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RESEARCH ARTICLE

Unveiling Deception: Exploring Cues in Islamic Website Text and Design Through User Perspective

Fatima Ahmed[1]*, Madihah Sheikh Abdul Aziz*[2], Noor Asiah Binti Rashid[3], Noor Afzan Binti Salleh[4], Zulfahmi Bin Rashid[5]

[1, 3, 4, 5] Faculty of AI & Meta Technology, University Geomatika Malaysia, Kuala Lumpur, Malaysia

[2]Kulliyyah of Information Communication Technology, International Islamic University Malaysia, Malaysia

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***Corresponding Author:**
dr.fatimaahmed@geomatika.edu.my,
madihahs@iium.edu.my

ABSTRACT

Disseminating Islamic knowledge in various ways. However, some websites present deceptive interpretations of true Islamic teachings. Despite the plethora of I-webs, there was no standard foundation or benchmark to identify these deceptive websites. Therefore, this study delves into the intricate realm of Islamic website text and design, seeking to uncover cues indicative of deception as perceived by users through the administration of a comprehensive questionnaire. The questionnaire factors were developed based on previous literature. The questionnaire was initially tested through a pilot study and later validated by experts to ensure its reliability and effectiveness. This study employed a quantitative approach, utilizing a quasi-experimental design. Data were gathered from 257 participants representing the Muslim population. The study has employed descriptive statistics and Exploratory Factor Analysis (EFA) techniques. The questionnaire contained nine confirmed themes with 43 items, which were: Lack of Authority and Accuracy, Lack of Legitimacy, Lack of Objectivity, Linguistic Cues, Poor and Inconsistent Design, Lack of Currency and Update, Unclear Navigation Hierarchy, Lack of Readability and Legibility, and Improper Use of Symbols and Islamic Identity. The analysis of responses revealed that participants are sensitive to deception in I-web. I-webs containing the tested measures were more likely to be perceived as deceptive. This study advances users' understanding and provides actionable guidance for enhancing the truthfulness and authenticity of online Islamic website content and design.

INTRODUCTION

In an era dominated by digital communication, it is essential to examine the legitimacy of online content, particularly within the context of the I-web. This research delves into the subtle nuances of linguistic and visual elements, exploring deception cues embedded in the text and the design of these online platforms. As virtual space becomes increasingly essential for spreading information, understanding the intricacies of potential deception in Islamic website content is crucial. Many people have used the Internet for spiritual purposes, such as getting educated or disseminating their faith with Islamic information. It offers users documentation, information, analysis, issues, and images of Islam as they are conveyed effortlessly and hastily (Wan-Chik, 2014). They have been classified differently in various literature, for example as commercial, communicative, informative, for entertainment purposes, or a combination of two or all the categories.

Similarly, websites have the same classifications, some groups of Islamic websites offer a complete covering of Islamic content (Quran, Hadith, Fatwa, among many others), and at the same time, there are I-web that provide Muslim users the capability to communicate and consult with Muslim scholars. They can communicate through a chat room or forum provided by their websites, with other I-web for online purchases of goods, such as Islamic books and clothes, while some websites are responsible for world news (Nassr, 2016). While websites have grown in popularity and convenience of use, and development, they face various challenges and issues. One of these challenges is known as deception, which in the context of I-web, is the act of bringing out a website with incorrect or incomplete Islamic information that purports to offer true or real beliefs and feelings (Mahmud & Abubakar, 2014). To this end, this study aims to develop an instrument to detect elements of detection in the environment of websites-web websites.

LITERATURE REVIEW

Deception is one of the most pervasive social phenomena of our age. It has been previously studied in large contexts, including organizational settings. (Schein.Edgar H, 2004), criminal settings, and forensic (Granhag et al., 2004), power and politics (Galasinski, 2000), and daily communication Miller (2004)Miller (2004), including an online environment (Chen et al., 2015; Cheshire & Fiore, 2012; Chun-Der Chen, 2011; Derrick et al., 2013; Gillespie et al., 2016; Grazioli & Jarvenpaa, 2003; Pak & Zhou, 2012; Schafer, 2007; Seçil Toros, 2015; Tsikerdekis & Zeadally, 2013; Wiboo et al., 2014; Zhou, Burgoon, & Twitchell, 2004; Zhou et al., 2003). However, there is an absence of studies that discuss cues of deception in I-web text and design.

Previous studies on deception detection suggest that normally people are not very good at identifying deceptive behavior. The accuracy of deception detection by non-experts tends to be at about, or only better than chance (Hancock & Woodworth, 2010; Li & Santos, 2011). Social psychology and communication studies demonstrate that the human ability to detect deception is only slightly better than chance since typical accuracy rates are in the 55–58% range (George et al., 2004). The most common excuse for poor deception detection rates is that people tend to focus on stereotypical behaviors when trying to identify deception, relying on generally held, and poor assumptions as to how deceivers should behave (Picornell, 2013). Several factors influence an individual's ability to successfully detect deception, such as behavioral cues associated with deception and the motivation of the liar, as well as the communication medium Hancock & Woodworth, 2010). The most important of these factors are the verbal and non-verbal cues that tend to be associated with deception. Previous studies have extensively discussed verbal textual cues for online deception in computer-mediated communication (CMC). Verbal cues include a rise in negative statements and linguistic constructions that distance the liar from his presentations (passive versus active voice). Generally, cues for deception fall into three categories: verbal, non-verbal, and physiological. Verbal cues can be subdivided into two groups: (1) content-based cues, which can be proved wrong when compared to the truth, and (2) linguistics-based cues, which can be detected when the truth is unknown (Connell, 2012). Deception patterns change across media, including frequency and content (Warkentin et al., 2010). Strategically, most liars use their language to avoid being caught and try to control what they are saying, like language "leakage" which occurs with certain verbal cues that are hard to monitor, such as frequency and patterns of pronouns, conjunctions, and negative emotion word usage (Conroy et al., 2015). Previous studies in online deception, such as CMC (Conroy et al., 2015; Zhou, Burgoon, Nunamaker, et al., 2004; Zhou et al., 2003) have relied extensively on patterns of psycholinguistic cues in written statements. Psycholinguistics studies the relationship between linguistics and psychological behavior consisting of verbal and written language (Arciuli et al., 2010).

Cues in Text and Design

The website text content is the written content on the page and can be inside images or text blocks, written content on the Web, rather than just copied and pasted from a print source (Jennifer, 2017). Despite the other components of the websites, most information resources in Islamic knowledge, such as translations of the Al-Quran and Hadiths available on the Internet, are considered natural language text documents (Saad et al., 2009). Text is the core of most Islamic informational websites. Visitors are more likely to look for information that answers a question or helps them complete a task. They expect this information to be easy to find, access, and understand, as well as accurate, up-to-date, and credible. Previous literature has investigated the importance of I-web content evaluation (Mahmud et al., 2012; Nassr et al., 2015) due to the lack of trust in the content's accuracy (Ibrahim et al., 2010). This has led to the need to monitor and evaluate the content of the I-web and identify possible misleading information. Conversely, previous studies related to I-web have identified factors for reliability as well as credibility of the content, such as text-based content (Diana et al., 2016; Ibrahim et al., 2010; Mohamed, 2016; Wan-chik, 2015). However, little is known about the deception of the websites. These websites claim to be Islamic, but they are deviated from Islamic teaching and learning. The goal of deceiving websites is to mislead users about the true understanding of Islam.

The website design generally starts by establishing some objectives for the website, deciding on the requirements, determining the target audience, and strategizing accordingly. All the design elements, its logo, the navigation bar, and the structure of web pages revolve around these determined objectives (Badi, 2013). Website design is a process that comprises a variety of diverse disciplines, such as graphic design, information design, interface design, document production, scripting and programming, and multimedia (FannyVainionpää, 2014). Nevertheless, not only the textual content of the websites attracts the user's attention, but also the design. This is because a good Islamic image is important to achieve success and attract many Muslim users. Previously, Muslims evaluated I-web based on whether the websites portrayed good Akidah, ethical values, and lawful symbols/images. Displaying deceitful pictures always portrays bad rejection and is considered un-Islamic. Therefore, it is extremely significant for I-web to adhere to Islamic values, principles, and guidelines in terms of design strategy, content quality, interface representation, and system characteristics (Aliyu et al., 2016). Meanwhile, (Aliyu et al., 2012; Aliyu & Mahmud, 2013) have listed some of the design features that influence the visits of website users and have a positive impact, including content features, ranging from trust, authority, relevancy, reliability, credibility, objectivity, and legitimacy. The design features are usability, navigation, interactivity, accessibility, functionality, attractiveness, security, and privacy. The third feature is Islamic; Tawhid, Sunnah, Niyyah, ethics, identity, and symbols. This study, therefore, focuses on the textual content and design of the I-web.

Islamic Websites and Deception

Despite the progress of I-web, users face various challenges. Among the problems encountered is deception, in which online deception on the I-web increases due to the exponential development of the Internet. One of the simplest questions an individual may ask is whether information technology changes how individuals produce lies or deception. According to (Hancock & Guillory, 2015), technology has led to more deception. However, one of the online environments mentioned that deception is a salient issue in the I-web. Deception in I-web is deviated and contradicts the Islamic teaching and learning that follow Ahlus-Sunnah wa'l-Jama'ah. Deception is manipulating the truth by hiding truthful information or showing false information to mislead others. Sites demand special attention due to the nature of the content delivered to users. When individuals come across new information about Islam on the website, they can trust what they have found on the web. Ideally, an existing measurement scale should be used as a benchmark to identify deceiving websites. These

questions lead the discussion of this literature review, which aims to develop an instrument to help users identify deception in I-web's textual content and design. Consequently, false information about Islam on the Internet has led some Muslims to leave Islam due to the misinterpretations that were presented to them (Parrott, 2018).

METHOD

The cues to deception used for the instrument development were identified and developed from the case study analysis research done by Ahmed Mohamed et al., (2023) this case study approach was carried out using content analysis on the biography of Prophet Muhammad PBUH websites. The cues used were tested against some websites. As a result, a list of cues was generated and grouped into nine factors; four factors related to text, and five factors related to design, and each of the factors has a list of cues.

Quasi-Experiment

This study implemented the quantitative approach by conducting a quasi-experiment which is deemed suitable for the evaluation of contextual social issues (Oluwatayo, 2012). The single-group post-test only refers to a one-shot study in which a dependent variable is measured for one group after treatment and is sometimes referred to as pre-experimental research (Privitera & Ahlgrim-Delzell, 2019). The one-group post-test-only design was used; a treatment was implemented with a dependent variable measured once after the treatment was implemented. The independent variable is the cue for manipulating deception instruments to gauge the effect of deception on the I-web. So, the treatment is made by altering the independent variable to see the resulting and the changes in the dependent variable. The reason for such a choice is that a one-group test design is very feasible with fewer resources than most other experimental designs (Creswell, 2005). For this experiment, respondents were supposed to perform two tasks: the first part was to conduct the task activity in which they must interact with the given website, and the second task was for the participant to fill out the questionnaire. For the questionnaire development, the quality of a measuring instrument was based on two approaches: reliability and validity. Validity mainly means "measure what is expected to be measured" (Taherdoost, 2016). For the questionnaire of the present study, two types of validity were performed, namely, face validity and content validity.

The questionnaire was designed and sent to 8 participants by email and WhatsApp messages to evaluate the questionnaire according to the criteria (Oluwatayo, 2012) for face validity. The criteria are related to proper grammar, sentence structure, clarity, font size, and legibility of the printout. The respondents were postgraduate students from the information technology and Islamic studies fields. Results show that the participants have agreed upon all the constructs and subconstructs for which they were favorable but need more improvement. Several items were rephrased, simplified by regrouping similar items, and modified. The modified questionnaire was used for the second validity, that is, content validity with subject matter experts. The experts were chosen based on their experience in Islamic studies and Human-Computer Interaction (HCI) survey instrument design, development, and validation. Eight experts from different countries and universities were invited to review the instrument. The validation includes the content flow length and generality of the instrument. A letter of invitation and the consent form were sent to the experts. During the validation process, the researcher communicated through WhatsApp calls and WhatsApp messages to shed light on the perfection of the instrument.

The validation was carried out by seven experts using the following criteria: relevance, simplicity, cl arity, and ambiguity. The seven specialists offered evaluations, remarks, and scores. The experts were then asked to rate each item based on criteria mentioned on the four-point scale. The content

validation involved the experts beginning to validate the construction of the questionnaire for content validation (CV) to gather quantitative and qualitative information. Table 1: Background Information for Content Validity Experts.

Table 1: Background Information for Content Validity Experts

No.	Achievement level	Years of experience	Institutions
1.	Professor	17	Qatar University
2.	Ph.D.	10	Hail KSA
3.	Ph.D.	15	IIUM
4.	Ph.D., Post Doctorate.	20	IIUM
5.	Ph.D.	6	Bahrain University
6.	Ph.D.	25	UITM
7.	Ph.D.	20	UUM

This research used one method that involved a practical method to compute the content validity index (CVI). There are two kinds of CVI: Item-CVI (I-CVI) and Scale-level CVI (S-CVI).

Content Validity Index CVI

This part has been calculated as the number of "very relevant" (or 3-4) ratings of experts for each question, by the total number of experts' panels. I-CVI was calculated as the number of experts providing a score of 3 or 4 divided by the total number of experts. Using the understanding of CVI, the researcher calculates the content validity of the deception in I-web text and design scale through individual items level content validity index I-CVI. Both qualitative and quantitative opinions of the experts were collected. The CVI formula was applied to quantify the relevance of the construct quantitatively, while clarity, simplicity, and ambiguity were subjectively assessed. For each item, the I-CVI was calculated as per the number of experts giving a score of 3 or 4, divided by the overall number of experts. Equation (1) was used for the CVI.

Equation (1)

$$\frac{Number\ of\ raters\ giving\ a\ rating\ of\ 3\ or\ 4}{Total\ Number\ of\ Raters}$$

If the instrument is evaluated with more than 5 experts, the CVI should not be lower than 0.78 (Halek et al., 2017). Since there were Seven experts, the eliminated items were rated 0.71. Items with CVI greater than 0.83 were maintained, while the rest were discharged. The remaining items were modified based on the expert's opinions. By removing those items, the items were reduced from 71 items to 63 items. The 63 items were later modified based on the subjective judgment of experts.

- Clarity Scale: The scale used for clarity is unclear. Some items need revision, some are clear but need minor revision, and some are very clear. Ten items were revised and checked to improve clarity Simplicity and Ambiguity Scale: 9 items were simplified and revised to be comprehensive and certain.

Content Validity Index for Scale (S-CVI)

The S-CVI is the scale content validity index, and it is the average of the I-CVI scores for all items on the scale or the average of proportion relevance judged by all experts. The proportion relevant is the average relevance rating by individual experts (José Nicolás Cardona Mora et al., 2016). The S-CVI (the relevancy of the overall questionnaire) was calculated to confirm the scale validity. The S-CVI was calculated from the S-CVI (universal Agreement)/UA and the Average CVI (S-CVI/Ave). S-CVI/UA considered the number of items on a scale/instrument that attained a score of 3 or 4 by the experts (Shrotryia & Dhanda, 2019). For this instrument, the S-CVI/UA was calculated with a score of 0.66. The CVI (S-CVI/Ave) of the overall scale is 0.902. The universal agreement demonstrates moderate results while the average demonstrates high content validity. Relevant scale: The content validity index was calculated for the items, and relevancy was determined using four scales (not Relevant, item needs some revision, Relevant but needs minor revision, very Relevant) a scores score of (1, 2, 3, 4) for the relevancy of the items to the domain of the study. The questionnaire consists of two main categories, text, and design, and each category has its constructs and items. For example, the text has four main constructs (themes), and items. While for the design, it has five main constructs, and each construct has items. As a result, three items were eliminated for the text and Five for the design.

Pilot Study

After calculating the I-CVI and S-CVI, rearrangement and refinement were made. The refined instrument has the original 48 items with five reverse items, with 53 items in total. Email questionnaires were sent to the participants for the pilot test. The distribution of the questionnaire was carried out online due to the COVID-19 pandemic. The questionnaire was designed using Google Forms. Subsequently, the questionnaire was sent to 6 participants from different universities. Undergraduates, graduate students, doctorate candidates, and postdoctoral scholars were among the participants, offering a range of scholarly experiences and perspectives. The questionnaire has two procedures. Participants were required to carry out task activities and needed to respond to the questionnaire. All Items in the questionnaire except the demographic section were assessed on a 5-point Likert scale (5 = Strongly Agree, to 1 = Strongly Disagree). Feedback and comments from the respondents on the questionnaire were collected for improvement. Some items were modified, and the unclear items were rephrased with some items removed. The refined questionnaire was proofread and edited by an English language professional.

Descriptive Data Analysis

The population targeted were Muslims from Ahl AL Sunnah WA Al Jamaah, particularly undergraduate and postgraduate students. The Reliability Analysis was used to assess the internal consistency of the survey instruments. The present study uses Exploratory Factor Analysis (EFA) performed using SPSS to understand the underlying structure of the data. The questionnaire survey was conducted from March to June 2021 (3 months). The total number of questionnaires distributed was 265. The final valid Sample Size was 257 (after data cleaning). The data cleaning and screening were performed to ensure the accuracy of the data collected, eliminate any responses with missing data, and eliminate outlier cases. 7 responses with incomplete data and outliers were excluded, so the final dataset of 257 responses was analyzed. The sample is well-balanced for both genders, with equal male and female representation at 50% (Male and Female). Most respondents fall within the 25-34 age group, making it the largest age category. The distribution of participants' educational level, postgraduate was 58.9% while undergraduate was 41.1%. With a higher percentage of graduate student respondents, the results may reflect the views of a more educated demographic. The varying levels of web experience among respondents can provide insights into how different user groups perceive and interact with web content.

Reliability Analysis

Cronbach is the most recognized measurement for measuring reliability and, more precisely, internal consistency (Creswell, 2005; Taber, 2018). If the alpha value is > 0.9, the reliability is considered excellent, and if it is at least > 0.7, the reliability is considered acceptable and satisfactory (Halek et al., 2017; Yu & Richardson, 2015). The Cronbach alpha results indicate good measurements of the items are > 9. During the reliability testing for internal consistency, five reverse items correlated negatively below the acceptable scores, with the correlation ranging from (-.063 to .000). The corrected item-total correlation should be greater than 0.3, and items with a low correlation may have to be dropped (Jani et al., 2020). Table 2 shows the reliability statistics of the items.

Table 2: The Reliability Statistics of the Items.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of the items
0.974	0.977	53

Table 3 shows the Cronbach alpha for each factor (theme) and their items were included with mean and standard deviation (SD), due to their high values. Table 3 shows the factors with their alpha.

Table 3: The Items with their Alpha

Factors Measures	**Mean**	**SD**	**Alpha**
Lack of Authority and Accuracy			0.932
1. The website has no contact information, e.g., e-mail address, phone number, and so on.	1.77	.982	
2. The content has no information about its references, e.g., book title, page number, or author name.	1.76	.895	
3. The website does not list the references that are cited in the content at the end of the webpage.	1.78	.843	
4. The credentials of the website owner are not provided.	1.84	.891	
5. The website has no "About Us" page that specifies the website's purposes and objectives.	1.88	.944	
Lack of Legitimacy			0.943
1. The content uses Hadith without stating its status, such as Sahih (authentic) or Hasan (good).	1.72	.829	
2. The content uses Hadith without stating its status, such as Sahih (authentic) or Hasan (good).	1.75	.847	
3. The content uses Da'if (weak) Hadith in which at least one of its narrators lacks integrity.	1.81	.841	
4. The content uses Hadith that has no reference, e.g., book title, page number, or author name.	1.73	.821	
5. The interpretations of Quranic verses are taken from unknown tafsir books.	1.79	.903	

Lack of Objectivity			0.962
1. The content contradicts the Islamic faith, moral values, and pillars.	1.75	.881	
2. The content contains distorted interpretations from other religions' books, such as The Bible was sent to Prophet Isa.	1.78	.870	
3. The content shows extremists' ideas, e.g., "Islam will destroy all other religions through Islamic Jihad fighters."	1.82	.983	
4. The content contains subjective interpretations of the Quran, e.g., "Kill them wherever you find them" (2:191) when the interpretation of the verse is about fighting the non-believers.	1.78	.849	
5. The content consists of accusations against Prophet Muhammad, e.g., he went after power and money.	1.82	.902	
6. The content contains allegations toward Islam, such as claiming that Islam which means peace in Arabic is false.	1.83	.920	
7. The content has abusive statements such as "The Adhan is shouting and screaming."	1.90	.890	
Linguistics Cues			0.911
1. The content has spelling mistakes, e.g., "bacause" or "descriping".	2.00	.908	
2. The writer did not refer to him or herself in the content or use any pronouns, such as I or me.	1.97	.856	
3. The content uses imaginative texts that contain more adverbs, such as mostly, especially, or roughly.	1.93	.833	
4. The terms used on the website are not appropriate for young users.	1.88	.881	
Poor and Inconsistent Design			0.732
1. The website design style is inconsistent, and every page has a different design.	1.86	.932	
2. The website consists of only one single page.	1.94	.954	
3. The website is poorly designed, e.g., with no header, footer, menu, or inadequate line height.	1.81	.874	
4. The website page titles reflect the page's content.	4.02	.962	
5. The website is visually unpleasing, for example, poor image quality.	1.86	.868	
6. The website has no comment section to allow its visitors to comment.	1.88	.876	
Lack of Currency and Update			0.894
1. The website last updated was a long time ago, e.g., 2001 or earlier.	1.96	.937	
2. The website has no copyright.	2.09	1.053	
3. The website copyright date is not updated.	1.95	.900	
Unclear Navigation Hierarchy			0.922
1. The website has large blocks of text with almost no breaks at all in paragraphs.	1.87	.896	
2. The website lacks simple navigation.	1.84	.866	
3. The website has no social media icons, such as Facebook or Twitter.	1.95	.932	
4. It is difficult to find the needed information on the website.	1.89	.932	
5. The website is hard to access on small-screen devices.	1.95	.891	

Lack of Readability and Legibility			0.956
1. The website has low-contrast fonts, e.g., the light-colored font on a light-colored background or the dark-colored font on a dark-colored background.	1.86 1.82	.890 .801	
2. The content uses many font styles such as caps, bold, or italics.	1.88 1.82	.944 .838	
3. The website content uses a small text size that most people may find difficult to read.	1.85	.891	
4. The content stretches across the page.	1.85	.859	
5. The website displays information on poorly designed tables, e.g., using extra-large table borders.			
6. The use of large blocks of text makes the content unreadable.			
Improper Use of Symbols and Islamic Identity			0.959
1. The website displays and supports terrorism-related content, e.g., promoting terrorist groups.	2.10 2.17	1.119 1.094	
2. The website depicted Muhammad's image using cartoons or caricatures.	2.05	1.089	
3. The website depicts Muslims as terrorists, for example, a Muslim man holding a sword or a gun.	2.08	1.076	
4. The website displays inappropriate or disrespectful images of the Quran and other Islamic books, e.g., being thrown in the garbage			

EXPLORATORY FACTOR ANALYSIS (EFA)

Based on the structure of the questionnaire, there were 53 items, 48 were the original items, and five were the reverse items, one item was in the textual content section, while the other 4 items were in the design sections. The reverse items are the items that were used to test the respondent's carelessness in answering the questionnaire. The use of reverse elements is considered a controversial issue, some authors recommend the use of reverse elements, while others reject them due to their undesirable effects on the psychometric properties of the tests. Woods (2006) reported that if at least 10% of the participants responded to the reverse items carelessly, it is recommended that the one-factor model for a unidimensional scale should be rejected. Respondents may answer carelessly accepting agreement on all negative statements, which is the most common response bias and is defined as an individual's tendency to agree with a statement regardless of its content (Vigil-Colet et al., 2020).

Since the purpose of the reverse words is to check the responses with great carelessness, it was checked during the reliability testing. Originally, the reverse items were made against the study phenomena, for example, the original item is 'The content consists of accusations against Prophet Muhammad' while the reverse is 'The content has true statements about Prophet Muhammad'. Therefore, the reverse words do not share the same conceptual meaning as other items within the same factor. With the current study aiming to study the negative phenomenon of deception, the reverse items were positive and fit for reliability and website use, and all the reversed items are not included in EFA. So, the unreversed versions of those same items were the original construct of the scale and are included. Many authors stated that if the sample size is less than 300, the researcher must check the average communality of the retained items. An average value above 0.6 is acceptable for samples less than 100, while an average value between 0.5 and 0.6 is acceptable for sample sizes between 100 and 200 (MacCallum et al., 1999; Samuels, 2016).

The EFA was conducted to examine the reliability and validity of the factors with associated items using SPSS. Principal Axis Factoring (PA) was used as an extraction method with Varimax, and Kaiser was used as a normalization rotation method. This is to avoid these mentioned issues for the current study EFA and future work CFA, for these five items to not be carried out for further analysis. Based on the initial PA extraction, one item from the five reverse items was not loading, while the other four items had low communality below the average (0.388, 0.394, 0.339, and 0.327, respectively). If the results of the initial EFA showed items which are loaded on the wrong factors or cross-loading on multiple factors, those items were deleted while EFA was reperformed until a simple solution was achieved (Yu & Richardson, 2015). EFA is used in the present research to validate the grouping factors against the extracted factors. There are 10 extracted factors, where four factors are related to textual content I-web, and six factors are related to the design of the website. Factors related to textual content are lack of authority and accuracy, lack of legitimacy, lack of objectivity, and linguistic cues. The factors extracted for the design of the I-web are poor and inconsistent design, lack of currency and update, unclear navigation hierarchy, lack of readability and legibility, improper use of symbols, and Islamic identity. However, the no 10 factors consist of two items as they came out of the group "Improper use of symbols and Islamic Identity". The factor should at least consist of three items so that these items are dropped because they do not meet the requirements for forming a factor. The reliability was conducted for the instrument, then followed by the EFA. The EFA was conducted separately where it was conducted for the textual content, followed by the design part.

The Kaiser-Meyer-Olkin (KMO) test is to measure sample adequacy. The KMO statistic varies between 0 and 1. A value close to 1 indicates that the correlation patterns are relatively compact so factor analysis should yield distinct and reliable factors. (Kaiser, 1974) Suggested that the accepted values must be greater than 0.5. Values between 0.5 and 0.7 are average, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great, and values above 0.9 are excellent. The overall Kaiser-Meyer-Olkin Measure of Sampling Adequacy score is 0.956 at the significant level of 0.000 accordingly, each factor and its items are presented. 'The scree plot is one of the procedures used to determine the number of factors to retain in factor analysis' (Kanyongo, 2005). With this procedure, eigenvalues are plotted against their ordinal numbers and an examination should be conducted to discover where the slope of the drawn line occurs. The eigenvalue is the amount of variance that a particular variable or component contributes to the total variance (Shrestha, 2021). The number of factors is specified by the number of eigenvalues above the point of break or the slope of the drawn line; an eigenvalue of more or greater than one is significant. In this study, the scree plot loads four factors for the textual content of the I-web, the four factors loaded above number one, the figure shows the scree plot. Figure 1 shows the factor loading on the Scree plot.

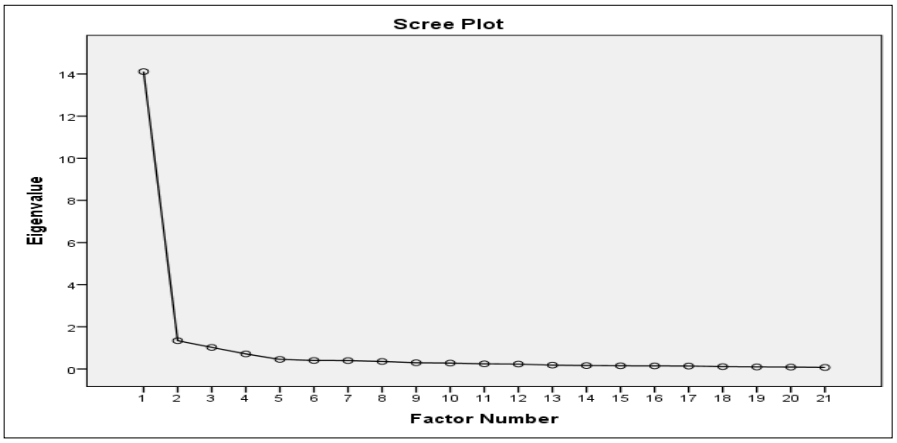

Fig.1: Factors loading in the scatter plot

EFA is used when a researcher wants to discover the number of factors that influence variables and to analyze which variables go together. Each factor and associated items are presented in the following section.

The Factors Loading for the Text

- Lack of Authority and Accuracy

Table 4 shows the analysis factors leading to five items for the lack of authority and accuracy, thus the EFA extracted five items loaded cleanly and successfully. Table 4 shows factor loading for lack of authority and accuracy.

Table 4: Factor Loading Authority and Accuracy for Lack of

Rotated Factor Matrix		
		Factors
Code	Items	Lack of Authority and Accuracy
LAA1	The website does not have contact information, for example, an email address, a phone number, etc.	.707
LAA2	The content has no information about its references, e.g., book title, page number, or author name.	.676
LAA3	The website does not list the references that are cited in the content at the end of the webpage.	.742
LAA4	The credentials of the website owner are not provided.	.751
LAA5	The website has no "About Us" page that specifies the website's purposes and objectives.	.734

- **Lack of Legitimacy**

There are six items in this factor, Table 5 shows five items successfully. Item No. 6 is loaded from the lack of an objectivity factor. Thus, EFA successfully extracted a one-dimensional factor of lack of legitimacy items for deception in I-web text-based content. Table 5 shows a lack of legitimacy loading factor.

Table 5: Lack of legitimacy loading factor.

Rotated factor matrix		
		Factors
Code	**Items**	**Lack of Legitimacy**
LL1	The content uses Hadith without stating its status, such as Sahih (authentic) or Hasan (good).	.524
LL2	The content has Mawḍu (fabricated) Hadith, which contradicts the fundamentals of Islam, e.g., "I am the Prophet who laughs when killing my enemies."	.551
LL3	The content uses Da'if a (weak) Hadith in which at least one of its narrators lacks integrity.	.632

LL4	The content uses Hadith that has no reference, for example, book title, page number, or author name.	.598
LL5	The interpretations of Quranic verses are taken from unknown Tafsir books.	.575

- **Lack of Objectivity**

Table 6 analysis factor loading on 7 items for lack of objectivity factor is different to the initial one-dimensional of the lack of objectivity factor one item loaded from linguistic cues LO7, and one item loaded from lack of legitimacy factor. LO1 considered the similarities like items. Hence, these seven items perfectly fit together and reflect the factor of lack of objectivity. EFA successfully extracted a one-dimensional factor of lack of Objectivity items for the deception in I-web text-based content. Table 6 shows factor loading on lack of objectivity.

Table 6: Factors loading for lack of objectivity

Rotated factor matrix		
		Factors
Code	**Items**	**Lack of Objectivity**
LO1	The content contradicts the Islamic faith, moral values, and pillars.	.559
LO2	The content shows the ideas of extremists, for example, 'Islam will destroy all other religions through fighters from Islamic Jihad'.	.687
LO3	The content contains distorted interpretations from other religions' books, such as The Bible was sent to Prophet Isa.	.618
LO4	The content contains subjective interpretations of the Quran, e.g., "Kill them wherever you find them" (2:191) when the interpretation of the verse is about fighting non-believers.	.763
LO5	The content consists of accusations against Prophet Muhammad, e.g. he went after power and money.	.757
LO6	The content contains allegations about Islam, such as claiming that Islam which means peace in Arabic is false.	.747
LO7	The content has abusive statements such as "The Adhan is shouting and screaming."	.601

- **Linguistic Cues**

This theme extracted four items of EFA successfully and extracted a one-dimensional factor of linguistic cues for items for deception in I-web text-based content. Table 7 shows the linguistic cues factor.

Table 7: The Linguistic Cues Factor

Rotated factor matrix		
		Factor loading
Code	**Items**	**Linguistic Cues**
LC1	The content has spelling mistakes, e.g., "bacause or descriping".	.697

LC2	The writer did not refer to himself or herself in the content or use any pronouns, such as 'I' or 'me'.	.754
LC3	The content uses imaginative texts that contain more adverbs, such as mostly, especially, or roughly.	.774
LC4	The terms used on the website are not suitable for young users.	.623

The Factors Loading for the Design

There are five factors loaded for this category ranging from three to six items, the scree plot shows six factors. Figure 2 shows the scree plot for the factor loading for the design.

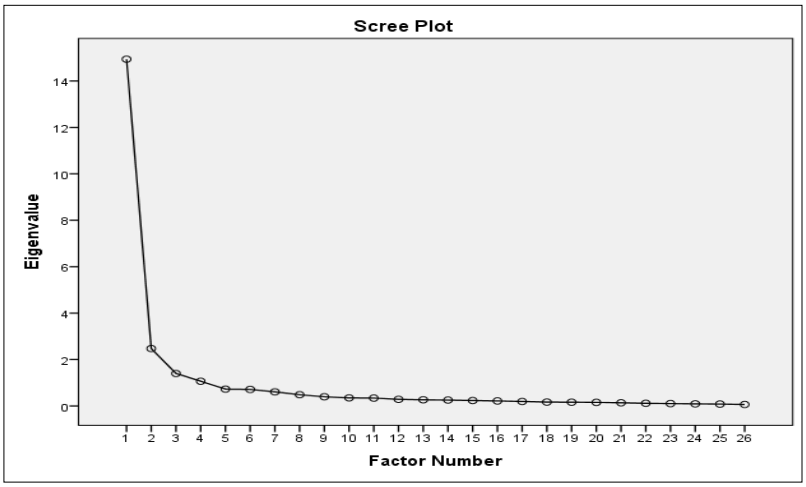

Fig 2: The scree plot for the factor loading for the design

- **Poor and Inconsistent Design**

Six items were successfully loaded for the design of the website and the factor loading. Out of seven items, one item was removed due to poor loading. The reverse item in this factor loads with negative loading. Thus, EFA successfully extracted a one-dimensional factor of poor and inconsistent design in the design of I-web. Table 8 shows the poor and inconsistent design factor loading.

Table 8: Poor and Inconsistent Design Factors Loading

Rotated factor matrix		
		Factors
Code	**Items**	**Poor and Inconsistent Design**
PID1	The style of the website design is inconsistent, and every page has a different design.	.626
PID2	The website consists of only one single page.	701
PID3	The website is poorly designed, e.g., no header, footer, menu, or inadequate line height.	.750
PID4	The titles of the website pages reflect the content of the page.	-.502
PID5	The website is visually unpleasing, for example, with poor image quality.	.772

PID6	The website has no comment section to allow its visitors to comment	.671

- **Lack of Currency and Update**

This factor was loaded successfully with three items, the force item is the reverse question, and it was removed due to poor loading. Thus, EFA successfully extracted the one-dimensional factor of lack of currency and updated it in the design of I-web. Table 9 shows the lack of currency and updates.

Table 9: Lacks currency and updates

Rotated factor matrix		
		Factors
Code	Items	Lack of Currency and Update
LAU1	The last update to the website was long ago.	.628
LAU2	The website has no copyright.	.632
LAU3	The copyright date of the website is not updated.	.529

- **Unclear Navigation Hierarchy**

This factor consists of 7 items, one item was dropped due to no loading at all, and the other item dropped due to poor loading. Thus, EFA successfully extracted a one-dimensional unclear navigation hierarchy factor for deception in the design of I-web. Table 10 shows an unclear navigation hierarchy

Table 10: Unclear Navigation Hierarchy

Rotated factor matrix		
		Factors
Code	**Items**	**Unclear Navigation Hierarchy**
UNH1	The website has large blocks of text with almost no breaks in paragraphs.	.562
UNH2	The website lacks simple navigation.	.612
UNH3	The website has no social media icons, such as Facebook or Twitter	.681
UNH4	It is difficult to find the needed information on the website.	.612
UNH5	The website is hard to access on small-screen devices.	.505

- **Lack of Readability and Legibility**

Table 11 analyses factor loading on the six items of lack of readability and legibility factor. All the items are loaded cleanly into one factor. Thus, one factor extracted for lack of readability and legibility. Table 11 shows the lack of readability and legibility.

Table 11: Lack of readability and legibility

Rotated factor matrix		
		Factors
Code	**Items**	**Lack of Readability and Legibility**
LRL1	The website has low-contrast fonts.	.697
LRL2	The content uses many font styles such as cap, bold, or italics.	.814
LRL3	The website content uses a small text size that most people may find difficult to read.	.747
LRL4	The content stretches across the page.	.721
LRL5	The website displays information in design tables.	.734
LRL6	The use of large blocks of text makes the content unreadable	.717

- **Improper Use of Symbols and Islamic Identity**

There are four items loaded successfully into one factor. Originally, there were 7 items constructed for this factor, two items loaded separately, and one item removed since it is a reverse item. Thus, EFA successfully extracted the one-dimensional factor of improper use of symbols and Islamic identity factor for deception in the design of I-web. Table 12 presents the improper use of symbols and Islamic identity factor loading.

Table 12: Improper Use of Symbols and Islamic Identity

Rotated factor matrix		
		Factors
Code	**Items**	**Improper Use of Symbols and Islamic Identity**
ISD1	The website displays and supports terrorism-related content	.821
ISD2	The website depicted Muhammad's image using cartoons or caricatures.	.849
ISD3	The website depicts Muslims as terrorists, for example, a Muslim man holding a sword or a gun.	.886
ISD4	The website displays inappropriate or disrespectful images of the Quran and other Islamic books.	.897

DISCUSSION

The study aims to close a gap in the literature and create a tool for assessing deception on the I-web from the Muslim point of view. The justification for this study is drawn from the observation that no instrument has considered text and design when evaluating deception in I-web. For this reason, the instrument was validated to gather opinions from the respondents through face validity, and from experts through content validity. The instrument evaluation was done through quasi-experiments. A

survey was employed as the instrument in the quasi-experiment, and the EFA was utilized for dimension determination and item reduction. The sample size for this study was selected by the first initial with a sample size of 30 based on the recommendations for sample sizes for experiments (Creswell, 2012). However, the number of sample sizes was found to be too small. The following guidance was referred to in determining and defining the appropriateness and adequacy of sample size for EFA: "100= poor, 200 = fair, 300 = good, 500 = very good, 1,000 or more = excellent"(Creswell, 2012; Lingard & Rowlinson, 2006). Therefore, based on this recommendation, the sample size was increased to more than 200 which is considered good and sufficient for Cronbach alpha and EFA.

Muslim society consists of various races, cultures, and traditions, it was therefore necessary to select representatives from the group. This study focuses on Muslim undergraduate and post-graduate students from many Islamic countries globally. The nationalities of the students constitute more than twenty Islamic countries, as well as Muslim minority countries such as Malaysia, the USA, Nigeria, and Sudan. The respondents selected were those familiar with the Internet and had a strong English language background (reading and writing), and basic Islamic knowledge to answer the questionnaire. The experiment was conducted online through the dissemination of the link to two forms of social media groups Facebook and WhatsApp. During the experiment, the participants were given two tasks: (1) task activity scenarios and (2) a questionnaire instrument. At first, the respondents were given task scenarios and activities where the activities required the participants to visit the attached website link. In the task activity, they were asked to perform two main tasks; to locate the page and provide information. Once the participants finished their first task, they were directed to answer the questionnaire. The survey's findings showed that the proposed instrument is efficient and effective in identifying deception on websites claimed to be I-web.

The result of the EFA was then presented whereby nine factors were explored with high reliability. All Cronbach Alpha has the lowest of 0.732 and the highest of 0.962. Some items were removed from their factors, the removed items from their factors, either because there was no loading at all, or they had poor loading of those items from SPSS. The factors that were being investigated are lack of authority and accuracy, lack of legitimacy, lack of objectivity, linguistic cues, poor and inconsistent design, lack of currency and update, unclear navigation hierarchy, lack of readability and legibility, improper use of symbols as well as Islamic identity.

CONCLUSION

In summary, the research has significantly contributed to our understanding of how users perceive the deception in Islamic content found online. By carefully studying individuals' views, the research discovered significant red flags of deception in the text and design of I-web. The study's findings show that users are especially perceptive to certain textual and visual cues that could be signs of deception. These include inconsistent religious references, overly harsh animosity to Prophet Muhammad (PBUH), and bizarre design cues that do not fit the audience's expectations in terms of culture and religion. The study offers an approach for content producers and website developers to improve the trustworthiness and reliability of I-web by eliminating these cues. The study also highlights how important it is to link Islamic information to trustworthy sources and present it online in a manner that aligns with the target audience's expectations. This approach builds confidence while ensuring users receive reliable and accurate information. This research does have certain drawbacks. The results may not be as broadly applicable to a wider audience due to its narrow emphasis on a certain population. Future research should consider a more diverse population to validate and expand upon these findings.

Furthermore, investigating the psychological processes that underlie users' recognition of deception signs may offer a more profound understanding of augmenting online authenticity. In the end, this

study emphasizes how important authenticity is for Islamic content found online and provides useful advice for enhancing the reliability of these websites. This study sets the stage for future attempts to develop more trustworthy and legitimate internet resources for the Islamic community by taking a user-driven approach.

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