

An Exploratory Study on the Influence of Anonymity, Personality, and Social Factors on Participation in Online College Communities

Eleana Louise HERNANDEZ^a, Vanessa Claire MA^a, Marco Lorenzo MITRA^a, Marco Gabriel TARROSA^a & Ryan EBARDO^{a,*}

^a*De La Salle University, Philippines*

*ryan.ebardo@dlsu.edu.ph

Abstract: Online communities based on social media have become extensions of university life, where students interact, seek information, engage in academic discourse, and build social relationships. In these spaces, anonymity, personality traits, and social factors influence the type of information students share and consume. Guided by the Theory of Reasoned Action (TRA), this study examined how perceived anonymity, neuroticism, extraversion, and fear of missing out (FoMO) affect the behavioral intention of 212 students to participate in online college communities. Using Partial Least Squares – Structural Equation Modeling (PLS-SEM), the analysis revealed that FoMO does not have a positive effect on participation intention. However, perceived anonymity, neuroticism, and extraversion were found to positively influence students' attitudes toward participation, thereby affecting their intention to engage in anonymous college communities. The study recommends further investigation into all Big Five personality traits, exploration of specific anonymous platforms such as subreddits or Facebook pages, and a deeper analysis of the relationship between FoMO and anonymity. Understanding these factors can help shape academic policies that leverage social media platforms as alternative spaces for academic discourse.

Keywords: Anonymous College Communities, Theory of Reasoned Action (TRA), Perceived Anonymity, Personality Traits, Fear of Missing Out (FoMO)

1. Introduction

Using anonymous online communities is becoming more prevalent, as it allows users to freely discuss thoughts, opinions, and experiences while keeping identities hidden. Among these communities, pages specific to colleges have risen. These come in the form of Facebook freedom walls, university subreddits, and confession pages. With the unique anonymity feature of such online platforms, college students share challenges and experiences, seek emotional support, and discuss coping strategies (Rodriguez et al. 2023; Sacks et al., 2021). Furthermore, these communities play a crucial role in providing students a safe space to express themselves and find support, while also offering valuable insights for educators and administrators to better understand and address student needs. Existing research on these communities is scant, and it is crucial for studies to find how various personality traits and social factors influence attitudes, intentions, and participation in these online spaces. While personality traits and social factors have been widely studied in social media, minimal studies explore their effect in anonymous contexts. Using the Theory of Reasoned Action (TRA) as a theoretical framework, the study analyzed the effect of anonymity, extraversion, and neuroticism on attitude; and subjective norms and fear of missing out (FoMO) on Filipino college students' intention to participate in anonymous college communities.

2. Literature Review

Sacks et al. (2021) found that confession pages feature a wide range of concerns such as parking, food, loneliness, university life, and academic concerns. In a Philippine context, the findings of Rodriguez et al. (2023) suggest that these pages provide a supportive and encouraging environment for students to share their experiences and discuss different topics.

One of its features is anonymity, which affects online behavior, as individuals seek anonymity to express themselves more freely or behave toxically (Nitschinsk et al., 2023). Higher levels of perceived anonymity also foster a stronger sense of moral courage (Pan et al., 2023). Meanwhile, Carpenter and Wilet (2021) concluded that anonymity can encourage self-disclosure, leading to more open discussions. Personality traits can also shape one's online behavior. Among the Big Five Personality Traits, extraversion is one of the highest predictors of social media use, as it is easier for people who are more sociable to express themselves in both real-life and online scenarios. (Lampropoulos et al., 2022; Bunz, 2021). For neuroticism, those experiencing unstable emotions tend to seek social contact (Chen and Peng, 2022). Additionally, a motivation to use social media for those with high neuroticism is to socially interact, despite having small online networks (Bowden-Green et al., 2021).

Subjective norms can also shape social media use intentions. In students, subjective norms may come in the form of peer influence. Trivedi et al. (2021) found that peer influence significantly mediates the relationship between performance expectancy, communication functionality, and self on intention to use social media in higher education. This mediation implies that students may experience influences from their peers which impacts intentions to use social media. Additionally, peer influence has been found to affect compulsive social media use (Wang et al., 2023). Lastly, Fear of Missing Out (FoMO) has been found to affect social media use. The meta-analysis by Fioravanti et al. (2021) revealed a strong positive correlation between FoMO and both normal and problematic social media use. In a longitudinal study, Groenestein et al. (2024) found that FoMO and social media use were positively correlated, and they found part of a reciprocal trajectory.

This study will extend the TRA to integrate perceived anonymity, extraversion, neuroticism, and FoMO in order to add to the current literature surrounding anonymous college communities.

3. Theoretical Foundation

TRA posits that an individual's intention to perform a behavior is the strongest predictor of that behavior (Ajzen & Fishbein, 1980; Ajzen, 1975). Behavioral intention is shaped by two primary constructs: attitude toward the behavior and subjective norms. TRA has been widely applied to explain various digital behaviors, including participation in online communities, making it a relevant lens to understand students' intention to participate in anonymous college communities. Perceived anonymity refers to the degree to which users believe their identity is protected in a given online space. Although not originally part of TRA, this construct is relevant in digital contexts where identity protection is a key factor in online participation. Thereby positively affecting attitude towards anonymous college communities. Individual personality traits are included to account for personal predispositions that may influence students' attitudes. Extraversion is the tendency to be outgoing and sociable, while neuroticism is the tendency to experience negative emotions such as anxiety and sadness. FoMO is introduced as a motivational construct that may amplify behavioral intention. FoMO is defined as the apprehension that others are having rewarding experiences from which one is absent. In anonymous communities, where trending confessions or viral posts circulate rapidly, students may feel compelled to stay engaged to avoid social exclusion.

The study hypotheses are summarized in Figure 1 and are framed into the following statements:

H1: Perceived anonymity positively affects attitude towards participation in anonymous college communities.

H2: Neuroticism leads to a positive attitude toward anonymous college communities.

- H3:** Extraversion leads to a positive attitude toward anonymous college communities.
- H4:** Subjective Norms lead to positive intention to participate in anonymous college communities.
- H5:** Fear of Missing Out leads to positive intention to participate in anonymous college communities.
- H6:** Positive attitude leads to positive intention to participate in anonymous college communities.
- H7:** Positive intention leads to actual participation in anonymous college communities.

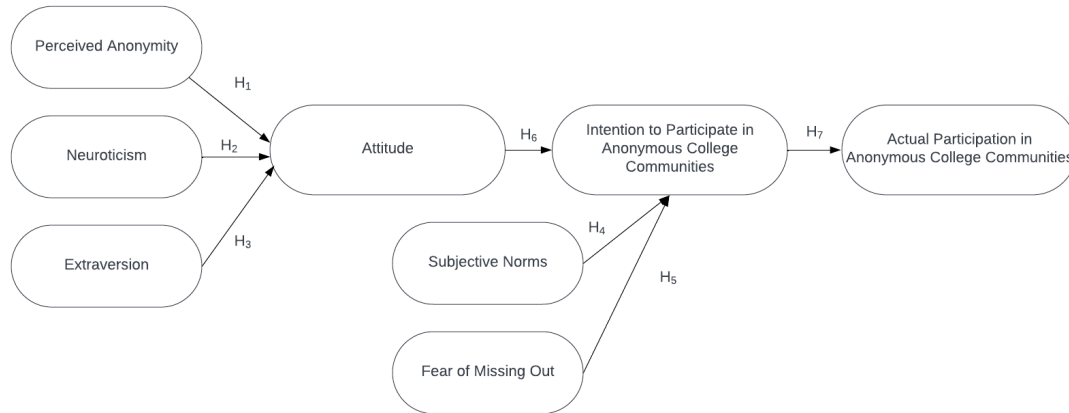


Figure 1. Theoretical Framework and Hypotheses

4. Methodology

A quantitative research design based on the TRA will be used to investigate how different constructs influence Filipino college students' participation in anonymous online communities. To validate the hypotheses and examine the applicability of the TRA in the context of anonymous college communities, the researchers adapted questions from previous validated studies to construct a comprehensive survey. Perceived Anonymity was measured using Hite et al.'s (2014) Perceived Anonymity Measurement Instrument. Neuroticism and Extraversion were measured using items from the Big Five Inventory (John et al., 1991; John & Srivastava, 1999). Subjective Norms were adapted from the study of Yu and Song (2021), while the FoMO construct used the scale developed by Przybylski et al. (2013). Questions for Attitude and Intention were drawn from Peslak et al. (2012), based on the TRA framework, and items related to Actual Participation in confession pages were adapted from Le et al. (2021). The survey was distributed to college students from nine universities across the Philippines, targeting those aged 18 and above. A pilot survey, consisting of 36 participants, was administered. A total of 212 responses were collected before proceeding to the data analysis.

Pilot test results from a sample of 36 students, shown in Table 1, were examined using the Partial Least Squares regression method with SmartPLS software. This method was chosen because it is suitable for predictive research based on our conceptual framework with multiple hypotheses. Bootstrapping was done in SmartPLS to correctly assess path significance with the sample size. This validation analysis demonstrates that the instrument meets the reliability and validity standards set by Hair et al. (2017), with Cronbach's Alpha, Average Variance Extracted (AVE), and Composite Reliability all exceeding the recommended minimum thresholds of 0.70, 0.50, and 0.70, respectively.

Table 1. Instrument Validation

Construct	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Perceived	0.911	0.967	0.716

Anonymity			
Neuroticism	0.748	0.977	0.528
Extraversion	0.826	0.930	0.635
Subjective Norms	0.871	0.869	0.733
FoMO	0.862	0.894	0.506
Attitude	0.849	0.868	0.621
Intention to Participate	0.877	0.879	0.804
Actual Participation	0.907	0.924	0.781

Bootstrapping involves repeatedly drawing random samples with replacement from the original dataset to generate a large number of simulated samples. Hair et al. (2017) states that bootstrapping is especially useful in small-sample research contexts, where traditional parametric assumptions may not hold, and the statistical power is limited. A t-statistic of 1.96 or higher is required to establish a significant relationship at a significance level of 5%, which corresponds to p-values of 0.05 or lower (Hair et al., 2017). Table 2 shows the path coefficient, t-statistics, and p-values extracted for each hypothesis.

Table 2. *Structural Model Test Results: Factors Affecting Attitude, Intention, and Actual Participation in Anonymous College Communities*

Hypotheses	Path Coefficient ¹	T-statistics	P-values	Decision
H1: Perceived Anonymity -> Attitude	0.255	3.539	0.000	Supported
H2: Neuroticism -> Attitude	0.214	3.163	0.002	Supported
H3: Extraversion -> Attitude	0.225	3.406	0.001	Supported
H4: Subjective Norms -> Intention	0.399	5.862	0.000	Supported
H5: FoMO -> Intention	0.098	1.597	0.110	Not Supported
H6: Attitude -> Intention	0.306	4.486	0.000	Supported
H7: Intention -> Actual Participation	0.621	10.388	0.000	Supported

5. Results and Discussion

Based on the statistical analysis of H1, it has been highlighted that perceived anonymity positively affects attitude towards participation in anonymous college communities. This finding is consistent with prior studies that revealed individuals with higher levels of perceived anonymity are more likely to participate actively and honestly in digital spaces (Carpenter & Wilet, 2021; Pan et al., 2023). The statistical analysis of the relationship between neuroticism and attitude (H2) indicates a significant relationship between the two. This aligns with previous research which states that those experiencing unstable emotions tend to seek social contact (Lampropolous et al., 2022; Chen & Peng, 2022). The result, explained by Bowden-Green et al. (2021), stated that neurotic people are not motivated to grow their online networks, however, social interaction is a primary motivation for them to use social media.

The significant positive relationship between extraversion and aligns with previous studies where extraversion is the most significant predictor of social media use and intensity (Lampropolous et al., 2022; Bunz, 2021). The study showed a significant relationship between subjective norms and intention to participate (H4). Wang et al. (2023) supports this idea by exploring how individual and peer-related factors lead to compulsive use of social media. Peer influence is a strong mediator between the key determinants in users' intention to use social media (Trivedi et al., 2021). This supports the notion that subjective norms such as perceived expectations from peers play an important role in shaping behavioral intentions. Similarly,

Leijse et al. (2023) conducted research on peer influence showing that while it may lead to negative effects like anxiety, it can also regulate behavior when social norms are emphasized. This could mean that subjective norms encourage open sharing and participation due to perceived peer activeness.

In contrast, there is a statistically insignificant relationship between FoMO and intention to participate. While previous literature suggests that FoMO can drive addictive or habitual use of social media (Brailovskaia & Margraf, 2024; Fioravanti et al., 2021), our results suggest that FoMO alone may not be sufficient to influence deliberate intentions to participate in anonymous spaces. One explanation could be in the nature of the communities themselves: anonymity makes it difficult to form social connections and strong relationships with others. Need to belong is defined as the drive to form and maintain lasting, positive, and significant interpersonal relationships (Baumeister & Leary, 1995, p. 497). It is possible that the lack of significant relationship is due to the underlying motivations, such as need to belong, which may drive them towards more identity-based platforms.

The study revealed that attitude positively influences intention to participate (H6), and intention to participate positively influences actual participation among students in anonymous college communities (H7). These results confirm the original proposition of TRA and other studies in social media (Yuan et al., 2021; Abbas Naqvi et al., 2019), wherein attitude leads to intention, which leads to participation.

6. Conclusion and Recommendations

This study investigates the determinants of students' engagement in anonymous college communities, affirming the relevance of TRA for understanding digital participation. The analysis supports six of seven hypotheses, revealing that perceived anonymity, neuroticism, and extraversion each positively shape students' attitudes toward these platforms, while subjective norms strengthen intention to participate. Attitude emerged as a strong predictor of intention, which in turn significantly drives actual participation, confirming the applicability of TRA in the study's context. Additionally, Fear of Missing Out does not influence intention, suggesting that the motivators for engaging anonymously differ from those in fully identifiable social media contexts.

Future research could broaden the scope by increasing their sample size and incorporating diverse educational institutions to enhance generalizability. Examining additional moderating factors, such as gender and age, may clarify under which conditions personality traits and anonymity exert stronger effects. Additionally, future research could distinguish between specific platforms like Reddit or Facebook, as they may differ in interaction styles and levels of anonymity. Lastly, our research uncovered the insignificant relationship between FoMO and intention to participate, likely due to the anonymous nature of these communities. Further research can explore FoMO in relation to anonymity and how this affects participation in public and private communities. The findings of this study should be considered when designing, moderating, or integrating such platforms into campus life. Understanding what drives students to participate can help promote safer and more purposeful use of anonymity in academic settings.

References

- Abbas Naqvi, M. H., Jiang, Y., Miao, M., & Naqvi, M. H. (2020). The effect of social influence, trust, and entertainment value on social media use: Evidence from Pakistan. *Cogent Business & Management*, 7(1). <https://doi.org/10.1080/23311975.2020.1723825>
- Ajzen, I. (1975). Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research. *Contemporary Sociology*, 6(2), 244. <https://doi.org/10.2307/2065853>
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Alabri, A. (2021). Fear of Missing Out (FOMO): The effects of the need to belong, perceived centrality, and fear of social exclusion. *Human Behavior and Emerging Technologies* 2022.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529.
- Bowden-Green, T., Hinds, J., and Joinson, A. (2021). Understanding neuroticism and social media: A systematic review. *Personality and Individual Differences*, 168.

- Brailovskaia, J., & Margraf, J. (2023). From fear of missing out (FoMO) to addictive social media use: The role of social media flow and mindfulness. *Computers in Human Behavior*, 150, 107984.
- Bunz, U. (2021). Investigating the relationship between social media use, big five personality, and well-being. *Journal of Communication Technology*, 4(3), pp. 25-52.
- Carpenter, J. P., and Willet, K. B. S. (2021). The teachers' lounge and the debate hall: Anonymous self-directed learning in two teaching-related subreddits. *Teaching and Teacher Education*, 104.
- Chen, M., & Peng, A. Y. (2022). Why Do People Choose Different Social Media Platforms? Linking Use Motives With Social Media Affordances and Personalities. *Social Science Computer Review*, 41(2), pp. 330-352. <https://doi-org.dlsu.idm.oclc.org/10.1177/08944393211049120>
- Fioravanti, G., Casale, S., Benucci, S. B., Probst, A., Falone, A., Ricca, V., & Rotella, F. (2021). Fear of missing out and social networking sites use and abuse: A meta-analysis. *Computers in Human Behavior*, 122, 106839. <https://doi.org/10.1016/j.chb.2021.106839>
- Groenestein, E., Willemsen, L., van Koningsbruggen, G. M., & Kerkhof, P. (2024). Fear of missing out and social media use: A three-wave longitudinal study on the interplay with psychological need satisfaction and psychological well-being. *New Media & Society*.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). A primer on partial least squares structural equation modeling (PLS-SEM) (2nd ed.). SAGE Publications.
- Hite, D.M., Voelker, T., Robertson, A. (2014). Measuring Perceived Anonymity: The Development of a Context Independent Instrument. *Journal of Methods and Measurement in the Social Sciences*, 5(1), 22-39. https://doi.org/10.2458/azu_jmmss.v5i1.18305
- John, O. P. (1991). The Big Five Inventory-Versions 4a and 54. University of California, Berkeley, Institute of Personality and Social Research.
- John O.P., Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives. *Handbook of personality: Theory and research*, 102-138
- Lampropoulos, G., Anastasiadis, T., Siakas, K., Siakas, E. (2022). The impact of personality traits on social media use and engagement: An overview. *International Journal on Social and Education Sciences*, 4(1), pp. 34-51. <https://eric.ed.gov/?id=EJ1332326>
- Le, T. D., Le, L., Phan, Q., Tran, K. T., Nguyen, P. & Liu, G. (2021). Participating anonymous online student communities and university brand relationship outcomes. *Cogent Business & Management*, 8(1). <https://doi.org/10.1080/23311975.2021.1947558>
- Leijse, M. M. L., Koning, I. M. and van den Eijnden, R. J. J. M. (2023). The influence of parents and peers on adolescents' problematic social media use revealed. *Computers in Human Behavior*, 143, 107705. <https://doi.org/10.1016/j.chb.2023.107705>
- Nitschinsk, L., Tobin, S. J., Varley, D., and Vanman, E. J. (2023). Why do people sometimes wear an anonymous mask? Motivations for seeking anonymity online. *Personality and Social Psychology Bulletin*. <https://doi.org/10.1177/01461672231210465>
- Pan, X., Hou, Y., and Wang, Q. (2023). Are we braver in cyberspace? Social media anonymity enhances moral courage. *Computers in Human Behavior*, 148, 107880.
- Peslak, A., Ceccucci, W., Sendall, P. (2012). An empirical study of social networking behavior using Theory of Reasoned Action. *Journal of Information Systems Applied Research (JISAR)*, 5(3), pp. 12-23. https://scholarworks.merrimack.edu/mgt_facpub/19
- Przybylski, A.K., Mruayama, K., DeHaan, C., Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, 29(4), 1841-1848.
- Rodriguez, R. L., Padilla, R.J., Montefalcon, M.D., Abisado, M. and Raga, R. (2023). The post behind anonymity: A thematic discourse analysis of Facebook posts from confession pages in different universities in the Philippines. In *Proceedings of the 2023 11th International Conference on Information and Education Technology (ICIET)*, pp. 529–533, Fujisawa, Japan.
- Sacks, B., Gressier, C. and Maldon, J. (2021). #REALTALK: Facebook confessions pages as a data resource for academic and student support services at universities. *Learning, Media and Technology*, 46(4), pp. 550–563. <https://doi.org/10.1080/17439884.2021.1946559>
- Trivedi, S. K., Patra, P., and Singh, S. (2022). A study on intention to use social media in higher education: the mediating effect of peer influence. *Global Knowledge, Memory and Communication*, 71(1/2), 52–69. <https://doi.org/10.1108/GKMC-11-2020-0169>
- Wang, W., Chen, R. R., and Yang, X. (2023). Examining compulsive use of social media: the dual effects of individual needs and peer influence. *Industrial Management + Data Systems*, 123(12), pp. 3109–3136. <https://doi.org/10.1108/IMDS-10-2022-0631>
- Yu, Z., Song, X. (2021). User intention of anonymous social application "Soul" in China: Analysis based on an Extended Technology Acceptance Model. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(7), 2898-2921. <https://doi.org/10.3390/jtaer16070159>
- Yuan, D., Rahman, M. K., Issa Gazi, Md. A., Rahaman, Md. A., Hossain, M. M., and Akter, S. (2021). Analyzing of user attitudes toward intention to use social media for learning. *SAGE Open*, 11(4).