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## DETERMINANTS OF GOOGLE MEET ADOPTION DURING THE CORONAVIRUS PANDEMIC IN VIETNAMESE UNIVERSITIES

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### ABSTRACT

The Covid-19 epidemic and its derivatives have had a major impact on many parts of social life, including higher education, general education, and primary education. Institutions and universities must sustain remote operations using digital technologies in order to swiftly adjust to the "new normal," which is regarded one of the generally applicable alternatives. The adoption of Google Meet, Zoom, and Microsoft Teams is extensively used in colleges and universities and is considered a significant milestone in communication. Although the use of online methods is projected to have a beneficial impact, there are still obstacles and hurdles in terms of infrastructure, acceptable new regulations, content, digital content, supporting devices, supporting capabilities, and deployment capabilities in digital environments. The study's aim is to discover the factors that influence the use of Google Meet in the educational process and user satisfaction. The tool's validity and reliability were examined using SPSS analysis for exploratory factor analysis (EFA). Factor-based testing using the Varimax rotation, 39 items remained in the questionnaire. Based on the analysis 378 responses, there are 5 factors affecting the use of the Google Meet tool, with the KMO index measuring the appropriateness of the sampling being 0.967; Bartlett's test shows that the Chi-Square Sig index is  $0.000 < 0.05$ . These findings are guidelines for teachers and educators in identifying the factors driving the more effective use of Google Meet in schools.

**KEYWORDS:** Google Meet, determinants, higher education, technology application.

### 1. INTRODUCTION

Education 4.0 in the university training environment is currently a trend of interest in the world as well as in Vietnam [1,2]. Higher education institutions are gradually modifying their training curriculum, instructional techniques, types of evaluation of learning outcomes [3], and other ways of

arranging learning activities in order to meet society's demand for high-quality human resources [1]. As a result, lecturers' ability must be changed to keep up with technological advancements and educational modernization [2]. It can be said that information technology is being widely applied in the field of education and training and has completely changed the traditional education method, reaching an active and globalized educational space. Digital platforms for education are increasingly being applied in many universities [4]. This is regarded as a very practical and extremely successful educational direction: a wise, scientific, and right orientation.

The Covid-19 pandemic not only affects human health and the health system, but also creates disruptions in the entire education system both at the high school and university levels of more than 190 countries around the world [4, 5, 6]. In this context, many colleges have shifted from face-to-face instruction to face-to-face instruction coupled with online or entirely online instruction [4,7,8]. Distance learning is viewed as a method to assist colleges in reducing the hazardous and harmful impacts of Covid-19 [6]. Online education is acknowledged as a teaching modality in the national education system. The Vietnam Ministry of Education and Training has issued directions on the organization of online teaching, which have been concretized by rules on the administration and organization of online teaching. Although online teaching has been shown to have limitations such as reducing face-to-face interaction between lecturers and students, the learning environment has little interaction and discussion [8,9], it also creates favorable conditions for expanding educational access opportunities for learners, particularly when they are unable to attend school for objective reasons. Online education allows lecturers and students to actively utilize important online resources for teaching and learning [10]. Online teaching flexibility allows students to save time, provide quick feedback, and develop higher-order thinking skills [8]. Both instructors and students may increase their capacity to use information and communication technology in the classroom by participating in online teaching, which contributes to the innovation of teaching techniques as well as testing and evaluation. As a result, the popularity of online education at the university level continues to increase [9].

Currently, there are many platforms applied in online teaching such as Zoom, Microsoft Teams, Canvas, Google Meet, etc. [4,9,11]. Google Meet has become a popular platform of choice for a range of online meeting activities, including university education, due to several benefits from the Google ecosystem. According to research, when monitor and manage on establishing learning motivation while using Google Meet to teach online, students are more likely to actively participate and connect with teachers' teaching activities, answer and follow the teacher's request, and provide feedback on the topic [7].

This article aims to investigate the factors affecting the use of Google Meet platform in teaching and learning based on user acceptance testing models of technology use. From there, it gives suggestions to educators in using technology applications effectively and further improving the quality of using online platforms, serving the pedagogical purposes of students and lecturers. Several research efforts

have been made on the factors that influence the use of technology platforms as presented in Table 1.

**Table 1: Factors influencing technology adoption**

| <i>Authors</i>               | <i>Title</i>  | <i>Factors Influencing online teaching</i>  |
|------------------------------|---|---|
| Yogi Tri Prasetyo et al [12] | <u>Determining factors affecting the acceptance of medical education eLearning platforms during the Covid-19 pandemic in the Philippines: UTAUT2 APPROACH</u> | <ol style="list-style-type: none"> <li>1) Performance Expectancy</li> <li>2) Effort Expectancy</li> <li>3) Social Influence</li> <li>4) Learning Value</li> <li>5) Facilitating conditions</li> <li>6) Habits</li> <li>7) Hedonic Motivation</li> <li>8) Instructor Characteristic</li> <li>9) Behavioural Intension</li> </ol> |
| A Shahzad et al. [13]        | <u>Effects of COVID-19 in E-learning on higher education institution students: the group comparison between male and female</u>                               | <ol style="list-style-type: none"> <li>1) Information Quality</li> <li>2) System Quality</li> <li>3)Service Quality</li> <li>4) Intention to Use/Use</li> <li>5) User Satisfaction</li> <li>6) E-learning Portal</li> </ol>   |
| R. Ibrahim et al. [14]       | E-learning acceptance based on technology acceptance model (TAM)  | <ol style="list-style-type: none"> <li>1) Instructor characteristics</li> <li>2) Computer self-efficacy</li> <li>3) Course design</li> <li>4) Perceived usefulness</li> <li>5) Perceived ease of use</li> <li>6) Intention to use e-learning</li> </ol>   |
| Natalia Wrzosek et al. [15]  | Doctors' Perceptions of E-Prescribing upon Its Mandatory Adoption in Poland, Using the Unified Theory of Acceptance and Use of Technology Method              | <ol style="list-style-type: none"> <li>1) Performance Expectancy</li> <li>2) Effort Expectancy</li> <li>3) Social Influence</li> <li>4) Facilitating Condition</li> </ol>   |

|                                   |  |   |
|-----------------------------------|--|---|
| Gefen D. et al. [16]              | Factors affecting the acceptance of blended learning in medical education:<br>Application of UTAUT2 model  | <ol style="list-style-type: none"> <li>1) Performance expectancy</li> <li>2) Effort expectancy</li> <li>3) Social influence</li> <li>4) Facilitating conditions</li> <li>5) Hedonic motivation</li> <li>6) Price value</li> <li>7) Habit</li> <li>8) Behavioral intention</li> <li>9) Use behavior</li> </ol> |
| Prasetyo Y.T et al. [17]          | Blackboard E-learning System Acceptance and Satisfaction Among Filipino High School Students: An Extended Technology Acceptance Model (TAM) Approach | <ol style="list-style-type: none"> <li>1) Perceived Interactivity</li> <li>2) Perceived Ease of Use</li> <li>3) Perceived Usefulness</li> <li>4) Attitude</li> <li>5) Behavior intention</li> <li>6) Actual Use</li> <li>7) Feature</li> <li>8) Satisfaction</li> </ol>                                       |
| Seyyed Mohsen Azizi1 et al. [18]  | Factors affecting the acceptance of blended learning in medical education:<br>application of UTAUT2 model (2020)                                     | <ol style="list-style-type: none"> <li>1) Performance expectancy</li> <li>2) Effort expectancy</li> <li>3) Social influence</li> <li>4) Facilitating conditions</li> <li>5) Hedonic motivation</li> <li>6) Price value</li> <li>7) Habit</li> <li>8) Behavioral intention</li> <li>9) Use behavior</li> </ol> |
| Arumugam Raman and Yahya Don [19] | Preservice Teachers' Acceptance of learning Management Software: An Application of the UTAUT2 Model  | <ol style="list-style-type: none"> <li>1) Performance Expectancy</li> <li>2) Effort Expectancy</li> <li>3) Social Influence</li> <li>4) Facilitating Conditions</li> <li>5) Hedonic Motivation</li> <li>6) Habit</li> <li>7) Behavioural Intention</li> <li>8) Use Behaviour</li> </ol>                       |

|   |   |  |
|---|---|--|
| <p>Ala'a salameh Abu Gharrah and Ali Aljaafreh [20]</p> | <p>Why students use social networks for education: Extension of UTAUT2</p>  | <ol style="list-style-type: none"> <li>1) The Actual Usage</li> <li>2) Performance Expectancy</li> <li>3) Effort Expectancy</li> <li>4) Social Influence</li> <li>5) Facilitating Conditions</li> <li>6) Hedonic Motivation</li> <li>7) Habit</li> <li>8) Lecturer's Support</li> <li>9) Student-Related-Factors</li> </ol>        |
| <p>Chen-Wei Yu1 et al. [21]</p>                         | <p>Exploring Behavioral Intention to Use a Mobile Health Education Website: An Extension of the UTAUT 2 Model</p>   | <ol style="list-style-type: none"> <li>1) Performance expectancy</li> <li>2) Effort expectancy</li> <li>3) Social influence</li> <li>4) Facilitating conditions</li> <li>5) Habit</li> <li>6) Mobile literacy</li> <li>7) Mobile self-efficacy</li> <li>8) Use motivation</li> <li>9) Behavioral intention</li> </ol>              |
| <p>Aburagaga I. et al. [22]</p>                         | <p>Assessing Faculty's Use of Social Network Tools in Libyan Higher Education via a Technology Acceptance Model</p> | <ol style="list-style-type: none"> <li>1) Privacy</li> <li>2) Infrastructure</li> <li>3) Institutional Support</li> <li>4) Access Device</li> <li>5) Perceived Ease of Use</li> <li>6) Perceived Usefulness</li> <li>7) Attitude toward using</li> <li>8) Behavioral Intension to use</li> <li>9) Actual use</li> </ol>            |
| <p>Nguyen, V.T. [23]</p>                                | <p>The perceptions of social media users of digital detox apps considering personality traits</p>                   | <ol style="list-style-type: none"> <li>1) Facilitating Condition</li> <li>2) Effort expectancy</li> <li>3) Performance expectancy,</li> <li>4) Educational policy</li> <li>5) Parental Involvement</li> <li>6) Parental Involvement</li> <li>7) Digital contents</li> <li>8) SexEd Knowledge</li> <li>9) SexEd Openness</li> </ol> |

The evidence from previous research, shown in Table 1, can be categorized as salient factors influencing the use of the technology platform by faculty and students which are as follows:

- Performance Expectancy: measures how strongly consumers think utilizing a technology platform will benefit them personally [12, 15, 16, 18, 19, 20, 21,23].
- Effort Expectancy: is the ease of using technology platforms, especially when it comes to new users. It is based on how long it takes a person to learn to use new technology [12, 14, 15, 16, 17, 18, 19, 20,23].
- Social Influence: refers to a person's perception of their significant others' attitudes toward a new technology platform [12, 13, 14, 15, 19, 20, 21].
- Facilitating Conditions: is the degree to which individuals believe that technical facilities and other organizations have technical support for the use of new technology [12, 15, 16, 18, 19, 20, 22,23].
- Utilitarian: is the convenience in the process of using technology, making users feel a technology platform may fulfill a wide range of needs [12,13,14,15,17, 18, 22].
- Hedonic Motivation: is the excitement and fun of using technology [12, 16, 17, 18, 19, 20].
- Habit: This refers to an individual's tendency to use technology automatically, as well as their behavioral intention to do so with the new platform [12, 19, 20, 21].
- Behavioral Intention: is the ability a person intends to use a new technology platform [12,14, 16, 17, 18, 20, 22].

However, past research has mostly focused on adapting online teaching, teaching in conjunction with face-to-face and online, and there are very few studies on instructors' and students' usage of Google Meet in teaching and learning. The goal of this study is to identify the factors influencing the adoption of Google Meet in the context of Covid-19 in the pedagogical university setting in Vietnam.

## 2. MATERIALS AND METHODS

### 2.1. Participants

A questionnaire was used to obtain primary data. Gender, employment, relevant university where the lecturer/student works/studies, frequency of using Google meet, and time of each access are all examples of responder information. The survey was constructed using a Google form and sent via social media (such as Zalo, Facebook, and others) to lecturers and pedagogical students at three institutions: Quang Nam University, Phu Yen University and Dong A University between November 18, 2021 and January 10, 2022. The number of lecturers and students taking part in the survey is projected to be 500, with 446 responding, accounting for 89.2 percent. Following data collection, the study team eliminated 68 invalid samples due to the same degree of selection while completing the answer. As a result, 378 was included in the analysis (84.75 percent).

Table 2 is a summary of data from online surveys, the proportion of men accounted for 7.14%, while the proportion of women accounted for 92.86%. The occupations of those surveyed related to using Google Meet are students (93.65%) and lecturers (6.35%) of pedagogical majors of Quang Nam University (75.4%), Phu Yen University (13.23%) and Dong A University (11.38%). Frequency of

using the Google Meet platform during the survey period was mainly daily (40.74%), followed by more than 12 times/month (35.89%), from 7 to 12 times/month (11.11%), from 3 to 6 times/month (8.73%), and finally 1 to 2 times/month (3.44%). The most common Google Meet visit time is 3 to 4 hours (65.08%), followed by more than 4 hours (20.11%), the rest is 1 to 2 hours (14.02%) and at least less than 1 hour (0.79%).

**Table 2: Demographic information of participants (N = 378)**

| <i>Variable</i>                             |                          | <i>Frequency</i> | <i>Percentage</i> |
|---|--------------------------|------------------|-------------------|
| Gender                                      | Male                     | 27               | 7.14              |
|   | Female                   | 351              | 92.86             |
| Occupation                                  | Lecturer                 | 24               | 6.35              |
|   | Student                  | 354              | 93.65             |
| University                                  | Quang Nam University     | 285              | 75.40             |
|   | Phu Yen University       | 50               | 13.23             |
|   | Dong A University        | 43               | 11.38             |
| Frequency of using the Google Meet platform | 1-2 times/month          | 13               | 3.44              |
|   | 3-6 times/month          | 33               | 8.73              |
|   | 7-12 times/month         | 42               | 11.11             |
|   | More than 12 times/month | 136              | 35.98             |
|   | Daily                    | 154              | 40.74             |
| Total time for each participation           | Less than an hour        | 3                | 0.79              |
|   | 1-2 hours                | 53               | 14.02             |
|   | 3-4 hours                | 246              | 65.08             |
|   | More than 4 hours        | 76               | 20.11             |

**2.2. Survey instruments**

Following an analysis of the survey questions based on the previous studies, the authors chose 39 questions to include in the study on factors influencing the usage of Google Meet by students and teachers, as shown in Table 3 below.

**Table 3: Questions used to survey participants (N = 39)**

|     |  |
|-----|--|
| Q1  | Google Meet is useful for my online teaching/learning                                      |
| Q2  | Google Meet makes it easy for me to organize or join activities                            |
| Q3  | Google Meet helps me improve teaching/learning efficiency                                  |
| Q4  | If I use Google Meet, I will have more opportunities to achieve my teaching/learning goals |
| Q5  | The Google Meet platform is clear and easy to understand                                   |
| Q6  | I have no trouble building skills using Google Meet  |
| Q7  | I specifically understand how to interact online on the Google Meet platform               |
| Q8  | Learning to use Google Meet was pretty easy for me   |
| Q9  | My colleagues/classmates all encourage me to use Google Meet                               |
| Q10 | Reputable colleagues/best friends in my class recommend that I actively use Google Meet    |
| Q11 | My school's leaders encourage us to use Google Meet  |
| Q12 | We have the guidance and support of the university in using Google Meet                    |
| Q13 | I use many resources in the process of teaching/learning Google Meet                       |
| Q14 | I have the necessary knowledge about using Google Meet                                     |
| Q15 | Google Meet is not compatible with other software/apps I'm using                           |
| Q16 | I am supported by another school/organization to teach Google Meet when I have difficulty  |



|     |   |
|-----|---|
| Q17 | In my work/study environment, everyone has a Gmail account so using Google Meet is easy         |
| Q18 | Google Meet free version with no time limit online  |
| Q19 | Google Meet creates stable interaction, no weak transmission during use                         |
| Q20 | Google Meet can be used on a variety of devices such as smartphones, tablets, laptops, desktops |
| Q21 | Using Google Meet makes it easy for me to interact with people                                  |
| Q22 | Google Meet does not limit the number of participants in each event                             |
| Q23 | Google Meet enables fast and convenient sharing of screens, slides, and documents               |
| Q24 | Learning through Google Meet stimulates excitement  |
| Q25 | Google Meet keeps teachers/learners entertained during teaching/learning                        |
| Q26 | Google Meet makes me feel interesting   |
| Q27 | Using the Google Meet platform really inspires me to study/teach                                |
| Q28 | Using Google Meet has become my habit   |
| Q29 | I tend to prefer using Google Meet in teaching/learning over using other apps                   |
| Q30 | I use Google Meet in combination with some other apps while teaching/learning                   |
| Q31 | I operate on Google Meet very naturally and fluently  |
| Q32 | I plan to continue using Google Meet  |
| Q33 | In the process of learning/teaching, I will use the Google platform                             |

|     |   |
|-----|---|
| Q34 | I will use Google Meet often  |
| Q35 | I will recommend my friends/colleagues to use Google Meet   |
| Q36 | During the Covid-19 period, I regularly use Google Meet   |
| Q37 | I use many functions of the Google Meet platform (messaging, whiteboard, pre-generating links and appointments, recording lessons, ...) |
| Q38 | Without the Google Meet platform, it would be difficult for me to organize/join classes   |
| Q39 | I use Google Meet to further support my teaching/learning process   |

A five-point Likert scale (1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Totally agree) was used for measuring the degree of agreement of each question.

### 2.3. Data Analysis

This study used Exploratory Factor Analysis (EFA) to analyze the data. EFA is a quantitative analysis method used to reduce a set of many interdependent measures into a smaller set of variables (called factors) but still retain most of the information content of the initial variable set [25]. EFA may be used to determine the basic structure of a set of correlated variables. Assume that each index in the set is a linear function of at least one common and one unique component. Common factors are unobservable, hidden variables that influence more than one indication in a collection of indicators. The unique factors are latent variables that are thought to effect only one indication from a collection of indicators and do not take the indicator's correlation into consideration. [26]. Before completing EFA, descriptive statistics were used to assess the fit of the measurement for the 39 survey questions. The study team determined the mean of all responses and the standard deviation (SD) for each question using descriptive statistics. If a item's mean was discovered to be near to 1 or 5, the research team eliminated that response from the analysis since it may affect the correlation between the remaining items [27]. After this step, the normality in the distribution is checked by the skewness and kurtosi test. After confirming the normality of the distribution, exploratory factor analysis was performed using SPSS software 26

### 3. RESULTS AND DISCUSSION

The exploratory factor analysis process begins with collecting eigenvalue values for each factor. Then, the Kaiser-Meyer-Olkin (KMO) scale was used to assess the eligibility of the data for factor analysis [28]. KMO values range from 0 to 1, with values greater than 0.5 deemed adequate for EFA [29].

Bartlett's method was used to determine whether the correlation between questions was strong enough for factor analysis and statistically significant [25]. Further analyzes will be performed only if Bartlett's test is statistically significant ( $\text{sig} < 0.05$ ).

Initially, 39 questions were proposed. After performing several testing procedures, all questions were eligible and retained to perform exploratory factor analysis.

**Table 4: KMO and Bartlett's Test**

|  |                    |         |
|--|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. |                    | .967    |
| Bartlett's Test of Sphericity                    | Approx. Chi-Square | 1.148E4 |
|  | df                 | 741     |
|  | Sig.               | .000    |

EFA was conducted on 39 questions using Varimax rotation. The SPSS software analysis results enable the research team to derive the eigenvalue for each component. The Kaiser-Meyer-Olkin assessment confirmed the adequacy of sample for analysis with a value of 0.967 (see Table 4), greater than 0.6 advised by Kaiser [30] and 0.5 by Kim. [29].

Bartlett's test of sphericity gives the result  $\chi^2(741) = 1.148E4$ ,  $p < 0.000$ , showing that the correlation between the items of the question is large enough to conduct exploratory factor analysis.

### 3.1 Exploratory Factor Analysis

According to Table 5, there are five primary components generated by 39 questions with eigenvalues larger than one. In other words, these 39 questions account for 65.608 percent of the importance of influencing variables in the usage of the Google Meet platform, with the remainder owing to other circumstances. Each component explains the following percentages: factor 1 (48,846 percent), factor 2 (5.728 percent), factor 3 (4.435 percent), factor 4 (3.594 percent), and factor 5 (3.004%).

**Table 5: Eigenvalue, Total Variance Explained of factors**

| Total Variance Explained |                     |               |              |                                     |               |              |                                   |               |              |
|--------------------------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
| Component                | Initial Eigenvalues |               |              | Extraction Sums of Squared Loadings |               |              | Rotation Sums of Squared Loadings |               |              |
|                          | Total               | % of Variance | Cumulative % | Total                               | % of Variance | Cumulative % | Total                             | % of Variance | Cumulative % |
| 1                        | 19.050              | 48.846        | 48.846       | 19.050                              | 48.846        | 48.846       | 6.811                             | 17.464        | 17.464       |
| 2                        | 2.234               | 5.728         | 54.575       | 2.234                               | 5.728         | 54.575       | 6.436                             | 16.503        | 33.968       |
| 3                        | 1.730               | 4.435         | 59.010       | 1.730                               | 4.435         | 59.010       | 4.986                             | 12.786        | 46.753       |
| 4                        | 1.402               | 3.594         | 62.604       | 1.402                               | 3.594         | 62.604       | 4.679                             | 11.998        | 58.752       |
| 5                        | 1.171               | 3.004         | 65.608       | 1.171                               | 3.004         | 65.608       | 2.674                             | 6.856         | 65.608       |
| 6                        | .924                | 2.369         | 67.977       |                                     |               |              |                                   |               |              |
| 7                        | .863                | 2.213         | 70.190       |                                     |               |              |                                   |               |              |

Table 6 shows the loads for each item under a factor. Factor loading provides a description of each factor and structure in a set of variables. For explanatory purposes, a factor load of .30 or more would be considered significant with a sample size of 378 [25]. Using this coefficient load threshold, we can observe that all loads are significant. Furthermore, Table 6 reports that each variable has only a significant load for one factor. Factor 1 has 10 variables, factor 2 has 12 variables, factor 3 has 7 variables, factor 4 has 5 variables and factor 5 has 2 variables.

**Table 6: Rotated Component Matrix**

|     | Component |      |   |   |   |
|-----|-----------|------|---|---|---|
|     | 1         | 2    | 3 | 4 | 5 |
| Q34 | .730      |      |   |   |   |
| Q33 | .685      |      |   |   |   |
| Q37 | .657      |      |   |   |   |
| Q35 | .649      |      |   |   |   |
| Q36 | .642      |      |   |   |   |
| Q32 | .625      |      |   |   |   |
| Q39 | .597      |      |   |   |   |
| Q31 | .556      |      |   |   |   |
| Q28 | .534      |      |   |   |   |
| Q30 | .527      |      |   |   |   |
| Q04 |           | .724 |   |   |   |
| Q03 |           | .721 |   |   |   |
| Q01 |           | .696 |   |   |   |
| Q05 |           | .686 |   |   |   |
| Q02 |           | .653 |   |   |   |
| Q09 |           | .596 |   |   |   |
| Q10 |           | .537 |   |   |   |
| Q06 |           | .532 |   |   |   |
| Q07 |           | .527 |   |   |   |
| Q14 |           | .510 |   |   |   |

|     |  |      |      |      |      |
|-----|--|------|------|------|------|
| Q08 |  | .473 |      |      |      |
| Q11 |  | .450 |      |      |      |
| Q20 |  |      | .768 |      |      |
| Q22 |  |      | .744 |      |      |
| Q23 |  |      | .729 |      |      |
| Q18 |  |      | .708 |      |      |
| Q17 |  |      | .523 |      |      |
| Q21 |  |      | .470 |      |      |
| Q19 |  |      | .444 |      |      |
| Q27 |  |      |      | .779 |      |
| Q24 |  |      |      | .757 |      |
| Q26 |  |      |      | .751 |      |
| Q25 |  |      |      | .659 |      |
| Q29 |  |      |      | .528 |      |
| Q15 |  |      |      |      | .611 |
| Q38 |  |      |      |      | .521 |
| Q13 |  |      |      |      | .502 |
| Q12 |  |      |      |      | .488 |
| Q16 |  |      |      |      | .482 |

Each factor can be named based on the general content of the variables as shown in Table 7.

**Table 7: Naming the factors**

| <b>Component 1: Use Behavior</b>                    |   | Loading |
|---|---|---------|
| Q34   | I will use Google Meet often  | .730    |
| Q33   | In the process of learning/teaching, I will use the Google platform   | .685    |
| Q37   | I use many functions of the Google Meet platform (messaging, whiteboard, pre-generating links and appointments, recording lessons, ...) | .657    |
| Q35   | I will recommend my friends/colleagues to use Google Meet   | .649    |
| Q36   | During the Covid-19 period, I regularly use Google Meet   | .642    |
| Q32   | I plan to continue using Google Meet  | .625    |
| Q39   | I use Google Meet to further support my teaching/learning process   | .597    |
| Q31   | I operate on Google Meet very naturally and fluently  | .556    |
| Q28   | Using Google Meet has become my habit   | .534    |
| Q30   | I use Google Meet in combination with some other apps while teaching/learning   | .527    |
| <b>Component 2: Expectancy and Social Influence</b> |   |         |
| Q4  | If I use Google Meet, I will have more opportunities to achieve my teaching/learning goals  |         |
| Q3  | Google Meet helps me improve teaching/learning efficiency   | .724    |
| Q1  | Google Meet is useful for my online teaching/learning   | .696    |
| Q5  | The Google Meet platform is clear and easy to understand  | .686    |
| Q2  | Google Meet makes it easy for me to organize or join activities   | .653    |

|  |   |      |
|--|---|------|
| Q9                                     | My colleagues/classmates all encourage me to use Google Meet                                    | .596 |
| Q10                                    | Reputable colleagues/best friends in my class recommend that I actively use Google Meet         | .537 |
| Q6                                     | I have no trouble building skills using Google Meet   | .532 |
| Q7                                     | I specifically understand how to interact online on the Google Meet platform                    | .527 |
| Q14                                    | I have the necessary knowledge about using Google Meet  | .510 |
| Q8                                     | Learning to use Google Meet was pretty easy for me  | .473 |
| Q11                                    | My school's leaders encourage us to use Google Meet   | .450 |
| <b>Component 3: Utilitarian</b>        |   |      |
| Q20                                    | Google Meet can be used on a variety of devices such as smartphones, tablets, laptops, desktops | .768 |
| Q22                                    | Google Meet does not limit the number of participants in each event                             | .744 |
| Q23                                    | Google Meet enables fast and convenient sharing of screens, slides, and documents               | .729 |
| Q18                                    | Google Meet free version with no time limit online  | .708 |
| Q17                                    | In my work/study environment, everyone has a Gmail account so using Google Meet is easy         | .523 |
| Q21                                    | Using Google Meet makes it easy for me to interact with people                                  | .470 |
| Q19                                    | Google Meet creates stable interaction, no weak transmission during use                         | .444 |
| <b>Component 4: Hedonic Motivation</b> |   |      |
| Q27                                    | Using the Google Meet platform really inspires me to study/teach                                | .779 |
| Q24                                    | Learning through Google Meet stimulates excitement  | .757 |



|   |   |      |
|---|---|------|
| Q26   | Google Meet makes me feel interesting   | .751 |
| Q25   | Google Meet keeps teachers/learners entertained during teaching/learning                  | .659 |
| Q29   | I tend to prefer using Google Meet in teaching/learning over using other apps             | .528 |
| <b>Component 5: Facilitating Conditions</b> |   |      |
| Q15   | Google Meet is not compatible with other software/apps I'm using                          | .611 |
| Q38   | Without the Google Meet platform, it would be difficult for me to organize/join classes   | .521 |
| Q13   | I use many resources in the process of teaching/learning Google Meet                      | .502 |
| Q12   | We have the guidance and support of the university in using Google Meet                   | .488 |
| Q16   | I am supported by another school/organization to teach Google Meet when I have difficulty | .482 |

### 3.2 Discussion and limitations

Studying the factors influencing the usage of Google Meet in the educational environment in the context of Covid-19 not only prepares us for similar challenges in the future, but also guides the use of technological platforms for future teaching. Based on the criteria examined, the following recommendations are made: To begin, a platform that wishes to be extensively utilized must get the awareness, involvement, and use of a large number of individuals in the community. Second, the program should provide a variety of useful functions and be compatible with the accompanying technological equipment. Third, building enthusiasm throughout the learning process via the platform is a crucial necessity for organizers of online events using Google Meet. Finally, the facilitation, guidance, and support of schools and teachers are crucial in the learning process using this platform.

The following are some shortcomings of this study: The first constraint is that this study does not take into account or investigate other factors. Many important factors that directly impact teacher and student use of Google Meet that have not been observed and measured, such as cultural and social factors, may exist. The second constraint is the issue of sample bias. The study only included pedagogy students and teachers from three universities: Quang Nam University, Phu Yen University, and Dong A University. These are three schools in Vietnam's central region. As a result, it has a significant

impact on the capacity to generalize study findings. Scholars and administrators should take precautions before using the findings of this study in their organization. The analytical approach is the last restraint. Exploratory factor analysis is a statistical method for testing the structural rationality and psychometric properties of a group of scales. However, EFA is insufficiently powerful to evaluate the theoretical foundations, hence the Confirmatory Factor Analysis approach should be utilized in future investigations to validate the data set that our model recommends (five factors). These constraints will direct our future research.

#### 4. CONCLUSION

The study was carried out to determine the determinants influencing the adoption of Google Meet among teachers and students at three institutions in Vietnam's central region. Based on previous research, 39 question variables were proposed for use and disseminated to survey participants via social networks. The results of exploratory factor analysis, based on evidence from 378 valuable samples collected, show that there are five main factors influencing teachers' online teaching, including: Use behavior, kỳ Expectancy and Social Influence, Utilitarian, Hedonic Motivation, and Facilitating Conditions. These findings might be utilized as a reference for future study or as a topic for further investigation by researchers interested in the use of digital platforms in education. Educators may use these findings to develop effective future instructional techniques for Vietnamese higher education, specifically using the Google Meet platform and online teaching platforms in general.

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