EMOTIONAL INTELLIGENCE AND FAKE NEWS QUOTIENT OF BPE STUDENTS

Potenciando, Marmee Rochelle Malinao\textsuperscript{1i}, Cabalquinto, Ron Danelle\textsuperscript{2}, Duliguez, Evander\textsuperscript{2}, Labarca, Rollen Joie\textsuperscript{2}

\textsuperscript{1}EdD, Faculty, College of Teacher Education, University of Mindanao, Davao City, Philippines
\textsuperscript{2}College of Teacher Education, University of Mindanao, Davao City, Philippines

Abstract:
This descriptive correlational design study aimed to describe the significant relationship between emotional intelligence and the fake news quotient of BPE students. The results from 200 BPE students from the College of Teacher Education of the University of Mindanao revealed the following: the level of emotional intelligence was high; the level of fake news quotient was high; when correlated, there is a significant and moderate positive relationship among the variables. This implies that emotional intelligence could moderately affect the fake news quotient of BPE students, where emotional intelligence will allow them to determine fake news. However, having an average level of emotional intelligence will not only be the factor that influences the determination of fake news. Thus, determining the students’ emotional intelligence level provides insight to teachers on how emotional intelligence may affect the fake news quotient of BPE students.

Keywords: emotional intelligence, fake news quotient, BPE students

1. Introduction

The purposeful dissemination of incorrect information online through print, broadcast, or social media sites was characterized as fake news or fact. Fake news has become a significant phenomenon in internet-based media (Molina \textit{et al.}, 2019). Aside from reporting mistakes, they often do not originate from reputable news sources. It was created to deceive readers to benefit politically or financially, and it frequently uses

\textsuperscript{1}Correspondence: email marmeepotenciando@gmail.com.
spectacular headlines meant to draw readers. The frightening headlines and emotive language are purposefully written to appeal to a large audience and to promote extensive sharing (Dey et al., 2018). While fake news is not new (Tandoc Jr., et al. 2018), inquiries such as why it has become a worldwide issue of concern are gaining more public attention.

According to the survey conducted by Social Weather Stations (SWS), 69 per cent of Filipinos say the problem of fake news in social media is serious, up from 60 per cent in December 2017 (In Media Internet, 2022). In an online article, seeing the adverse causes and effects of fake news, fake news affects the social and economic decision-making process needed for individual progress. It prevents users from accessing accurate information (Statement on Fake News, 2018). Further, fake news stories have recently caused disruptions to society and damaged individual’s lives (Torres & Negahban, 2018).

As a matter of fact, fake news is a serious concern as it is evil and wrong for society and democracy (Molina et al., 2019). With this, it is essential to be aware of fake news and administer fake news quotient, self-awareness, and digital literacy when tackling the problem of fake news items (Kalita & Deka, 2018). Comprehending and acquiring a fake news quotient is one of the most important aspects of avoiding destroying credibility (Fake News, 2022).

To clarify, emotional intelligence (EI) is the individual’s ability to manage emotions (Karibeeran & Mohanty, 2019; Zhao, 2021). This is reflected in expressing, controlling, and assessing them. Such emotional intelligence can predict one’s capacity to achieve success. It has four competencies, namely, self-awareness, self-management, social awareness, and relationship management (Barinua et al., 2022; Mustafa et al., 2020; Stoller, 2021; Winter & McCann, 2022). Specifically, self-awareness is attributed to one’s ability to recognize what they feel and act, the points of their strengths and weaknesses, their independence among the things they are surrounded by, to make decisions on their own, express their thoughts freely upon a particular matter, and to be able to assess themselves (Atmojo, Muhtarom, & Lukitoaji, 2020; Castine et al., 2019). Meanwhile, self-management is one’s ability to control oneself when triggered by a distressing emotion or overjoyed (Goleman, 2001; Sabie et al., 2020). Social awareness is one’s ability to recognize and perceive others’ emotions (Wamsler & Restoy, 2020). Lastly, relationship management is the ability of an individual to be aware of oneself and others when it comes to fostering a solid relationship with them (Naik, 2020).

Several studies found that people with high levels of emotional intelligence are less likely to be susceptible to ‘fake news’ and are better at spotting it. They can acknowledge and embrace the differences between accurate and misinformed information circulating on different platforms (Anderson & Robertson, 2021; Llamas et al., 2022; Preston et al., 2021). Meanwhile, the fake news quotient entails one’s level of awareness in recognizing fake news and is determined by fake news identification (FI) and fake news tackling activities (FTA) (Kalita & Deka, 2018). FI refers to a person’s ability to distinguish between fake and true news and how they respond to the biases they would inevitably have in identifying such information. (Batailler et al., 2022). While FTA,
it involves conversations that concern spreading fake news to individuals and society (Kalita & Deka, 2018).

Consequently, this study is anchored in the theory of Thorndike (1911), the “Law of Effect,” which states that the probability that a particular stimulus will repeatedly obtain a particular consequence depends on how it is perceived. This means that the student’s level of emotional intelligence would likely be a significant endeavour. As an effect, it will highlight and enhance the student’s ability to determine fake news. The adverse impacts of fake news can spontaneously adversely impact the lives of each individual. However, there needs to be more research on whether one’s emotional intelligence precedes the ability to grasp fake news. As to whatever emotions an individual experiences at the moment, whether too joyous or otherwise, this study will determine how the individual handles their emotions while absorbing new information and whether such emotions impact their recognition of the information as the truth or a fake one.

The outcome of this study will help individuals from all walks of life to reflect on the relationship between emotional intelligence and fake news quotient. Such will help them better assess whether their emotions impact their information-captivating process. More than that, it will help academe to further research in this aspect of study and provide opportunities to their constituents if this paper has proven the variables’ positive relation. Further, this will also benefit the whole society because when people understand that their recognition of fake news is precedence by their capability to manage their emotions, they can better assess and evaluate the information they intend to absorb, and this will help society because the adverse impacts of fake news are prevented and that only information that holds veracity are being shared to the community.

This study intends to determine the underlying relationship between emotional intelligence and fake news quotient. It will examine the capability of Bachelor of Physical Education (BPE) students to detect and recognize fake news and whether this capability is affected by one’s emotional intelligence. The researchers will first determine the BPE students’ emotional intelligence level and their fake news quotient. Also, this study will test the hypothesis that there is no significant relationship between emotional intelligence and fake news quotient at a .05 significance level.

2. Method

2.1 Research Respondents
The study’s target respondents are Bachelor of Physical Education (BPE) students from the College of Teacher Education of the University of Mindanao (Main) enrolled in the academic year 2022-2023. However, the researchers are excluded from the study, and the participants are allowed to withdraw from it.

Using Raosoft Sample Size Calculator, the recommended participants of the study are 201 out of 420 enrolled BPE students. The sample size is deemed appropriate since it is greater than 30 but less than 500 (Bujang et al., 2018). This study will use convenience sampling – a nonprobability or non-random sampling in which members of the target
population who meet specific practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or willingness to participate, are included for the study (Etikan et al., 2016).

2.2 Research Instruments
The instrument used in this study is an adapted questionnaire to collect data from respondents. The survey questionnaire is composed of two parts. The first part is the Emotional Intelligence questionnaire adapted from Daniel Goalman’s (1995) “Emotional Intelligence: Why it can matter more than IQ” and was modified by Suzanne Farmer et al. (2013) at UT South Western’s Office of Development and Training. It comprises four indicators: self-awareness (7 items), self-management (8 items), social awareness (8 items), and relationship management (7 items). The second part is the Fake News Quotient questionnaire adapted from Kalita & Deka (2018). It comprises two indicators - fake news identification (9 items) and fake news tackling activities (8 items).

The adapted questionnaire was modified by the researchers with the assistance of their adviser for contextualization. Then, it was submitted to the panel of experts for its validity, resulting in an overall mean of 4.5, which means a very high rating. The tool's item consistency underwent pilot testing, which yielded a Cronbach alpha coefficient score of 0.9375. As a result, the updated questionnaire can be a trustworthy tool for performing this research since it has excellent internal consistency.

In answering the questionnaire, the respondents will rate each of the statements using a five-point Likert-type scale by simply checking the accurate selection corresponding to their knowledge and experience stipulated in each item in the questionnaire. Mean scores will be interpreted using the scale: for a range of mean of 4.20-5.00 (Very high), this means that the emotional intelligence and fake news quotient are always manifested. With 3.40-4.19 (High), this means that the emotional intelligence and fake news quotient are sometimes manifested. For 2.60-3.39 (Moderate), this means that the emotional intelligence and fake news quotient are often manifested. With 1.80-2.59 (Low), this means that the emotional intelligence and fake news quotient are rarely manifested. Furthermore, 1.00-1.79 (Very low) means that the emotional intelligence and fake news quotient never manifest.

2.3 Research Design/Procedures
The researchers used the descriptive correlational method in conducting the study, which provides static pictures of situations and establishes the relationship between different variables (McBurney & White, 2009). This approach was appropriate for this study to determine the relationship between emotional intelligence and fake news quotients of BPE students.

The researchers requested permission from the Dean of the College of Teacher Education. Upon confirmation and approval, questionnaires were administered online and face-to-face. As to online administration, an online Google Form was used where the link was disseminated through the Messenger platform and BlackBoard Learn-Learning Management System with the assistance of BPE professors. For face-to-face
administration, a hard copy was distributed to random BPE students of the said University. The desired number of responses took a month to gather, and then they were tallied and analysed. The statistical tools employed in treating the problem were mean, standard deviation, and Pearson’s r.

3. Result and Discussions

This chapter discusses the results of the statistical treatment of the data collected by the proponents.

3.1 Level of Emotional Intelligence of BPE Students

Table 1 shows the respondents’ emotional intelligence level, which is high, with an overall mean of 4.15, SD=0.460. This means that the emotional intelligence of BPE students is sometimes manifested. Further, self-awareness and self-management got a very high description with a mean rating of 4.32, SD=0.507 and 4.22, SD=0.558, respectively. Meanwhile, the last two indicators got a high description with a slight difference in the mean rating of 4.01, SD=0.588 and 4.05, SD=0.588, respectively. This implies that the students understand the context of self-awareness, self-management, social awareness, and relationship management.

In support, students with high self-awareness can significantly impact the decisions of an individual (Yao et al., 2022). Similarly, emotionally intelligent people are more adept at recognizing it (Anderson & Robertson, 2021). Further, in the study of Brashier, Eliseev, and Marsh (2020), they posited that how individuals absorb information influences their ability to acknowledge fake news upon knowing the veracity of the information absorbed.

Table 1: Level of Emotional Intelligence of BPE students

<table>
<thead>
<tr>
<th>Indicators</th>
<th>X</th>
<th>SD</th>
<th>Qualitative Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-awareness</td>
<td>4.32</td>
<td>0.507</td>
<td>Very High</td>
</tr>
<tr>
<td>Self-management</td>
<td>4.22</td>
<td>0.558</td>
<td>Very High</td>
</tr>
<tr>
<td>Social Awareness</td>
<td>4.01</td>
<td>0.588</td>
<td>High</td>
</tr>
<tr>
<td>Relationship Management</td>
<td>4.05</td>
<td>0.558</td>
<td>High</td>
</tr>
<tr>
<td>Emotional Intelligence</td>
<td>4.15</td>
<td>0.460</td>
<td>High</td>
</tr>
</tbody>
</table>

3.2 Level of Fake News Quotient of BPE Students

Table 2 presents the level of fake news quotient of BPE students. The respondents manifested a high level of fake news quotient with an overall mean value of 4.04 with SD=0.562. Fake news identification has the highest mean of 4.15 with SD=0.627, compared to fake news tackling activities with a mean of 3.91 and SD of 0.676; both have a description of high. This means that awareness of students in recognizing fake news is sometimes manifested.

Hence, with the high result of fake news identification, students can distinguish between fake and trustworthy news and how they respond to the biases they would
inevitably have in identifying such information (Batailler et al., 2022). It can be attributed to their education and can be improved further through communication programs (Montagni et al., 2021), as well as to their experience and age (Mladenova & Valova, 2022). Similarly, in fake news tackling activities, students are exerting efforts against spreading fake news by notifying others, sharing a piece of certain information, and vouching that it is fake (Veeriah, 2021). Tackling activities involve conversations about spreading fake news to individuals and society (Kalita & Dela, 2018).

### Table 2: Level of Fake News Quotient of BPE Students

<table>
<thead>
<tr>
<th>Indicators</th>
<th>X</th>
<th>SD</th>
<th>Qualitative Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fake News Identification</td>
<td>4.15</td>
<td>0.627</td>
<td>High</td>
</tr>
<tr>
<td>Fake News Tackling Activities</td>
<td>3.91</td>
<td>0.676</td>
<td>High</td>
</tr>
<tr>
<td>Fake News Quotient</td>
<td>4.04</td>
<td>0.562</td>
<td>High</td>
</tr>
</tbody>
</table>

Lastly, on the level of the fake news quotient, students have a strong ability to spot false information and prevent it from spreading. In contrast, the quotient entails one's level of awareness in recognizing fake news (Kalita & Deka, 2018). Such quotient includes verifying the information as accurate or fake and having information skills and education (Batailler et al., 2022; Dabbous et al., 2022). Students have unique information-seeking habits and critical assessment methods linked to precise identifications and evaluations, as well as a propensity to share news items on social media and evaluate false news stories effectively (Leeder, 2019).

### 3.3 Correlation between Emotional Intelligence and Fake News Quotient of BPE Students

Table 3 shows the correlation between emotional intelligence and the fake news quotient of BPE students. As indicated in the table, self-awareness got the highest correlation value of .599 among the indicators of emotional intelligence, while self-management got the lowest correlation value of .489. When the variables were correlated, they had a significant and moderate positive relationship; hence, the overall r is .625 in which p < .001.

The individual’s self-awareness in social media positively impacts their ability to identify fake news (Dabbous et al., 2022). Barthel, Mitchell, and Holcomb (2016) quantified Americans' self-awareness level in terms of their ability to identify fake news. They concluded that being aware of this phenomenon and taking initiatives against it creates an avenue for fake news to no longer be shared with the general public.

Several studies supported the claim of this study. According to Preston et al. (2021), there is a significant and positive relationship between the varying emotional intelligence of individuals and their fake news quotient. That is, people can better judge the accuracy of the information when they can ignore the emotionally charged content. Likewise, Martel et al. (2020) discovered a positive correlation between emotions and belief in fake news. Dependence on emotion enhances belief in false information and highlights that emotional processing may have made people more susceptible to false information.
Similarly, in an article, those with strong emotional intelligence are less likely to be influenced by "false news" (News, 2021).

### Table 3: Correlation between Emotional Intelligence and Fake News Quotient of BPE Students

<table>
<thead>
<tr>
<th>Emotional Intelligence</th>
<th>Fake News Quotient</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fake news identification</td>
<td>Fake news tackling activities</td>
</tr>
<tr>
<td>Self-awareness</td>
<td>.522**</td>
<td>.513**</td>
</tr>
<tr>
<td>Self-management</td>
<td>.394**</td>
<td>.452**</td>
</tr>
<tr>
<td>Social Awareness</td>
<td>.384**</td>
<td>.470**</td>
</tr>
<tr>
<td>Relationship Management</td>
<td>.378**</td>
<td>.502**</td>
</tr>
<tr>
<td>Overall</td>
<td>.500**</td>
<td>.581**</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

4. Conclusion and Recommendation

4.1 Conclusion

This study was conducted to determine the level of emotional intelligence and fake news quotient of BPE students of the University of Mindanao and further test the relationship between both variables. The conducted methodology discovered that the respondents’ emotional intelligence level was high, and their fake news quotient also manifested a high level. A significant and moderately positive relationship was manifested among the variables in testing the relationship between emotional intelligence and fake news quotients through the Pearson correlation. Hence, such results led to the rejection of the null hypothesis established for this study.

The result implied that the student’s level of emotional intelligence affects the student’s fake news quotient. The theory of Thorndike on the “Law of Effect” supports the result of this study. It claimed that how a stimulus is perceived affects the likelihood that it would lead to a specific outcome again. As a result, assessing the student’s emotional intelligence will likely be important, which will also emphasize and improve their capacity to spot fake news. This means that the students' emotional intelligence level helps them to function effectively, but being emotionally intelligent is not the only factor that can affect the fake news quotient of the respondents. Nevertheless, emotional intelligence somehow helps BPE students to determine fake news. Hence, emotional intelligence can still be considered to affect the BPE students’ fake news quotient positively.

4.2 Recommendation

With the findings and conclusions that were gathered, the recommendations are created: For students, hence their level of emotional intelligence is high, they may strengthen it by consistently joining training that will prepare them in developing skills for recognizing fake news. It is obvious that students utilize social media for maintaining relationships, entertainment, and obtaining information, their ability to critically evaluate information should now be considered a basic literacy since it tackles the traditional moral and ethical issues in them.
For teachers, enhancing their critical media literacy through training and workshops. This will equip them with the tools necessary to identify fake news so they can teach effectively their students and other employees on the importance of being aware of false news, how to identify and avoid it, and how to critically absorb news.

For future researchers, may utilize this study as a reference for information in the aim of gathering data and finding context for the study of emotional intelligence and fake news quotient. They may also consider carrying on with the study and include more data regarding the study of emotional intelligence and fake news quotient in a different learning environment. With further consideration, there are few studies regarding emotional intelligence and fake news quotients and their indicators, and future researchers may investigate more information regarding this topic.

Conflict of Interest Statement
The authors declare no conflicts of interest.

About the Author(s)
Marmee Rochelle Malinao Potenciando, Doctor of Education, Faculty, College of Teacher Education, University of Mindanao, Davao City, Philippines.
ORCID: orcid.org/0000-0002-0188-531X
Ron Danelle Cabalquinto, Evander Duliguez, Rollen Joie Labarca, College of Teacher Education, University of Mindanao, Davao City, Philippines.

References


