Information Quality, Social Friendship and Social Interaction in Predicting Web Usage and Online News Readers' Understanding

Yusdiana[1,3,*], Bernardinus Maria Purwanto[3], Sahid Susilo Nugroho[3]

Correspondence Author: ysdiana@gmail.com

[1] Doctoral Program of Management, Faculty of Economics and Business, University of Gadjah Mada, Special Region of Yogyakarta, Indonesia

[2] Department of Management, Faculty of Social Sciences and Humanities, University of IBBI, North Sumatera

[3] Faculty of Economics and Business, University of Gadjah Mada, Special Region of Yogyakarta, Indonesia

INFO	ABSTRACT
	This research aims to reveal information quality, social friendship, and social interaction in predicting web usage and understanding of online news readers and also to reveal that web usage predicts online news readers' understanding. This quantitative research uses an online survey design based on a purposive sampling technique using 423 respondents who are active readers of online news. The data in the study were analyzed utilizing SEM Amos and SPSS 21. The results and findings showed that information quality and social interaction could positively and significantly predict web usage and understanding of online readers. Web usage could also predict online reader understanding positively and significantly. Social friendships could not predict web usage and reader understanding of online news based on research results. The theoretical implication of the research aims to fill the gap in the existing literature on information quality and social interaction that can explain web usage and understanding of online newsreaders and web usage as a predictor to explain the effect of comprehension as an individual's intended media use. The practical implication of this study is that websites as news sources must pay attention to information and features that are more attractive to readers or potential online news readers.

INTRODUCTION

The digitization of media content on the internet has seen a major increase in the media resources available as content providers for individual users (Xu et al., 2014). One of the common online activities among internet or online media users is accessing or consuming online news, which is increasingly common for internet users (Patwardhan & Yang, 2003). Online news becomes an integrated part of the reader's media environment (Patwardhan & Yang, 2003). Reading news online is an activity by individual users or why they use online media (Asosiasi Penyelenggara Jasa Internet Indonesia [APJII], 2018). People read online news to find or get important or specific information and the latest news (Flavián & Gurrea, 2008). Online news is represented by new and contextual content on specific topics and distributed through many

outlets (Holton & Chyi, 2012). Online news as content from web/sites is consumed by individual users and shared with others or spread to their social environment (Kwon & Kim, 2018).

Individual users can trust the information from the news sites they visit regarding this information, which is obtained quickly (APJII, 2020). Belief in the content or quality of information affects the confidence of individual users in accessing online news (Newman, 2022). They, as online news readers, read online news to get and find out more information about an event or individual (Velichety & Shrivastava, 2022). News websites are preferred by individual users as online news readers to get more information or news by searching using digital devices such as mobile phones, computers or tablets (Vogels, 2019). News websites appear and create competition among them to be selected and get their readers' attention (Bondad-Brown et al., 2012).

The assumption used in this study is that reading news online is part of the daily information search process, and people are involved with news both intentionally and unknowingly (Yadamsuren & Erdelez, 2011). News readers aged 14 to 39 years are considered internet literate, that is, internet adopters and heavy users (Diddi & Larose, 2006). Individual internet users or online news readers in this age range in their online activities are more directed to friends and family, and social internet information as a source for finding truthful information (Connaway et al., 2008 in (Zhitomirsky-Geffet & Blau, 2017). Social relations as a type of social relations between individual media users is a recommendation (Bondad-Brown et al., 2012).

This study is consistent with the use and gratification theory that media chosen by individual users arises because of a need or deficiency that must be met (López et al., 2022). The main unit of data collection from U&G is individuals who are psychologically and socially dependent on media (Rubin, 1994). This study aims to develop and test an integrated model rooted in the use and gratification model and the dependence on the media system. Individuals use U&G and MSD to meet and achieve their needs and goals (Ball-Rokeach, 1998). These two theories are combined in a complementary way to explore the factors that affect web usage and readers' understanding of online news.

Using web/pages as a source of information and understanding of information from online news conveyed by news web/sites is analyzed to study and understand online news consumers as online news readers. This research can be a guideline for news web/sites as a source of information that is different from others to reach consumers (Yi et al., 2013). This research analyses the attractiveness of online news to answer questions about how and why people use online news. The contribution of this study is therefore useful as additional knowledge about factors such as information quality, social friendships and social interaction to predict web usage as an online news source and understanding of online news consumption, and how individual web usage can predict understanding that they get from online news of being adopted. This research also serves as a guideline for organizations or media providing online news to understand and reach a wider range of individual users as readers of the online news they provide. Finally, the key elements of the research are summarized, and future research directions regarding online news are discussed.

LITERATURE REVIEW

Uses and Gratifications Theory

Uses and Gratification Theory focuses on individual motivations for personal or individual use of technology and is not a theory about technology use at work in the communication domain (Stafford, Stafford, & Schkade, 2004; Lin, 1999). The U&G approach attempts to explain how individual users meet their needs and achieve their goals (Katz et al., 1973). U&G describes individual internet media use (Stafford et al., 2004) with the basic principle of the assumption that individual users are active users and take initiative in selecting media and fulfilling their needs (Katz et al., 1973). This research focuses on content gratification through messages carried by the media and social gratification that can encourage individuals to use the internet in the form of connectedness with other people (Stafford et al., 2004). The main strength of UGT is that it can be used to investigate or study communication situations mediated through one or several psychological needs, psychological motives, communication channels, communication content, and psychological satisfaction in the communication context (Lin, 1996; Ruggiero, 2000).

Media System Dependence Theory

Media systems dependency theory is a theory that attempts to explore and explain the role of the media in the dependency relationship between users and the media they use (Ball-Rokeach, 1985; Ball-Rokeach & DeFleur, 1976; Grant et al., 1991). Media dependency theory states that media influence is determined by the connectedness between media, individual users, and society (DeFleur & Ball-Rokeach, 1982). The orientation of media systems dependency theory provides a theoretical approach to the issue of media influence that identifies possible observable effects of mass communication on individuals, groups, and society (Ball-Rokeach & DeFleur, 1976). Relationship dependency focuses on the question, "Why did I choose this medium to fulfil a purpose? (Grant et al., 1991). Dependency is a form of relationship when needs are met or individual goals are achieved, depending on existing resources (Ball-Rokeach & DeFleur, 1976). People or individuals develop dependency relationships with media as a means or way to achieve their goals, such as understanding (Grant et al., 1991). Individuals depend on the media to collect, process, and disseminate information from news to achieve their goals (Ball-Rokeach, 2010). Media system dependence is a relationship with the ability of individuals to achieve goals by depending on the information resources of the media system with the capacity of these sources (a) to create and collect, (b) to process, and (c) to disseminate information (Ball-Rokeach, 1985).

Information Quality

Information quality as part of content gratification is related to the content or message of the information itself (Stafford et al., 2004; Stafford & Stafford, 2001). Information quality is the quality of the output produced by a web/site generated by the media system in terms of completeness, accuracy, and up-to-date (Zha, Yang, Yan, Liu, & Huang, 2017; Lee & Kim, 2017). Information quality is the extent to which individual users see the information provided

by websites as current, accurate, relevant, useful, and comprehensive (Yi et al., 2013; Zha et al., 2018). The quality of information as relevant information provided by the news web/sites consumed by using the web to get online news makes individual users feel important or knowledgeable (Peters et al., 2007).

Social Friendship

The social satisfaction that individual users feel from media use is social friendship, which refers to communication with others (Stafford et al., 2004; Stafford & Stafford, 2001). Social friendship is an individual need through media to stay connected with their environment (Rodrigues & Paradies, 2018). Social friendships tend to be the main source of recommendations (Bondad-Brown et al., 2012). Internet use can increase individual connectedness in social friendships (Patwardhan and Yang, 2003). The social benefits individual media users feel can emerge through social friendships (Tran & Strutton, 2013).

Social interaction

Social interaction can be defined as an individual's ability or want to communicate and build relationships with others. Social behaviour describes how people interact and socialize with each other (Al-Jabri et al., 2015). Social interaction allows individual users to interact with other users or anyone (Gan & Wang, 2015; (Barnes et al., 2017). Individual users' social interactions influence information-sharing activities among online news users or readers as the process by which they become involved in social communication activities (Yen, 2016).

Web Usage

Web usage is a perceived benefit or effect motivated by web/site attributes that can influence the behaviour of individual users (Liang & Lai, 2022; Mandel & Johnson, 1999). Web usage as an activity carried out by individual users is profitable for them and can be done easily (Xu et al., 2014). Web usage by active individual users is motivated by specific needs and motives for satisfaction or media use (Peters et al., 2007). Web usage is based on users' individual choices that they use regularly (Aranyi & van Schaik, 2015).

Understanding

Understanding as an action or activity using the media or accessing sources of information from the media is used to be able to understand yourself and the environment (Ball-Rokeach, 1974, 1985; Patwardhan & Yang, 2003). Patwardhan and Yang (2003) also stated that understanding the purpose of using media differs from time to time for different individuals and the same individual. Understanding can encourage the formation of trust to increase the consumption of information online (Yi et al., 2013) as insight and guidance on individual and social behaviour (Chiu & Huang, 2015).

Information Quality and Web Usage

Information quality as an output produced by the system (Lee & Kim, 2017; Taylor et al., 2011) is information selected by individual users that has value and provides benefits for them (Sepp et al., 2011). Quality and informative information will make it easier for individual users to receive stimulation in web usage as a source of information (Ko et al., 2005; Tran & Strutton, 2013). Individual users may use the web to get the latest information or search for the latest information or related analytical reports in certain fields (Jalali & Jamalabad, 2014). Content with the quality of information provided by news web/sites that provide satisfaction for individual users can be a lesson for them from the information brought by online news on web. Information from online news websites is of high quality and can influence individual behaviour on the news website (Kujur & Singh, 2017). The first hypothesis proposed is as follows.
H1: Information quality positively affects web usage.

Information Quality and Understanding

Factors that influence individual users not only selectively and actively when searching for and using news web/sites as a source of news, but also the effect that is felt as anticipation can form expectations about content, namely to gain an understanding of what is going on (Bondad-Brown et al., 2012; Patwardhan & Yang, 2003). Information from online news can increase the understanding of online news readers about events currently happening in the world (Yadamsuren & Erdelez, 2011). Information quality can also meet the cognitive needs of individual users to be creative, think critically and understand an event or condition (Baydas & Yilmaz, 2016). Online readers can select news or information to gain a deeper understanding (Moeller et al., 2018). Therefore, the second hypothesis proposed is as follows.
H2: The quality of information has a positive effect on understanding.

Social Friendship and Web Use

Sharing news online as information within communities or social connectedness of individual users through web usage can facilitate conversation among them and generate satisfaction in connectedness (Peters et al., 2007). A website is an online news source where individual users share news with their social friends (e.g., friends and family) to meet their needs and stay connected with their network or environment of friends and family (Rodrigues & Paradies, 2018). Online news becomes a shared social experience when people exchange links and recommendations for online news within their communities or relationships (Purcell et al., 2010; Rodrigues & Paradies, 2018). Online news recommended for the user's social friendship environment can facilitate the adoption of online news. Online news adoption can influence web usage (Kwon & Kim, 2018). Kwon and Kim (2018) also stated that the influence of sources and referrals from social friends or colleagues positively impacted the dissemination of information. Therefore, the third hypothesis proposed is as follows.
H3: Social friendships positively affect web usage.

Social Friendship and Understanding

The purpose of social understanding focuses on information-seeking behaviour carried out by people or individuals (Patwardhan & Yang, 2003). The basis for the theory of media dependence is that when ambiguity in the social environment or social friendship increases, the user's understanding can increase with increasing dependence on the media (Jung, 2017). In the context of online news consumption patterns, it becomes important to understand why individuals consume and share online news in their social friendships (Rodrigues & Paradies, 2018). Human needs are embodied in universal motivations, such as to achieve understanding. A better understanding of existing conditions individuals are facilitated by sharing online news on social friendships to serve their understanding well (Tewksbury & Riles, 2015). Therefore, the fourth proposed hypothesis is as follows.

H4: Social friendships positively affect understanding.

Social Interaction and Web Usage

The social needs of individual users can be met by using the web as an online news source that can motivate them to interact with others (Hashim et al., 2015). Interaction with others in social interaction between individuals can increase their motivation to use the web and is positively related to sharing information with people who are important to them (Choi et al., 2009). People can easily and freely share all kinds of information with others, such as useful information, hotspots and other interesting things (Gan & Wang, 2015). Individual users with a tendency to intentionally share informative news online as their motivation to interact with others benefit from using the web (Hashim et al., 2015). Online news readers who actively seek and read online news like to share it with others and open communication using online news through websites (Ho & See-To, 2018; Lee & Kim, 2017). Thus, the fifth hypothesis proposed is as follows.

H5: Social interaction positively affects web usage.

Social Interaction and Understanding

Social interaction contributes to forming social awareness of certain phenomena and general issues through the web as a source of information (Madouni, 2020). Individual users who share information with others feel they can help others feel involved in the world (Guildford, 2022). Online news that is shared in social interactions can play a role in helping people, or individual users increase their understanding and awareness of their environment (Madouni, 2020). According to Madouni (2020), social interaction contributes to forming public opinion on certain topics. Sharing news online is information in social connectedness between online newsreaders to give others a better understanding of who they are and the focus of their attention (Guildford, 2022). Online news shared in the social interaction of online newsreaders is useful for understanding the individual's society and world (Oeldorf-Hirsch & Sundar, 2016). Thus, the sixth hypothesis proposed is as follows.

H6: Social interaction positively affects understanding.

Web Usage and Understanding

Web usage directed at the user's goals can attract them to check messages or media information anytime and anywhere without being tied to a particular location (Peters et al., 2007). Individuals tend to use websites from their viewpoint (Jalali and Jamalabad, 2014). Using the web as a source of information can facilitate the impulsive behaviour of individual users and be directed towards their goals (Peters et al., 2007). The more individual users are involved in web usage to achieve understanding goals, the more they interact with the media or the web, and the more time they interact using the web increases (Grant et al., 1991). Web usage gains an understanding of online news readers such as obtaining or adding to their insights, following world developments and being used to guide their behaviour (Chiu & Huang, 2015). Individual users promptly select and use news sites/pages with online news featuring analytical topics that are important to individuals so that individual users can understand the topics of interest (Hurley & Tewksbury, 2012). Thus, the seventh hypothesis proposed is as follows.

H7: Web usage positively affects understanding.

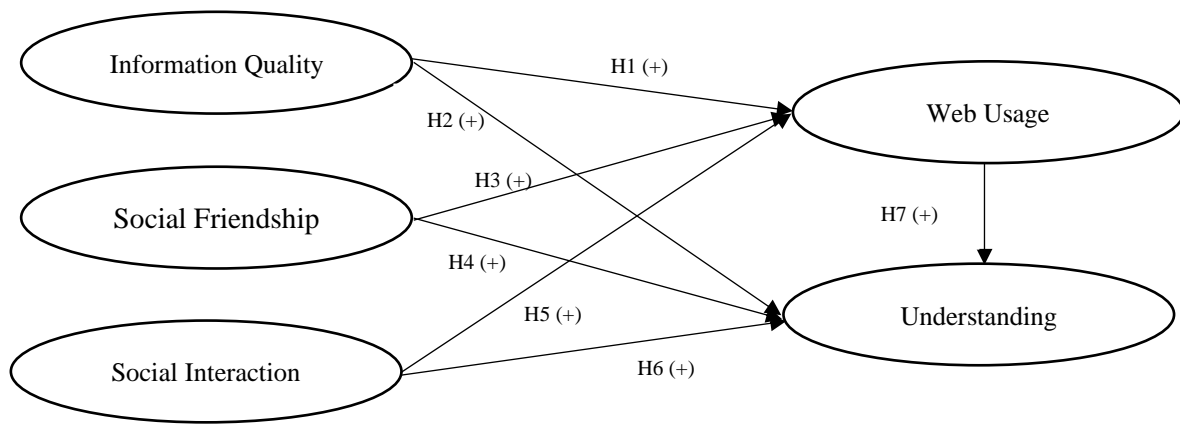Based on this description, the research model proposed is shown in Figure 1.

Figure 1. Conceptual Model

RESEARCH METHOD

Participants and Sample

This study is based on a sample of online news readers in Indonesia. The sample consisted of online news readers who were active in the age range of 14-39 years, which consisted of 2 age groups, namely 14-24 years and 25-39 years (Southgate, 2017). This research data was collected online by distributing online questionnaire links. The data collection technique in this study was purposive sampling supported by snowball sampling to encourage and increase the range of responses that facilitate population heterogeneity (Neuman, 2002; Shang et al., 2020; Teddlie & Tashakkori, 2009). Respondents' participation was voluntary, and they were informed of the anonymity and confidentiality of their data and responses.

Instruments and Variables

The online survey instrument developed in this study uses measurement items adopted from previous studies, which were later adapted and modified for this study. These items were designed after conducting an in-depth literature review of the topic or context of online news consumption. The online questionnaire is designed to collect responses to items that measure research variables (Table 1).

Table 1. Operational Definition and Measurement of Variable

No.	Variable	Definition	Measurement	Source
1	Information quality	Timely, accurate, and complete page content (Lee & Kim, 2017)	Accuracy Up to date Diversity	Cheng et al. (2009); Delone & McLean (2003); Ducoffe (1996); McKinney et al. (2002); Zhu et al. (2002)
2	Social friendship	Strengthening reference group affiliation and encouraging online news acceptance (Tran & Strutton, 2013)	Share the news with others Facilitate dialogue Be close to others	Hashim et al. (2015); Ko et al. (2005); Lee & Kim (2017); Tran & Strutton (2013)
3	Social interaction	Making active connectivity with others (Choi et al., 2009)	Exchange ideas Communication with friends Interaction with others	Chiu & Huang (2015); Hashim et al. (2015); Kaye & Johnson (2002); Patwardhan & Yang (2003)
4	Web usage	Interacting with media and browsing the web using technology to access content and communicate (Hoffman & Novak, 1996; Stafford et al., 2004)	Unlimited freedom of choice Communicating through media/interactivity	Luo et al. (2011); Patwardhan & Yang (2003)
5	Understanding	Understanding and explaining the world around them and themselves (DeFleur & Ball‐Rokeach, 1982)	Understand the existing situation Understand yourself	(Blumler, 1979; Chiu & Huang, 2015)

Measurement

Responses for each variable item (i.e., information quality, social friendship, social interaction, web usage, and understanding) used a 5-point Likert scale. The questionnaire used in this study consists of two parts: first, it asks for personal and demographic information of individual online news readers. Second is exploring the factors or motives for using online news based on information quality, social friendships, social interaction, web usage and understanding of online news. Instrument pre-submission was carried out through an online survey to ensure the clarity and validity of the survey instrument. Pre-test questionnaires were given to seventy online news readers before being distributed to research respondents. Preliminary test results obtained and valid. Links to online surveys to be distributed online were distributed to participating respondents, and there were 423 valid respondent responses to be used and further analyzed as data in this study. The data obtained from the online survey were analyzed using the statistical program SPSS v.21 and Amos.

RESULTS AND DISCUSSION

Demographic Profile

Respondents in this study consisted of two age groups aged 14-24 years, as many as 218 people, and those aged 25–39 years, as many as 205 people. The reason for dividing these age groups refers to the study by Southgate (2017), which aimed to see trends in online news consumption behaviour in these age groups. Analysis of the demographic characteristics of the respondents shows (Table 2) that 196 male and 227 female respondents participated in this study. The characteristics of respondents related to education, ICT used, social media that is often used, sources of information, and online news topics consumed can be seen in Table 2.

Table 2. Characteristics of Respondents Based on Demographics

Item	Count	Ratio (%)	Item	Count	Ratio (%)
Age			Source of information on national news sites		
25 – 39	205	48.5			
14 – 24	218	51.5	Friend	240	56.7
			Family or relatives	63	14.9
Gender			Phone	21	5.0
Male	196	46.3	Notifications	10	2.4
Female	227	53.7	Social media	29	6.9
			By your own	16	3.8
Education			Neighbour	44	10.4
Junior High School	20	4.7			
Senior High School	183	43.3	Frequently used social media		
Main expert (D1)	15	3.5	Instragram	169	40.0
Young expert (D2)	5	1.2	Whatsapp	34	8.0
Associate degree (D3	35	8.3	Facebook	80	18.9
Bachelor degree	121	28.6	Twitter	126	29.8
Post Graduate	44	10.4	Line	7	1.7
			Youtube	4	0.9
ICT used			Tiktok	3	0.7
Cellphone	341	80.6			
Laptops	51	12.1	Most read online news topics		
PC	17	4.0	Health	85	20.1
Tablet	14	3.3	Political	77	18.2
			Technology	84	19.9
			Education	63	14.9
			Science	101	23.9
			Economics & Business	13	3.1

Reliability and Validity Analysis

Reliability analysis and content checking and construct validity of the proposed scale. The constructs and items in this study were adapted from existing literature, with several word items corrected after the pilot survey so that the constructs and items used have a clear meaning. Barlett's roundness test was significant (1338.183; df=325, Sig, 0.000), and the results of the sample size adequacy indicator yielded an adequate rating (Kaiser-Meyer-Olkin = 0.820). (López et al., 2022).

Exploratory factor analysis was performed to simplify the number of motives and simplify the construct-based interpretation of these items (López et al., 2022). A varimax rotation is applied to the factors obtained from the test results to improve the interpretation of the results.

The attributes that determine each of the 5 factors obtained can be defined more clearly and interpreted according to the criteria for selecting a score higher than 0.5. This study measures the research constructs validly and reliably to obtain a possible scale. The results are shown in Table 3.

Table 3. Result of Rotated Component Matrix[a]

Item	Component				
	1	**2**	**3**	**4**	**5**
IQ1				.725	
IQ2				.765	
IQ3				.801	
IQ4				.739	
IQ5	.407			.620	
SF1			.739		
SF2			.841		
SF3			.852		
SF4			.630		
SF5			.769		
SI1	.755				
SI2	.787				
SI3	.748				
SI4	.844				
SI5	.622				
WU1					.809
WU2					.813
WU3					.585
WU4	.456				.647
WU5		.519			.591
U1		.759			
U2	.414	.651			
U3		.699			
U4		.774			
U5		.733			
U6		.771			

Note:
Extraction Method Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 8 iterations.
IQ was information quality; SF was social friendship; SI was social interaction; WU was web usage; and U was understanding

Table 4 below shows the results of the construct reliability test using SPSS 21. The Cronbach's alpha value for each construct is greater than 0.7 (> 0.70). This value indicates that the construct used in this study is acceptable for reliability (Sekaran & Bougie, 2016).

The Cronbach's Alpha reliability limit value in each construct is greater than 0.8 (> 0.8). This value indicates that construct reliability as a measuring tool in this study is good and can measure the same construct consistently to be declared reliable.

Model Evaluation

Model evaluation in this study is through the evaluation of measurement and structural models (Chin et al., 2003). Evaluation of measurements to see the validity and reliability of the

models used, such as convergence validity, discriminant validity, composite reliability, and Cronbach's alpha (Chin et al., 2003).

Table 4. Reliability test result based on *Cronbach's alpha* value

Construct	Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha	Information
Information quality	IQ1	0.620	0.807	0.835	Reliable
	IQ2	0.690	0.786		
	IQ3	0.700	0.783		
	IQ4	0.677	0.791		
	IQ5	0.500	0.837		
Social friendship	SF1	0.703	0.884	0.897	Reliable
	SF2	0.864	0.847		
	SF3	0.747	0.874		
	SF4	0.659	0.894		
	SF5	0.774	0.869		
Social interaction	SI1	0.740	0.895	0.909	Reliable
	SI2	0.801	0.881		
	SI3	0.829	0.876		
	SI4	0.873	0.866		
	SI5	0.615	0.920		
Web usage	WU1	0.671	0.825	0.856	Reliable
	WU2	0.683	0.824		
	WU3	0.660	0.829		
	WU4	0.676	0.825		
	WU5	0.681	0.825		
Understanding	U1	0.822	0.855	0.889	Reliable
	U2	0.750	0.866		
	U3	0.757	0.864		
	U4	0.775	0.859		
	U5	0.665	0.878		
	U6	0.584	0.900		

Discriminant validity was assessed based on the imposition of a measurement factor on the construct (Table 6) and based on the AVE root to see the correlation between the construct and the other constructs in the model. Table 6 shows that the factor loading values obtained from the analysis results as a measure of each construct are considered good and appropriate because they meet the minimum level of more than 0.5 (Hair et al., 2019). A loading factor value greater than 0.70, according to Hair et al. (2019), means that the loading is significant and well-defined. Thus, the discriminant validity of each construct is good.

Table 5. AVE Square value and correlation between variables

Construct	Information quality	Social friendships	Social interaction	Web usage	Understanding
Information quality	0.739				
Social friendship	0.258	0.778			
Social interaction	0.383	0.624	0.762		
Web usage	0.631	0.406	0.595	0.739	
Understanding	0.521	0.280	0.531	0.697	0.745

Table 5 shows the AVE root values and the correlation between constructs obtained from the results of data analysis. The test results show that all correlations between research variables are significant at the 0.01 level. The AVE root value obtained is greater than the correlation

between constructs in the model (Salisbury et al., 2002). The measurement model in this study can be said to have good discriminant validity.

Table 6 also shows each research construct's AVE, Cronbach's Alpha, and Composite Reliability values. The test results assess that the measurements' convergent validity and internal consistency, shown in Table 5, are good. The AVE value of each construct is greater than 0.5 (> 0.5), the composite reliability value is greater than 0.6 (> 0.6), and the Cronbach's Alpha value is greater than 0.8 (> 0.8).

Table 6. AVE Value, Cronbach Alpha, and Composite Reliability

Construct	Item	Indicator loading	AVE	Cronbach's Alpha	Composite Reliability
Information Quality	IQ1	0.701	0.509	0.835	0.837
	IQ2	0.792			
	IQ3	0.729			
	IQ4	0.701			
	IQ5	0.634			
Social Friendship	SF1	0.756	0.605	0.881	0.884
	SF2	0.864			
	SF3	0.772			
	SF4	0.698			
	SF5	0.790			
Social Interaction	SI1	0.680	0.581	0.871	0.873
	SI2	0.762			
	SI3	0.850			
	SI4	0.811			
	SI5	0.694			
Web Usage	WU1	0.739	0.546	0.854	0.857
	WU2	0.771			
	WU3	0.729			
	WU4	0.753			
	WU5	0.701			
Understanding	U3	0.730	0.555	0.822	0.832
	U4	0.841			
	U5	0.750			
	U6	0.646			

Structural Model Evaluation

The pictures below in Figure 2 show the measurement model results, which describe the extent to which predictor variables contribute to or influence the outcome variables analyzed in this study. Structural model testing includes examining the path coefficient and the appropriate significance level. Figure 2 presents the results of Amos' analysis. The results of hypothesis testing are presented in Table 7. The significance test between constructs in the structural model was carried out by evaluating the path coefficient and t-statistic values or Critical Ratio (CR) values (Anderson & Gerbing, 1988).

Table 7 describes the goodness of fit index of this research model. In this study, there are three types of goodness-of-fit index measures in the measurement model (Goodness of Fit Index), namely absolute fit measures (CMIN/DF, GFI, RMSEA, and SRMR), incremental fit measures (CFI), and parsimonious fit measures (AGFI) (Hair et al., 2014). Based on the model

suitability test results obtained from the results of testing and analysis (Table 6), the model suitability index has a good value, and the model in this study is categorized as good.
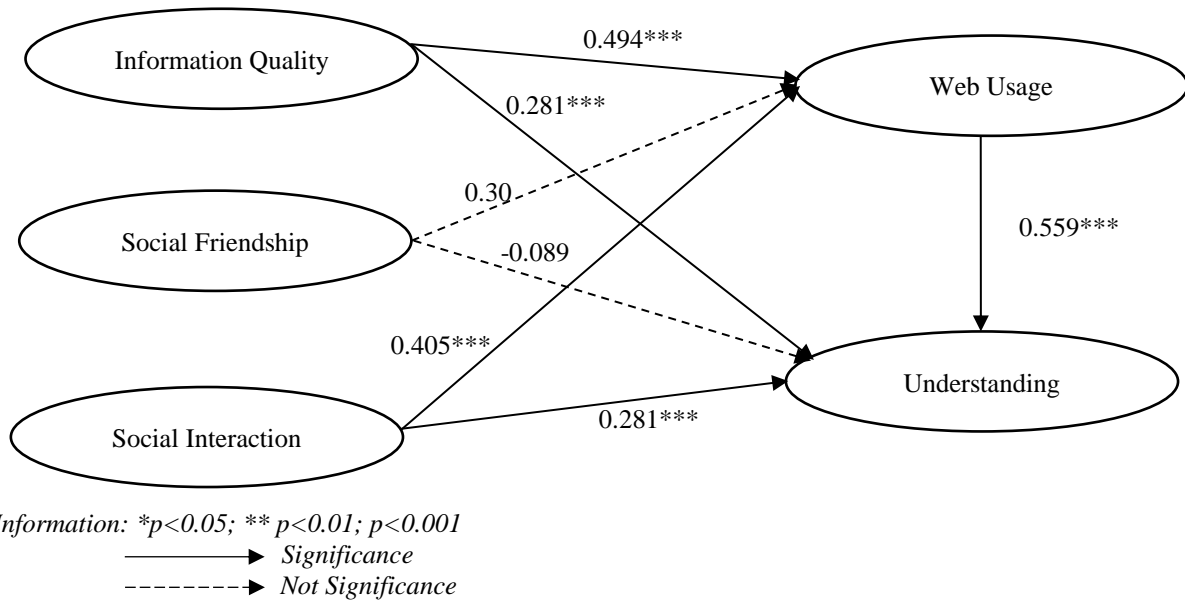

Information: *p<0.05; ** p<0.01; p<0.001
⟶ *Significance*
- - - - - ▸ *Not Significance*

Figure 2. Structural Model

Table 7. Value of Goodness of Fit Empirical Model

Type Goodness of Fit Model	Goodness of Fit Model Index	Cut of value	Result	Information
Absolute fit measures	Normed (CMIN/DF)	$2 \leq$ Normed $\chi^2 \leq 3$	2.763	Good
	GFI	≥ 0.90	0.872	Moderat
	RMSEA	≤ 0.08	0.065	Good
	SRMR	≤ 0.10	0.061	Good
Incremental fit measures	CFI	≥ 0.90	0.920	Good
Parsimonious fit measures	AGFI	≥ 0.80	0.842	Good

Research test results

The test in this study was through testing the causality relationship with a one-tailed test at a significance level (α) of 5 per cent (5%). This test is performed when a positive or negative relationship has been hypothesized. The direct effect or path coefficient shown in the model can be seen based on standard regression figures, with standard significance test comparisons of CR values that are the same as t counts or t tables. The calculated t value, if obtained, is greater than the t table value and can be declared significant. The recommended CR value is >1.96 (Hair et al., 2019; Kumar et al., 2019). The results of hypothesis testing can be seen in Table 8.

Discussion

The results indicated that information quality has a positive effect on web usage as a source of information by online newsreaders, and information quality also has a positive effect on the understanding of individual users as online newsreaders. Thus, H1 and H2 are supported. Social friendship on web usage based on the results of the analysis in this study is not supported, as well as social friendship does not affect the understanding of online news readers. H3 and H4,

based on the results of the analysis in this study, are not traditional healers. Social interaction positively predicts web usage as an information resource. In addition to that, social interaction can predict online newsreaders' understanding of the information they obtain. Therefore, this study supports H5 and H6. The next hypothesis proposed is that web usage can positively predict online news readers' understanding of information from online news they consume. H7, in this case, is supported.

Table 8. SEM Estimation and Hypothesis Testing Results

Hypo-thesis	Path	Parameter estimation value	Critical ratio (CR)=t	*p*-value	Direction	Path coefficient	Information	Hypothesis validation
H1	IQ → WU	0.494	8.157	0.000	Appropriate, positive	0.494	Significant	Supported
H2	IQ → U	0.150	2.066	0.039	Appropriate, positive	0.150	Significant	Supported
H3	SF → WU	0.030	0.728	0.467	Appropriate, positive	0.030	Not significant	Not supported
H4	SF → U	-0.089	-1.955	0.051	Not appropriate, negative	-0.089	Not significant	Not supported
H5	SI → WU	0.405	5.755	0.000	Appropriate, positive	0.405	Significant	Supported
H6	SI → U	0.281	3.382	0.000	Appropriate, positive	0.281	Significant	Supported
H7	WU → U	0.559	6.128	0.000	Appropriate, positive	0.559	Significant	Supported

*Information: *$p<0.05$; ** $p<0.01$; ***$p<0.001$*

Some of the findings were derived as described below. First, this study reveals that information quality affects web usage as an information source and positively affects readers' understanding of online news. The higher the quality of the information provided by the web/site as a source of information, the more they will use the website to access online news. Individual users as online news readers only need trustworthy and credible news (Tian, 2022). Information quality from online news provided by news websites can be used to predict web usage (Chiu & Huang, 2015). Users with a strong interest in the information quality of a website will revisit or use the web again (Sutanto et al., 2013).

Information quality has a positive effect on web usage, meaning that the higher the quality of the information from online news provided by the website, the easier it is for individual users to understand the message of the information. Individual users are motivated by using information from news websites/sites to meet their cognitive needs, which enables them to think critically and understand the current situation (Baydas & Yilmaz, 2016; Hashim et al., 2015). Information quality builds individual users to understand the essence of news messages and the purpose of these news messages (Ku et al., 2019)so that they, as users, can easily receive, read, and share information on various topics (Shang et al., 2020).

Second, unproven social friendships can affect web usage and understanding of online news readers after reading online news provided by news websites. This result contradicts expectations and can be explained by uncertainty regarding the mechanism of sharing related information types that still require further observation (Shang et al., 2020). Social friendship has

not been proven to predict web use, and this result is the same as research conducted by Tran & Strutton, 2013 in which social friendship failed to influence online news acceptance or web usage. Information recommendations through online news about social friendships are not necessarily well received by the parties as recipients, so social friendships cannot influence web usage. Individuals and their differences produce different subjective exposures and understandings of existing information (Chiu & Huang, 2015).

Social friendships also do not affect understanding of information from online news that individual users access. Online news readers will filter irrelevant information from a large amount of information that will be widely disseminated to others (van Erkel & Van Aelst, 2021). Another explanation for the results of this study can be explained by the theory of trust (Chopra & Wallace, 2003). This theory states that risks may arise when the information shared on social friendships is wrong. Inappropriate online news dissemination or recommendations result in biased and irrelevant information and can be detrimental to individual users because it interferes with their understanding of the information (Chopra & Wallace, 2003). Individual users find it difficult to understand the news the sharer receives and will avoid it (Tian, 2022). Apart from that, the results show that social friendship does not affect understanding because online news that is shared or obtained from social friendship is not something to be understood but as a tool to strengthen connectedness (Bondad-Brown et al., 2012; Hampton et al., 2011; Kim & Lee, 2018).

Third, social interaction positively affects web usage, indicating that the more online news can increase social interaction between individual users and their environment, the more they will be involved in using the web as a news source. The results align with a study conducted by Bondad-Brown et al. (2012) that found that individuals who are more mobile and comfortable with interpersonal interactions tend to seek information through web usage and learn online news by using web/sites found from social relations. Who directly share articles or news article links (Bondad-Brown et al., 2012). Individual users tend to participate or be actively involved in a discussion regarding current events from online news (Al-Jabri et al., 2015). Social interactions between users can be formed by using online news provided by websites (Gan & Wang, 2015) so that websites as online news provider media can help individual users to know, connect, and interact with the reality and events around them (Madouni, 2020).

Social interaction positively affects the understanding of online news readers that the more or more useful online news is shared through social interaction as information, their understanding of the surrounding environment will increase. Interaction through recommendations can facilitate online news adoption by influencing social community members to adopt and share news online (Kwon & Kim, 2018). According to Kwon and Kim (2018), online news sharers express their emotions and feelings about the online news used, provide related information, or create shared meaning or understanding through recommendations from subsequent users. In their research, Lee and Kim (2017) also stated that regular and expanded interactions with other online news reading community members will result in high information exposure and communication.

Fourth, web usage positively affects the understanding of online news readers. Individual users will increase their exposure to the web/page when they feel that their understanding of the environment and surroundings increases from the online news provided. By the web/page as a source of news. Web usage with the information it provides drives the main function of individual user understanding as it can identify problems, find appropriate information, synthesize it, and communicate the information they adopt (Leu et al., 2007). Thus, individual users of online news readers who have had enough use of the web will better understand the online news provided by the news web/sites. This effect results from online news on the web/news page (Flavián & Gurrea, 2008).

CONCLUSION

The authors found a positive relationship between information quality on web usage and online newsreaders' understanding of online news consumption. Based on the analysis results in this study, the conclusion is that preference for information quality, and social interaction can positively affect web usage as a source of information and understanding of information from consumed online news. Social interaction is also based on the results of the analysis showing that it can strengthen the relationship between individual users and online news. It can positively influence web usage and understanding of the environment and surroundings. The analysis results also show that web usage can positively predict the user's understanding of online news adopted from the web/page. The purpose of understanding consuming online news is for individuals to feel that they can broaden their knowledge and acquire new learning values.

Theory implications

Theoretical implications are as follows: First, this study fills gaps in the existing literature on information quality and social interaction that can explain web usage and understanding of online newsreaders. Second, this research can add to the explanatory literature on web usage that can predict or explain the effect of comprehension as an individual's intended media use.

Managerial implications

Web/news pages as online news providers and news sources are starting to pay attention to information and its features to make it easy and attractive for every individual reader or prospective online news reader.

Limitations and Future Research

The limitation of this research is that it is a cross-sectional study, so it is relatively unable to predict changes in the behaviour of online news readers. It is impossible to draw causal conclusions or observe the arbitrary behaviour of online news consumption. It is recommended that future researchers conduct longitudinal research so that they can observe the behaviour of online news readers within a certain period. Future researchers may be able to use or add other theories related to the same research context, namely the behaviour of online news readers.

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