The Effect of Media Literacy in Detection of and Mitigating the Use of Inaccurate Memes Among Egyptian University Students

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Abstract:

This study aims at exploring the effect of media literacy in the detection of and reducing the spread of inaccurate memes among university students. Given the significant influence of social media platforms and the prevalence of meme culture, understanding the impact of media literacy on combating the spread of misinformation in this context is crucial. The main objective of this research project is to examine how media literacy programs can empower university students to detect and critically analyze inaccurate memes and thus creating a more informed and responsible online community. The study used quasi-experimental method to test the effect of media literacy on 391 Egyptian university students' ability to detect inaccurate memes and reduce their willingness to interact and share skeptic memes. Results indicate the need to develop the more effective media literacy programs focusing on new tools and technologies like memes.

Keywords: Media literacy – Memes – Misinformation

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Introduction:

Egyptians are known to use humor to cope with bad situations and make fun of themselves, the government, and their living situations. With the wide use of social media, the use of funny posts among Egyptians is also widely spread. According to Oxford Languages dictionary, memes are defined as "an image, video, piece of text, etc., typically humorous in nature, that is copied and spread rapidly by internet users, often with slight variations." They can also be defined as, "a genre of online communication whereby text and/or image (and also video, GIFs, and more) are remixed with aspects of popular culture to begin or continue a discussion and may also be used as a form of socio-cultural or political critique or protest." (Wiggins, 2017). Because they are easily spread, memes are sometimes called "idea viruses" (Tandon, Singh, & Tripathi, 2022). Memes expresses everyday life opinions of users, but they are also widely used in disseminating political messages.

Memes are no longer fringe communication, but mainstream (Das, 2023; Zidani & Moran, 2021; Holland, 2020). The boom in meme culture could be traced to the COVID-19 pandemic in 2020. During this time, two main things happened. First, there was a massive use of online communication instead of face-to-face communication, which consequently led to a surge in the circulation of misinformation and disinformation and affecting users' perceptions, attitudes, and beliefs, especially those with no literacy means to deal with consuming fake news (Usman, Msughter, & Ridwanullah, 2022). Second, memes were used to insert a laugh to a dark situation (Priyadarshinia, et al., 2021). In 2020, Instagram announced, according to digital information world, that there were 1 million shared memes during this year in comparison to 500 thousand memes shared during 2018 (Ahmed, 2020).

Users tend to spread false news and information due to its novelty (Vosoughi, Roy, & Aral, 2018)The visual nature of memes makes it easier to perceive and can invoke strong emotions to increase the engagement with the message (Klein, 2020), and the humor aspect of it. Although memes might seem trivial and unrealistic, it is arguably the expression of the deeper thoughts and feelings of users (Bouvieraand & Way, 2021). In addition to that, researchers attributed the notable use of multimodality to the specific characteristics

imposed by memes. This means that both visual and textual elements are deliberately chosen in memes to strengthen the intended message they aim to communicate (Younes & Altakhaineh, 2022; Ostanina-Olszewska & Majdzińska-Koczorowicz, 2019).

Although users view mems as a laughing material, the information embedded in these memes are stored in their cognitive structure, which could affect how they think and act on similar situations (Das, 2023). This makes memes a perfect tool for spreading misinformation and disinformation.

According to Oxford Languages dictionary, media literacy can be defined as, "ability to critically analyze stories presented in the mass media and to determine their accuracy or credibility," which means having the ability to analyze the content the user is exposed to, evaluate it critically to determine its purpose and to be able to create media content that is meaningful (Zidani & Moran, 2021). This is becoming an essential skill in today's digital age. In this context, media literacy can help university students detect and reduce the spread of inaccurate memes. By teaching students how to critically evaluate the sources and content of memes, they can become better equipped to navigate the digital landscape and identify disinformation and misinformation.

Humor and Communication
People use humor to vent their negative feelings like frustration, anger, and sadness. It's a way to express "untold or repressed truth" (Arijeniwa, 2023). It's also a very successful tool for persuasion.

Memes The act of sharing funny memes is easier than sharing hard facts posts, because users can always counter any criticism by saying it was "just of fun". Memes are generally viewed as a trivial message used for laughs, but it can blur the distinction between facts and opinions and misinformation (Svatoňová, 2023).

Memes are intended to originate from users rather than official sources (Holland, 2020), enhancing their credibility and creating the impression that they represent public opinion (McVicker, 2021). Memes primarily rely on visual elements, making it subtle to introduce fabricated or out-of-context information through accompanying text (Ostanina-Olszewska & Majdzińska-Koczorowicz,

2019). By combining true information with humorous twists, memes can serve as effective disinformation tools, making fact-checking more challenging (McVicker, 2021). It also attracts a lot of people due to its wittiness and being concise (Hakoköngäs, Halmesvaara , & Sakki, 2020).

Political memes can't be seen as just funny memes, it has impact on voters and could cause "agitation" during elections (Kuznetsov & Soldatkina, 2017). The simple and funny nature of memes makes it easy to share (Hakoköngäs, Halmesvaara , & Sakki, 2020), thus repeating it and making it go viral. When this happens the frequency of getting exposed to these memes, especially when concentrated on specific topic, slowly but surely changes users' attitudes, opinions and beliefs (Das, 2023; Zhang, 2020; Holland, 2020). This makes memes a perfect tool to agitate feelings and even mobilize efforts (Svatoňová, 2023; Hakoköngäs, Halmesvaara , & Sakki, 2020). Memes have the ability to influence meanings and persuade individuals even though their credibility is questioned (Arijeniwa, 2023).

Symbolic Interaction Theory and Memes

Memes are cultural practice that spread rapidly through online platforms, relying on shared cultural references and symbols to convey meaning and evoke responses from viewers (Denisova, 2019). The use of symbols, language, and shared meanings in memes aligns with the principles of Symbolic Interaction Theory, which emphasizes how individuals construct and interpret meanings through social interactions.

Symbolic Interaction Theory is sociological perspective that focuses on how individuals construct and interpret meanings through social interactions. It emphasizes the role of symbols, language, and shared meanings in shaping social behavior. (Aksan, Kısac, Aydın, & Demirbuken, 2009) Memes, on the other hand, are cultural symbols or ideas that spread rapidly through online platforms. They often convey meaning, humor, or commentary on various aspects of society. Memes rely on shared cultural references and symbols to communicate a message or evoke a particular response from users (Jain & Shivaprasad, 2022). The theory helps in better understanding the interplay between individuals and society through their actions and

interactions (Charmaz & Belgrave, 2013). In the modern world, the term "society" could be argued that it relates to online communities, where most interactions happen.

The first one to coin the term symbolic interaction was Blumar in the nineteen sixties. Blumar continued the work of George Herbert Mead, who was one of the most important symbolic school theorists (Lal, 1995). To Blumar facts are interpreted through a set of "meanings", which were created by the interaction of individuals with other individuals, their surroundings or society (Charmaz & Belgrave, 2013). Thus, the "facts" about situations, objects or individuals could be different from one person to another or could change for the same person after passing of time (Aksan, Kısac, Aydın, & Demirbuken, 2009).

Blumar suggested that the core reason of human behavior can be interpreted through three main factors: (1) meaning, (2) language, and (3) thinking (Aksan, Kısac, Aydın, & Demirbuken, 2009; Lal, 1995). Since Blumar's time the concept of language, or the symbols by which humans use to communicate, has vastly changes. Visuals are now an integral part of communications. A simple picture carries a lot of symbols and meanings that helps humans interpret the world. This makes memes the perfect tool of combining visual and written languages to transfer subtle meanings and interactions between individuals in online communities.

Symbolic theory is used a lot in communication nowadays especially in marketing and advertising with consumers now seeking products that carry meaningful associations. These associations contribute to the symbolic value of a product, enabling individuals to express their personal and social identities through their purchases and usage (Benaim, 2018). With the same perspective, memes are persuasive by nature because of the manipulation of meaning it carries (Arijeniwa, 2023). It's deeply rooted in culture, politics, economics and social interactions.

Memes, as cultural symbols, reflect and shape social meanings, facilitate communication, contribute to identity formation, and influence collective behavior in online spaces. Exploring the interplay between symbolic interaction theory and memes can deepen our

understanding of how digital culture and social dynamics are evolving in the digital age.

Media literacy and memes

Media literacy serves as a powerful tool in equipping individuals with critical thinking skills, enabling them to discern the accuracy and reliability of the content they encounter especially nowadays where technology helps in spreading rumors and fake news and information (Krutka, Heath, & Mason, 2020). By teaching individuals how to critically evaluate and analyze content, these interventions equip them with the necessary tools to identify and halt the dissemination of false or misleading information. As media literacy becomes more ingrained in society, individuals are more likely to question the accuracy of memes before sharing them, thus curbing the rapid spread of misinformation.

By encouraging individuals to question the sources, veracity, and underlying biases of memes, media literacy interventions enhance the ability to distinguish between accurate and inaccurate information. These interventions focus on developing skills such as source verification, fact-checking, and understanding the context in which a meme is shared. But it also needs to focus on the medium by which the message is presented (Wineburg & McGrew, 2017) and the subtle effect of jokes and sarcasm (Gaillard, Oláh, Venmans, & Burke, 2021).

The digital medium is completely different than print or visual media. Research found that digital media consumers are more likely to have more confidence in their ability and knowledge associated with "cognitive retreat" and "shallow processing" of information. This leads to less ability in detecting fake news and fact checking information (Gaillard, Oláh, Venmans, & Burke, 2021). Thus, part of the media literacy program should teach users how to fact check digital media messages quickly. One of the ways to do that was developed by Stanford University and is called lateral reading. Researchers there found that users read digital messages vertically, each article alone, but that they needed to read laterally, scan it quickly then search other sources for the same information, to check its credibility fast (Wineburg & McGrew, 2017).

Moreover, media literacy interventions also emphasize the importance of considering the visual and linguistic elements of a meme. Understanding the medium itself is crucial, which means understanding the nuances of image manipulation, the use of persuasive language, and the impact of emotional appeals empowers individuals to recognize the potential for misinformation and propaganda within memes (Mason, Krutka, & Heath, 2021). This heightened awareness contributes to more informed decision-making when engaging with and sharing memes.

Younger generations don't really trust social media, although it's the most common media used by them (Pérez-Escoda, Pedrero-Esteban, Rubio-Romero, & Jiménez-Narros, 2021). The youth are already "digitally native" (Gaillard, Oláh, Venmans, & Burke, 2021) which means they are supposedly more aware in detecting fake news and information. But reality is that although they don't trust it, they would easily share it with others, which means they need to still be the target of media literacy efforts.

Moreover, when considering the credibility of a meme, users should evaluate both the visual and the linguistic elements of the meme (Mason, Krutka, & Heath, 2021). Media literacy should empower individuals by making them understand the nuances of image manipulation, the use of persuasive language, and the impact of emotional appeals used in memes to recognize the potential for misinformation and propaganda within memes. This heightened awareness contributes to more informed decision-making when engaging with and sharing memes.

Media literacy is an interactive process, where the target of the media literacy program should actively participate in unfolding the ways of using social media (or any other media) safely and informatively (Bozdağ, 2022). Media literacy also needs to be tailored to the specific target audience putting into consideration their age, culture, interests, and reasons and habits of using social media.

While media literacy holds immense promise, it is important to acknowledge its limitations. The effectiveness of media literacy interventions can vary depending on factors such as the quality and accessibility of educational resources, individual motivation, and the ever-evolving nature of memes and online platforms.

To sum up, media literacy interventions have the potential to reduce the spread of inaccurate memes. By teaching individuals how to critically evaluate and analyze content, and to understand the differences caused by messages medium, these interventions equip them with the necessary tools to identify and halt the dissemination of false or misleading information. As media literacy becomes more ingrained in society, individuals are more likely to question the accuracy of memes before sharing them, thus curbing the rapid spread of misinformation.

From the previous literature, this study aims at answering the following research questions:

Q1. How do university students perceive and engage with memes?
Q2. To what extent are university students exposed to inaccurate memes?
Q3. How effective is media literacy in reducing the spread of inaccurate memes among university students?

Methodology

A quasi-experiment was designed to measure the effect of media literacy lectures on sharing fake memes among university students. The experiment was a 2 (Media literacy lectures vs. no lectures) by 2 (news posts vs. memes) by 3 (political news vs. social news vs. health news) design. Mass communication students from a private university were asked to participate in the study. The students were divided by academic year and then classes were picked randomly from each year to be either assigned to receive a media literacy lectures or to be asked about the messages without any lectures.

The media literacy lectures included the meaning of misinformation and disinformation, the effects of spreading fake news on societies, the role of memes in spreading fake news and false information, their role as users in stopping the spread of fake news and how they can do it, and finally, a participatory exercise on how fake posts and memes are created.

The researcher fabricated three news posts based on some slither of truth and then used these posts to create memes. One of the news was of a political nature (government achievement), another was of a

social nature (related to marriage laws), and the final one was related to medical news (a cure for diabetes).

Sample

The study focused on Mass Communication students since it's their job to be media literate. Classes from Freshman, Sophomore, Junior, and Senior years were chosen and divided into four groups. First group were given the media literacy lecture and then they were asked to evaluate news posts. The second group were also given the media literacy lecture but were asked to evaluate memes concerning the same news given to the first group. The third and fourth groups weren't given any media literacy lectures and were asked to evaluate the news posts (third group) and memes (fourth group).

Measurements

The students were asked to evaluate the news post/meme in terms of (a) it's credibility (convincing, believable, credible), (b) their most likely behavior towards it (liking, sharing, and commenting), and (c) their judgment of its truthfulness (true or fake).

Results

The study used a quasi-experimental design to answer the research questions and test the hypotheses. 391 Mass Communication student participated in the study. 46 of the participants were males (11.8% of total number of participants), and 345 participants were females (88.2% of total number of participants). The ages ranged between 17 and 24 with mean 19.9 and standard deviation 9.4.

Table (1)
The division of study participants

Message		Gender		Academic year			
		Male	Female	Freshman	Sophomore	Junior	Senior
Media literacy lecture	Memes	7	89	43	38	14	1
	News	19	62	50	18	10	3
No media literacy lecture	Memes	4	100	38	22	17	27
	News	16	94	62	35	9	4
Total		46	345	193	113	50	35

The participants were divided into four groups. The total number of participants that were asked to evaluate memes is 200 (51.2% of the

total number of participants), while those who evaluated the hard news is 191 participants (48.8% of the total number of participants). Out of the 200 participants 96 were given the media literacy lectures with a percentage of 48% of the total number of participants who were asked to evaluate memes. And out of the 191 participants who were asked to evaluate hard news 81 participants (42.4%) were given media literacy lectures.

Table (2)

Media literacy lectures	what was the format of message?		Total
	Memes	News posts	
yes	96	81	177
No	104	110	214
Total	200	191	391

i- Social media habits of participants

Most participants were heavy users of social media, where 39.2% of the total number of participants reported that they use social media from 4 to 6 hours daily. While 30.3% of the participants use social media more than 6 hours daily. Also, 29.2% use social media from 1 to less than 4 hours daily and only 1.3% use social media less than one hour daily. These results indicate that the main source of communication, interaction and information for these participants is social media.

The most common used social media app among the university students participating in this study is Tik Tok. Nearly half of the participants (48.1%) reported they use Tik Tok. The second most used social app is Instagram, with a percent of 28.4% of participants reporting it is their most common used app. Both apps depend on videos and pictures rather than long texts, which makes memes a very suitable cultural tool for communicating among them.

The participants use social media mainly to share social and personal news or information. A total of 67.6% of the participants reported they either share social news, like trends, family and friends' news, and interests (27.8%), or personal news, like videos and photos of themselves, their thoughts or feelings, and things they like (39.8%). This indicates that university students see social media apps to communicate socially and not to gain hard news or information. On

the other hand, the sheer amount of time spend on social media suggests that the participants depend on social media to keep up to date with what's going on in the world around them.

When the participants were asked to evaluate the credibility of social media apps, their evaluation was moderate with mean 5.4 and standard deviation 1.6. This is supported by the fact that 74.1% of participants stated they must check any information they receive on social media before sharing it. The problem is the way they verify the information they receive. Only 19.5% of the participants do check the credibility of news and information from other online and offline sources. While nearly one third of the participants (31.9%) depend on other people opinions (comments, shares and likes), or if the news or information went viral, or their own judgment on the content of news or information. These methods are of course not accurate not to mention very biased way to judge the credibility of news and information.

Table (3)
Evaluating the credibility of social news

How to judge the credibility of news	Percent	How to judge the credibility of news	Percent
Checking other online credible sources	14.9%	Checking the comments	6.9%
Checking governmental sources	1.1%	The number of likes and shares	1.8%
Checking traditional media	3.5%	If it went viral	11.6%
The source is a credible source	34.1%	The content makes sense to me	11.6%
All news is fake	1.5%	I know after I share	13%

ii- Engagement with memes

University students depend on memes excessively in their communication. All participants reported they are exposed to memes on social media daily. And the majority of them (94.4%) do share memes rather than news and information. They stated that memes are more fun to share.

Three quarters of the participants in this study (74.9%) stated that they never share any news or information without verifying its authenticity first. Moreover, only 2.3% reported that they share fake news all the

time without knowing, while 40.8% said that they only made the mistake of sharing fake news once or twice without knowing and 56.8% said they never shared fake news ever. This indicates a good base of media literacy, but the case is different in case of sharing and reacting to memes.

Although they are aware that most memes aren't accurate or even truthful, they do share them a lot. 93% of the participants see memes as fun communication tool with no serious consequence. That's why they don't believe that sharing fake memes is considered distribution of misinformation. Only 6.2% of the participants admitted they shared misinformation deliberately before, and from them 90.9% said they did that because it was funny. This indicates that although they are somewhat media literate, they don't consider memes as a tool that could cause any damage.

iii-   The effectiveness of media literacy in reducing the spread of inaccurate memes

The results show that the subject of the post affected both the most probable reaction and the evaluation of the content of the post. Out of 391 participants, 51% were asked to evaluate the news in form of memes and 49% were asked to evaluate the hard news. Out of the 391 participants 8.7% reported that they don't share any news on social media in any form, but they just react to the news, pictures and videos they like.

- Political news:

The results show that the participants weren't interested in the political news in general, as 89.7% said that they will not share or comment on political news and 72.3% stated that they won't even react on it, whether it was in a form of meme or hard news. The main reasons for that was that (a) they aren't interested in political news at all (28.3% of the participants who said they won't react to this news), or (b) they didn't find it funny (24.7%), or (c) they think it is fake or not credible (35%).

The least action the participants would probably do to political news is to comment on it. As 74.3% of participants who were asked to evaluate hard news said that they would never comment on the

political news because they aren't interested (37%) or they thought of it as fake or not credible (44.3%). While 70.3% of the participants who were asked to evaluate the memes said they would never comment on political memes. The reasons were slightly different, as 60% referred their decision that the meme wasn't funny to them, and 38.2% stated that they weren't interested in political memes.

Table (4)

The effect of media literacy lectures on reacting to political messages

what was the format of message?	Will you react to this political news							Total
	Never 1	2	3	4	5	6	Definitely 7	
Memes	66	42	28	23	19	10	12	200
News posts	96	28	23	20	13	6	5	191
Total	162	70	51	43	32	16	17	391

Spearman Correlation		No.of cases	Value	Asymp. Std. Errora	Approx. Tb	Approx. Sig.
		391	-.165	.050	-3.292	.001c

They topic of the message affects the reaction on the users to the news. Results show that if the political message is in a form of a meme, users are more likely to react to it. Although the strength of this correlation is weak (0.165), it still indicates that users feel more confident in reacting to political news in the form of memes and not hard news format. This could be due to their fear of offending anyone in their social circles if they express their opinion on political news, which makes reacting to memes less risky as it's just a joke.

As for sharing the political news, there was a significant correlation between sharing of political news and the format of message. 72.3% of the participants who were shown the hard news said they would never share this type of news, while it was slightly different concerning memes as 66% expressed the same sentiment. This means that the probability of sharing political news is higher when it takes a memes form. 95% of those who stated they would share the memes stated the reason for that that it is funny to them. At the same time, 81.1% of those who will not share the political meme said they wouldn't share it because they didn't think it is funny, and 10% said that it wouldn't interest their friends.

Participants in general said that the political news was fake, but there was a slight change between hard news and memes. Those who were evaluated political memes 91.9% stated they thought the meme was fake, while those who evaluated the political hard news only 88.5% stated they thought the news was fake. This indicates that university students don't give much credibility to memes compared to hard news.

The media literacy lectures didn't have a big effect on sharing or commenting on political hard news vs. memes, as the general trend was not to share or comment. Nevertheless, the results show a significant relation between taking the media literacy lectures and decreasing the tendency to react on the hard news only at a significance level 0.05. This shows that the participants still don't really see memes as tool of communicating information.

The effect of media literacy lectures appeared when the participants evaluated the credibility of the news in both the hard news and the memes. There was a significance correlation between media literacy lectures and evaluating the credibility of the political news with significance level 0.01 for evaluating memes and 0.001 for evaluating hard news.

Table (5)

The correlation between media literacy lectures and evaluating the credibility of the political news

What was the format of message?			Evaluate the credibility of the political news							Total	Pearson Chi-Square		
			Not credible at all 1	2	3	4	5	6	Very credible 7		Value	df	Asymp. Sig. (2-sided)
Memes	Media literacy	yes	74	6	5	4	3	3	0	95	14.892a	6	.021
		No	57	21	12	4	5	2	1	102			
	Total		131	27	17	8	8	5	1	197			
News posts	Media literacy	yes	47	16	1	2	4	3	6	79	30.330b	6	.000
		No	40	9	18	17	6	10	9	109			
	Total		87	25	19	19	10	13	15	188			

This indicates that although media literacy lectures affected the participants view of the credibility of social media news, this effect

wasn't evident in the intentions of participants towards reacting, commenting or sharing the political news memes. It was evident when reacting towards the hard news only.

- Social news:

Results show differences in the credibility evaluation between memes and hard news. The hard news format was evaluated as more credible than the form of memes although both news formats had the exact same information. The media literacy lectures didn't have an effect on evaluating the credibility of memes, but it did have a small effect on the evaluation of hard news social message. Those who received the media literacy messages evaluated the credibility of the hard news message slightly less than those who didn't receive the media literacy messages. Nonetheless, this difference wasn't statistically significant.

Table (6)
Evaluation to credibility of Social news vs. message type

Evaluation of message credibility		Format of message		Evaluation of message credibility		Format of message		Evaluation of message credibility		Format of message	
		Memes	Hard News			Memes	Hard News			Memes	Hard News
Easy to picture	Not at all	29	18	*Specific*	Not at all	31	17	*Credible*	Not at all	131	87
	2	25	15		2	31	8		2	27	25
	3	26	17		3	27	14		3	17	19
	4	34	23		4	22	15		4	8	19
	5	22	33		5	26	31		5	8	10
	6	32	40		6	27	36		6	5	13
	Very	27	38		Very	30	62		Very	1	15
Total		195	184	Total		194	183	Total		197	188

Statistically, the correlation between the format of message (hard news or memes) and the evaluation of message credibility in relation to being easy to picture, specific and credible is significant with significance level 0.01, but the strength of this correlation is weak as shown in table (7).

Table (7)

The correlation between credibility of Social news vs. message type

Spearman Correlation	N of Valid Cases	Value	Asymp. Std. Errora	Approx. Tb	Approx. Sig.
News was easy to picture	379	.166	.050	3.264	.001c
News was specific	377	.287	.048	5.801	.000c
News was credible	385	.243	.049	4.902	.000c

There was no significance correlation between in the intention of participants to comment, react on or share the social news posts and taking the media literacy lectures for both memes and hard news. 38.1% of the participants weren't interested in the social news whether in the hard news format or the meme. 42.1% of the participants who were asked to evaluate the social news meme based their reaction (comment, share, or react) on how funny the meme to them is or if they think it will be funny for their friends.

Table (8)

Reasons for reacting, sharing, or commenting on the social news

Reason	Media literacy lecture		No media literacy lecture		Total
	meme	*Hard news*	*meme*	*Hard news*	
Funny/not funny	36	4	33	4	77
Credible/not credible	24	43	22	24	113
Not interested	26	21	4	47	98
I don't share	-	-	5	-	5
Others	8	4	18	11	41
Missing	13	14	11	19	57
Total	107	86	93	105	391

Again, media literacy lectures effect is evident when evaluating the credibility of the social news in hard news only and not the memes. There is significant correlation between taking the media literacy lectures and not trusting the credibility of the hard news post at significance level 0.05, where the percentage of the participants who trust the credibility of the news and its source is only 9.1% for those who took the media literacy lectures, compared to 19.8% for those who didn't take the lectures.

- Health news:

The results for the health news are a bit different. The percentage of participants who weren't interested is much less than the political or social news (10.6%), which indicate that the participants are much more interested in health news. This could be due the raise in health issues interest after COVID-19.

Table (9)
The effect of message type on the sharing intentions towards Health news

what was the format of message?	Will you share this health news							Total
	Never 1	2	3	4	5	6	Definitely 7	
Memes	116	31	12	15	8	4	7	193
News posts	98	19	17	16	15	7	15	187
Total	214	50	29	31	23	11	22	380

Spearman Correlation	No. of cases	Value	Asymp. Std. Errora	Approx. Tb	Approx. Sig.
	380	.117	.051	2.288	.023c

The participants who were asked to evaluate the health meme expressed their disapproval of using funny tool with such a serious topic, where 30% stated that it isn't a laughing matter. At the same time, 13% those who received the hard news expressed the importance of the information and the need to share it with others to help them. This needs to help others made their intention to share the news or meme higher than the other topics regardless of its credibility. The format of message affected the intention to share the health news to some extent. There is a statistically significant correlation between the format of message and the intention to share it at significance level 0.05, but this correlation is weak (0.117). Opposite to the political and social news, the hard news had a higher intention to share than memes. This again could be attributed to the need to help others, but it indicates the easiness of sharing fake health news among university social media users.

Table (10)

Evaluation to credibility of Health news vs. message type

Evaluation of message credibility		Format of message		Evaluation of message credibility		Format of message	
		Memes	Hard News			Memes	Hard News
Convincing	Not at all	55	31	*Specific*	Not at all	36	23
	2	32	36		2	32	16
	3	32	34		3	21	29
	4	28	33		4	27	25
	5	12	22		5	30	24
	6	15	12		6	19	26
	Very	17	17		Very	26	42
Total		191	185	Total		191	185

Table (11)

The correlation between credibility of Health news vs. message type

Spearman Correlation	N of Valid Cases	Value	Asymp. Std. Errora	Approx. Tb	Approx. Sig.
News was convincing	376	.104	.051	2.030	.043c
News was specific	377	.153	.051	2.987	.003c

Moreover, the format of the message affected the participants' evaluation of the message. Although it didn't affect their overall evaluation of the message credibility, the participants' answers indicated the trust in hard news health messages more than memes. There was a statistically significant correlation between the message format and the evaluation of it being specific (at significance level 0.05) and convincing (at significance level 0.05).

The media literacy lectures effect was evident when evaluating the credibility of the information of the health meme. There was a significant correlation between media literacy lectures and evaluating the credibility of information in the meme at significance level 0.05. 37% of the participants who took the media literacy lectures rated the meme as not credible at all compared to 21.2% for those who didn't take the media literacy lectures.

Overall, media literacy lectures didn't significantly affect the users' evaluation of all types of news or their intentions to react, share or comment on them or their judgment on the fakeness of these news for

the memes format. On the other hand, the success of media literacy lectures was somewhat evident with the hard news format, but the differences wasn't statistically significant all the time. The subject of the news had more effect on the users' reactions and evaluations. Political news isn't interesting at all to most of the university students under study, while health news had the highest interest to them, but not because of the news itself but rather because they see it as helpful to others.

Discussion

At the present time, Memes is a cultural and easy tool used to express the thoughts, feelings, hopes and fears of youth on social media. The concise witty way memes are written combined by the visual element that strengthens the meaning behind the meme makes it easily stored in the minds of users. It became a part of the interpretation process of the world. Youth sees the world and gives it meaning through memes.

At the same time, it is the perfect agent to spread misinformation and disinformation. The results show that university students are aware of the importance to check the information and news they receive through social media, but at the same time they don't see memes as a tool of spreading information. To them, memes are just funny messages to share just for laughs.

The study findings shed light on the social media habits of the participants. It was found that most participants were heavy users of social media. TikTok was reported as the most commonly used social media app among the participants, followed by Instagram, which indicates that the monopolization of Facebook could lessen in the recent year.

The participants primarily used social media to share social and personal news, indicating that they view it as a means of social communication rather than a source of hard news. However, the amount of time spent on social media suggests that they also rely on it to stay updated on current events.

The study highlighted the participants' engagement with memes, revealing that all participants were exposed to memes on social media daily, and the majority shared memes more often than news and information. Although participants were aware that memes are often inaccurate or untruthful, they still shared them frequently, considering

them as fun communication tools with no serious consequences. Only a small percentage admitted to deliberately sharing misinformation through memes, primarily driven by the humor factor. This action, accompanied by the participants' actions concerning how they verify the credibility of social media news, indicates a conflict between their perception and their actions.

When evaluating the credibility of social media apps, the participants' ratings were moderate, indicating a degree of skepticism, but they still share, react and comment on many of the skeptical news due to other reasons besides its credibility. Around third of the participants reported that they rely on other people's opinions or the virality of the news to check the credibility of social media news. Of course, these approaches are prone to biases and inaccuracies.

Regarding the effectiveness of media literacy in reducing the spread of inaccurate memes, the results indicated that the format of the message (memes vs. hard news) influenced participants' reactions and evaluation of the content more than the media literacy lectures itself. In general, memes received less credibility compared to hard news. On the other hand, the intention to share memes was higher than hard news. This supports the already existing literature that memes are "safer" to share especially in political or controversial issues. Again, this also indicates that the credibility of the message isn't the main factor of determining the intention of sharing.

The study found that media literacy lectures had a limited effect on participants' intentions to react, comment, or share political news memes. However, there was a significant correlation between the lectures and the evaluation of the credibility of political news. The participants who received the media literacy lectures were more skeptic of the political news messages in both formats and were more conservative in their intention to share, comment or react on it. This effect was evident also in the social media message but was limited to the hard news format only. As for the health news messages, the media literacy lectures had no significant effect on the participants' intentions to react or evaluation.

This phenomenon needs more investigation, but it could be attributed that social media is viewed by participants as credible source for social news and not political ones. It also could be attributed that

participant viewed sharing the health and marriage laws messages could be more helpful than harmful, or they could use it to start "safe" conversations between individuals in their online circles.

To sum it up, Media literacy is an essential part of education nowadays, but the tools used need to be updated all the time to match the vast changes in technology. The study found that media literacy lectures had a minimal impact on reducing the spread of inaccurate memes among university students. Participants who received media literacy lectures didn't show a higher level of critical evaluation and skepticism towards memes compared to those who did not receive the lectures. This doesn't negate the importance of media literacy in equipping individuals with the necessary tools to identify and halt the dissemination of false or misleading information, but rather experimenting more on media literacy to find the right combination of tools and content that would reach the target audience.

Media literacy lectures need to be developed more to suit the motivations and perceptions of social media users. Also, the type of the news is one of the factors that could be taken into consideration when building media literacy programs. Media literacy programs need to incorporate memes more as a tool of education to be more effective in detecting and mitigating the use of inaccurate memes.

Conclusion

The study focuses on the significance of symbolic interaction theory in understanding the dynamics of memes. Memes, as cultural symbols, rely on shared cultural references and symbols to convey messages and evoke responses from social media users. The interplay between symbolic interaction theory and memes deepens our understanding of how digital culture and social dynamics evolve in the digital age.

The research questions addressed in this study were focused on university students' perception and engagement with memes, their exposure to inaccurate memes, and the effectiveness of media literacy in reducing the spread of inaccurate memes among them. The quasi-experimental design allowed for a comparison between the group that received media literacy lectures and the group that did not,

considering different types of messages (news posts vs. memes) and topics (political news, social news, and health news).

The findings of this study contribute to the existing literature by shedding light on the role of memes, media literacy, and symbolic interaction theory in the context of university students. The results emphasize the need for media literacy interventions to empower individuals in critically evaluating and analyzing memes, discerning between accurate and inaccurate information, and making informed decisions when engaging with and sharing memes.

Limitations of the study

1. Generalization of results: The findings of this study may not be generalizable to the entire population, as the sample consisted of Mass Communication students only and from a private university (one institution only). The results may vary among different demographics, educational backgrounds, and cultural contexts. Also, although the study included 391 participants, the sample size may still be considered relatively small, which could limit the statistical power and generalizability of the findings.

2. Self-report measures: The data collected in this study relied on self-reported evaluations from the participants. Self-report measures are subject to biases and may not always accurately reflect participants' actual behaviors or perceptions.

3. Short-term effects: The study focused on the immediate effects of media literacy lectures on sharing fake memes among university students. Long-term effects and sustainability of these interventions were not examined.

Recommendations for future research

1. larger and more diverse samples: Future research should aim to include larger and more diverse samples to increase the generalizability of the findings. This could involve including participants from different educational backgrounds, cultural contexts, and age groups.

2. Longitudinal studies: Conducting longitudinal studies would allow for a better understanding of the long-term effects of media literacy interventions on meme sharing behaviors and the spread of

misinformation. Examining the sustainability of these interventions over time is crucial.

3. Comparative studies: Comparing the effectiveness of different media literacy interventions and strategies can provide valuable insights into the most effective approaches for reducing the spread of inaccurate memes. Comparisons can be made between different educational methods, curriculum designs, and target populations.

4. Qualitative research: In-depth qualitative research methods, such as interviews or focus groups, can provide deeper insights into participants' perceptions, attitudes, and experiences regarding memes and media literacy. This can help researchers better understand the underlying factors influencing meme sharing behaviors.

5. Cross-cultural studies: Exploring the role of memes and media literacy in different cultural contexts can shed light on the cultural variations in meme usage, interpretation, and the spread of misinformation. Comparative studies across cultures can help identify culturally specific factors and inform the development of culturally tailored media literacy interventions.

6. Integration of technology: As technology continues to evolve, future research should explore the impact of emerging technologies, such as artificial intelligence and deepfakes, on meme creation, dissemination, and the spread of misinformation. Understanding these dynamics can inform the development of more comprehensive media literacy interventions.

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