prospective student's decision to enrol in the university.

Potential future studies might want to look at whether PSI and satisfaction influence intention to enrol and eWOM at top universities. Perhaps top universities are less dependent on building parasocial relationships using social media platforms because they already have a strong reputation and therefore students know that they want to enrol

there. Another potential study might be to compare male and female results to see if there are differences in the tested hypothesis. This could indicate that a different social media marketing strategy should be used depending on gender.

This study focused on how three variables (perceived interactivity, openness, and knowledge) impact PSI. However, there are other models that have looked at other variables such as social attraction, task attraction, and physical attraction (Xiang et al., 2014). A future study could incorporate these additional variables.

6.1 Theoretical implications

Research results show that the PSI theory that has been used in television media studies can also be used to explain how a university's social media platform's service quality (represented by perceived interactivity and openness) can encourage PSI and intention to share by eWOM. This result strengthens a number of previous researches which showed that interaction in social media strengthens the relationship between customers and a product's brand in an e-commerce environment (Xiang et al., 2014; Labrecque, 2014; Lawry, 2013). This research also confirms PSI theory's applicability in a service context, in this case in education services.

6.2 Practical implications

Most universities have a website presence already, and some may also have a social media platform to share with existing and prospective students about events and news at the university. Our research findings show that universities social media platforms can be further leveraged and used as a marketing tool to attract prospective students because the interactivity feature of Web 2.0 allows universities via their social media platforms to build parasocial relationships with prospective students.

Building a relationship can be accomplished by making the prospective student feel like he/she is already a part of campus life. The more parts of the campus, the prospective student can interact with via social media, the more attached the student will become to the university and the stronger the PSI will be. As an example, it is valuable for the student to be able to talk to admissions departments using a social media platform like Facebook to get their questions answered. But what if prospective students could also engage on social media with existing students, or interact with future teachers and ask about their major and interesting topics being studied? It is likely that the parasocial relationship and satisfaction of the prospective student would become even stronger, which in turn means that the intention to enrol and spread news by eWOM would also be greater. Implementing such a social media strategy will take more resources, perhaps to the point of needing a marketing team exclusively dedicated to actively managing the content and planning the strategy of the social media platform.

It is also important that universities know what kind of information prospective students typically look for when they use social media, and this may vary from university to university. For example, if a prospective student is concerned about a university's reputation, he/she may want more information on the social media platform highlighting different awards a university has received or about famous alumni. Other universities may find that the social media platform is mainly used by prospective students to learn more about admissions requirements and deadlines. Whatever the case may be, providing

the prospective student with relevant content will contribute to the prospective students satisfaction using the social media platform.

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