

Assessing the Effectiveness of Using Online Google Meet Tools in Improving Students' Understanding of Econometrics Subject among Public University Students in Malaysia

Wen Chiat Lee^{1*} and Ahmad Fadzil Jobli²

^{1*}Faculty of Business and Management, Universiti Teknologi MARA (UiTM) Sarawak Branch, Malaysia

²Faculty of Civil Engineering, Universiti Teknologi MARA (UiTM) Sarawak Branch, Malaysia

* Corresponding author

DOI: <https://doi.org/10.47772/IJRISS.2026.100400023>

Received: 05 April 2026; Accepted: 10 April 2026; Published: 25 April 2026

ABSTRACT

Gamification in education is important as it provides a new pathway for learners to be more engaged in their learning journey. "Google Meet" is an online meeting tools that is used by educators for academic purpose and enables the students to promote collaborative teaching and engage with students. The study in this paper is a quantitative study undertaken to examine the perception of 32 university's students towards the effectiveness of Google Meet in improving students understanding of Econometrics subject in a public university in Malaysia. The students that have taken Econometrics class and undergone Google Meet teaching in a university in Kuching, Sarawak are chosen as respondents. Questionnaire in Google Form is then given to the respondents to answer. The data is analysed using descriptive (frequency and percentage) analysis in Excel and SPSS 29.0 software. The results show that Google Meet can increase the understanding of students on definition and concepts of Econometrics by 50 percent and improvement of numeracy skill in Econometrics by 50 percent as well. It is hoped that the findings could provide some insights to educators in employing Google Meet as their formative assessments to improve universities' students' performance.

Keywords: Google Meet, gamification, Econometrics, numeracy skill.

INTRODUCTION

The application of online teaching tools is getting popular since the outbreak of COVID-19 pandemic disease. Online teaching tools such as Online Google Meet are always used in teaching and learning activities. Online Google Meet allows the lecturer to record the video and discuss with students effectively in line with the era of Industrial Revolution 4.0. Development of new information and knowledge must be spread easily to everyone in need (Setyawan et al. 2020). Students of the 21st century need several skills such as knowledge, numeracy skill and problem-solving skills.

Online Google Meet has been widely applied in teaching and learning (Setyawan et al. 2020). Setyawan et al. (2020) show that Online Google Meet can build knowledge and meet the students' learning outcomes. Moreover, Al Farug et al. (2024) and Khalili et al. (2024) show that application of Google Meet can increase students' engagement and academic performance. However, there is limited understanding on the application of Online Google Meet used in Economics and Econometrics subject. Econometrics is a subject that requires knowledge and numeracy skill in teaching and learning. Econometrics, is increasingly demanded in the labour market (Carter et al. 2017). Consequently, Econometrics has become part of the core curriculum in both Economics undergraduate and PhD programs around the world. There are some challenges in Econometrics subject. Gibbs (2010) explains that a large proportion of university students lack essential mathematical and statistical skills and, according to Cook et al. (2019), they show low confidence and anxieties in connection with quantitative methods. Empirically, there are limited literature that focuses on examining the effectiveness of Online Google Meet on improving students understanding on Econometrics and Economics (only a few literatures as done by

Obinna-Akaruru et al. 2021; Khalili et al. 2024). Therefore, this paper intends to address that gap by examining the effectiveness of Online Google Meet on improving students understanding on Econometrics concept in a public university in Malaysia.

LITERATURE REVIEW

The Use of Online Teaching Tool

Online Teaching Tools are used for Synchronous (live) and asynchronous (recorded) sessions and can improve academic engagement, facilitate collaborative learning and enhance students' comprehension on a complex topic (Setyawan et al. 2020). Moreover, online teaching tools can be used to support remote learning (Khalili et al. 2024). Remote learning is a situation in which students are separated from the lecturers and teaching and learning can be done in different locations (Greener et al. 2021). Online learning tools such as Google Meet, Zoom Meet allow the lecturers and students to interact and communicate effectively in teaching and learning (Greener et al. 2021).

The shift towards remote learning has accelerated the need for effective digital platforms that support educational continuity. Google Meet, a video conferencing tool developed by Google, has emerged as a significant player in this landscape. Research has highlighted various dimensions of its impact on online education, focusing on aspects such as user acceptance, engagement, and instructional effectiveness (Khalili et al. 2024).

The Google Meet platform is commonly used for video conferencing purposes in online learning (Purwoko et al. 2022). It enables teachers and students to engage in audiovisual calls, both in smaller settings and with larger groups. In addition, Google Meet also offers a wide range of features that support the implementation of online learning. By utilizing Google Meet, lecturers can easily present learning materials and foster active and creative classrooms through interactive discussions and interactions with students (Prisuna, 2021). Online learning, when approached creatively and professionally, still presents positive opportunities.

Empirical Literature on Applications of Online Google Meet Used in Teaching Economics and Econometrics subject

Online Teaching Tools such as Google Meet has been used in multiple discipline such education (Setyawan et al. 2020), Medical (Khalili et al. 2024), Economics (Khalili et al. 2024) and Engineering (Al Faruq et al., 2024). This is because Google Meet platform can be structured easily and the functions can be aligned to the educational task, thus increase its popularity in teaching and learning especially university students (Alturki and Andraiweesh, 2022). The Google Meet has shown multiple benefits to students such as increase students understanding, increase motivation of students, increase students' engagement and academic performance (Al Faruq et al. 2024, Khalili et al. 2024).

Given all these benefits of Google Meet, there are very limited empirical on the application of Google Meet used in the Econometrics subject. Econometrics subject is important that can be used in forecasting real-world situation. Econometrics is the application of mathematics, statistics to measure economic data and prove the validity of theory. Therefore, it can train student to have numeracy skill, knowledge skill and problem-solving skill consistent with today's contemporary skills of students of the 21st century. Thus, application of technology and online teaching tool especially Google Meet is critical to be used in Econometrics subject. There is still gap of understanding the effectiveness of Google Meet on enhancing students understanding of Econometrics concept and master numeracy skill suitable for decision-making.

METHODOLOGY

The data is collected from 30 Bachelor students that have taken Econometrics subject in a public university in Malaysia in year 2025. The data is obtained by using questionnaires in Google Form. The questionnaire was distributed to 30 university students in Malaysia for the academic year 2025/2026. The sample size for quantitative data collection of this study is based on purposive sampling. This strategy is used to specifically target Bachelor degree students who have taken Econometrics subject that are most relevant to meet the objective

of the paper. The questionnaire consists of two parts. The first part consists of demographic questions whereas the second part consists of feedback of students before and after the application of Online Google Meet to improve the understanding of Econometrics concept and improve numeracy skill. This study is a non-experimental descriptive research study. The data is analysed using Statistical Package for the Social Sciences (SPSS) and Microsoft Excel. SPSS and Excel are used to calculate percentage of marks before and after the implementation of Google Meet used to teach Econometrics. Tables and figures are utilized to summarize and present the study's results. Descriptive statistics results are used to show results of the feedback. The results are presented in next section.

RESULTS AND DISCUSSIONS

The results consist of two parts, profiling of students and the perception of students towards effectiveness of online Google Meet in improving understanding of Econometrics concept and improve numeracy skill. Table 1 shows the results of profile of students.

Results of Descriptive Statistics of Respondents

The results of descriptive statistics can be divided into socio-demographic variables and effectiveness of Quizizz in improving marks of Diploma students.

Table 1: Descriptive Statistics for Socio-Demographic Variables

Gender	Male	Female
Percentage of Respondents	6.70	93.30

From Table 1, the percentage of male is 6.70 percent and percentage of female is 93.30 percent from total 30 respondents that answered the questionnaire. This shows that female is dominant in the Econometrics class in the university.

Results of Perception of Respondents towards Online Google Meet Can Improve Understanding of Econometrics Concept and Improve Numeracy Skill

The results that show the feedback of comparison before and after the implementation of online Google Meet in Improving Understanding of Econometrics concept and improve numeracy skill can be shown in Table 2.

Table 2: Feedback Comparison Before and After the Implementation of Online Google Meet

Item	Before the Project (Percentage of Students that Understand the Concept (6-10))	After the Project (Percentage of Students that Understand the Concept (6-10))
1. Understanding on Definition of Econometrics	9.38	59.38
2. Understanding on Concept of Regression	9.38	56.25
3. Understanding on Concept of Independent Variables and Dependent Variables	12.50	59.38
4. Understanding on the calculation of coefficient in regression	6.25	50.00
5. Understanding on the calculation of t-statistics in regression model	6.25	50.00

The results above show the feedback comparison. It shows big improvement after the implementation of boardroom game. Before the online Google Meet, only 9.38 percent of respondents understand the definition of Econometrics. After the Google Meet, the understanding rate is 59.38 percent, an increase of 50 percent. This shows an improvement of 50 percent and implies that Google Meet application enhances student understanding of definition. The application of Google Meet can enhance cognitive skills among students.

Moreover, there are improvement in the percentage of students that understand the concept of regression in Econometrics from 9.38 percent to 56.25 percent. This shows that the Google Meet is effective in improving students understanding on concept of regression. From the results in Table 1, students also show improvement in understanding on the concepts of independent variables and dependent variable. The percentage of students that understand the concepts of independent variables and dependent variable raise from 12.50 percent to 59.38 percent before and after the Google Meet respectively.

Moreover, students also perceive that Google Meet can improve their numeracy skill in Econometrics. Before Google Meet, the understanding on calculation on coefficient is 6.25 percent and has increased to fifty percent after Google Meet. This improvement shows Google Meet can increase the numeracy skill and problem-solving skills consistent with the results of studies that also find out that Google Meet can improve numeracy skill and problem-solving skill (Marsini & Dwikoranto, 2022). Google Meet can also foster students' interest in learning subject and promote lifelong learning (Suyahman et al. 2024). The results also show that students can understand better in calculating t-statistics (enhancing numeracy skill) as the results of feedback show that there is improvement of 42.75 percent in the understanding of calculating after attending Google Meet.

CONCLUSION

The results show that the implementation of online games like Google Meet has brought about an improvement in the understanding of Econometrics concept and numeracy skill. This is also supported by the previous study of Obinna-Akaruru (2021) who found out that Google Meet can improve understanding of Econometrics and Economics concept and improve problem understanding (Marsini & Dwikoranto, 2022). Obinna-Akaruru (2021) mentioned that the use of Google Meet in computers and the interactive tool teaching provides more effective learning when compared with traditional methods, increases the motivation of the learner, develops positive attitudes in students. Hence, it can be concluded that the use of Google Meet does assist in enhancing students learning in econometric concepts and thus helping them to score better Econometrics performance.

Moreover, the results also show that the application of Google Meet can improve the numeracy skill of students in Econometrics subject. Numeracy skill and problem solving skill are important for students of the 21st century to excel in studies and search for job opportunities in today's competitive market. This paper thus becomes the guidelines for lecturers to understand the impacts of Google Meet in improving the students understanding in Econometrics concepts and improve their numeracy skills. Thus, lecturers are more confident to implement Google Meet in the context of university's students setting. The findings of the study lend support to the effectiveness of Google Meet in improving Universities Students Understanding in Econometrics Concept and improving numeracy skill of students. Those lecturers that teach Econometrics subjects should always adopt Google Meet in the teaching and learning and integrate interactive teaching tool to attract students' interest to learn. However, implementation of Google Meet must be carefully designed to ensure students learning and teaching. Lecturers must always adapt to changes and always obtain feedback from the students on the use of the Google Meet. Lecturers must improve on the implementation of Google Meet to ensure smooth learning by the students. Every student has different pace of learning. Thus, lecturers need to adapt to the pace of students.

FUNDING ACKNOWLEDGEMENT

This study did not use any funding from any institution and the write-up for the manuscript are the efforts of the authors. However, the authors acknowledge the time provided by Universiti Teknologi Malaysia Sarawak Branch to write this article.

Conflict of Interest

The author declares that there are no conflicts of interest with any party.

REFERENCES

1. Al Faruq, A.Z., Ngadiso, N. & Supriyadi, S. (2022). Students' Perceptions of Synchronous Online Learning Using Google Meet in a Reading Class. *AL-ISHLAH Jurnal Pendidikan*, 14(3), 4053-4066. <https://doi.org/10.35445/alishlah.v14i3.1937>
2. Alturki, U., & Aldraiweesh, A. (2022). Adoption of Google Meet by postgraduate students: The role of task technology fit and the TAM model. *Sustainability*, 14(23), No. 15765. <https://doi.org/10.3390/su142315765>.
3. Carter, J., Brown, M. & Simpson, K. (2017). From the classroom to the workplace: how social sciences students are learning to do data analysis for real. *Statistics Education Research Journal*, 16, 80-101.
4. Cook, S., Watson, D. & Vougas, D. (2019). Solving the quantitative skills gap: a flexible learning call to arms! *Higher Education Pedagogies*, 4, 17-31. <https://doi.org/10.1080/23752696.2018.1564880>.
5. Gibbs, G.R. (2010). Mathematics and statistics skills in the social sciences. In C.M. Marr, M.J. Grove (Eds.), *Responding to the Mathematics Problem: The Implementation of Institutional Support Mechanisms*, Maths, Stats & OR Network (2010), pp. 44-50.
6. Greener, S. (2021). Exploring remote distance learning: what is it and should we keep it? *Interactive Learning Environments*, 29(1), 1–2. <https://doi.org/10.1080/10494820.2021.1848506>.
7. Khalili, B.G., Qurashi, T., Ahmadi, M. & Ahady, R. (2024). Revolutionizing remote learning: A case study of google meet at an online university. *Tech in Learning*, 1(1), 1-9. DOI: <https://doi.org/10.62568/tel.v1i1.176>
8. Marsini & Dwikoranto (2022). Using Google Meet in Group Discussions to Improve Learning Activities And Students Problem-Solving Ability During the COVID-19 Pandemic. *International Journal of Recent Educational Research*, 3(5), 584-597. <https://doi.org/10.46245/ijorer.v3i5.249>
9. U., Obinna-Akakuru, Annabel, Ordua, Victor N., Akakuru, Ojiugo C., and Nelson-Okata, Ezinne. 2021. "Effect of Google Meet E-Learning Technology on Building Students Knowledge". *Asian Journal of Education and Social Studies*, 20(3), 36-42. <https://doi.org/10.9734/ajess/2021/v20i330487>.
10. Prisuna, B. F. (2021). Pengaruh Penggunaan Aplikasi Google Meet terhadap Hasil Belajar. *Jurnal Penelitian Ilmu Pendidikan*, 14(2), 137–147. <https://doi.org/10.21831/jpipfip.v14i2.39160>
11. Purwoko, R. Y., Primartadi, A., Efendi, Y. & Amin, T. (2022). The Online Learning Creativity Using the Google Meet Platform in Vocational High Schools. *Tarbawi: Jurnal Ilmu Pendidikan*, 18(2), 111-121. <https://doi.org/10.32939/tarbawi.v18i1.1313>
12. Setyawan, A., Aznam, N., Paidi, Citrawati, T. & Kusdianto (2020). Effects of the Google Meet Assisted Method of Learning on Building Student Knowledge and Learning Outcomes. *Universal Journal of Educational Research*, 8(9), 3924-3936. <https://doi.org/10.13189/ujer.2020.080917>
13. Suyahman, S., Irfana, T.B., Touwe, Y.S., Rohman, R. & Andika, A. (2024). Use of Meet Apps to Improve Student Achievement during the Pandemic. *World Psychology*, 3(1), 43- 61. <https://doi.org/10.55849/wp.v3i1.604>