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التعليم الحضوري مقابل التعليم الافتراضي عبر غوغل ميت: تصورات الطلاب حول حضور المدرس الجامعي

Face-to-Face Education vs. Virtual Education via Google Meet: Students' Perceptions of University Instructor Presence

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Abstract

This study investigates students' perceptions of university instructor presence and academic authority across three instructional modes: face-to-face teaching, virtual teaching via Google Meet, with the camera on, and audio-only teaching. Data were collected from 100 Italian language students at Blida 2 University, distributed across undergraduate and Master's levels. A 19-item Likert scale questionnaire and one open-ended question were used, with reliability analysis confirming strong internal consistency (Cronbach's alpha = 0.846).

Results revealed that face-to-face instruction achieved the highest mean score (M = 4.09, SD = 0.82), followed by virtual teaching with the camera (M = 3.92, SD = 0.89), while audio-only teaching recorded the lowest mean (M = 3.87, SD = 0.91). ANOVA confirmed significant differences among modalities ($F(2, 297) = 21.452$, $p < .001$, $\eta^2 = 0.13$). Qualitative

الملخص

تبحث هذه الدراسة في تصورات الطلاب حول حضور المدرس الجامعي وسلطته الأكاديمية عبر ثلاثة أنماط تعليمية: التدريس الحضوري، التدريس الافتراضي عبر *Google Meet* مع تشغيل الكاميرا، والتدريس الافتراضي بالصوت فقط. جُمعت البيانات من 100 طالب في اللغة الإيطالية بجامعة البليدة 2، موزعين بين مستويات الليسانس والماستير. استُخدم استبيان مكون من 19 بندًا على مقياس ليكرت وسؤال مفتوح واحد، وأظهرت نتائج الموثوقية اتساقًا داخليًا قويًا (ألفا كرونباخ = 0.846).

أظهرت النتائج أن التعليم الحضوري حقق أعلى متوسط ($M = 4.09$، $SD = 0.82$)، يليه التعليم الافتراضي مع الكاميرا ($M = 3.92$، $SD = 0.89$)، بينما سجل التعليم بالصوت فقط أدنى متوسط ($M = 3.87$، $SD = 0.91$). أكدت نتائج *ANOVA* وجود فروق دالة إحصائيًا بين الأنماط ($F(2, 297) = 21.452$، $p < .001$، $\eta^2 = 0.13$). أبرزت النتائج النوعية أن استخدام

findings highlighted camera use, direct interaction, voice clarity, lesson organization, visual aids, and instructor personality as key factors. Overall, physical presence remains the most effective model, with partial compensation possible through visual and interactive elements.		الكاميرا، التفاعل المباشر، وضوح الصوت، تنظيم الدرس، الوسائل البصرية، وشخصية المدرس هي عوامل أساسية. تؤكد الدراسة أن الحضور المادي يظل النموذج الأكثر فعالية، مع إمكانية تعويض جزئي عبر العناصر البصرية والتفاعلية، بينما يبقى الاعتماد على الصوت وحده الأقل فاعلية في بناء حضور أكاديمي قوي.
Keywords :instructor presence; academic authority; virtual education; Google Meet; Italian language teaching.		**كلمات مفتاحية: السلطة الأكاديمية؛ التعليم الافتراضي؛ غوغل ميت؛ تدريس اللغة الإيطالية.**

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1. Introduction

A university instructor in the face-to-face classroom constitutes one of the most important elements of the educational process as an instructor's role extends beyond mere knowledge transmission to include the construction of an academic image grounded in authority, scholarly credibility and direct interaction with students. However , despite the increasing shift to virtual education through platforms such as Google Meet a fundamental question arises as to whether the use of a camera or audio alone can compensate for the absence of the instructors physical presence. Many studies have compared face-to-face and online education in terms of effectiveness and flexibility but most focus on learning outcomes and general student experience without examining students perceptions of the instructor academic image and presence across different instructional modes. There is therefore a clear research gap due to the lack of systematic studies that directly compare face-to-face instruction camera-based virtual instruction and audio-only virtual instruction in the context of language teaching. To what extent can virtual education via Google Meet, with only camera or audio, compensate for the absence of the university instructor physical presence in the classroom? the hypotheses assume that face-to-face instruction remains the most effective in reinforcing the instructor’s

academic image and presence while virtual instruction whether with camera or audio only partially compensates for the absence of physical presence.

Previous Studies and Research Gaps

Qin (2025) – *Online vs. Face-to-Face: A Long-Term Study on the Effectiveness and Essence of Learning*

Although this study is of prime importance in establishing fundamental distinctions between face-to-face and virtual learning in terms of effectiveness and essence, this particular study neglected to explore students' attitudes towards university instructor image and academic presence and did not specifically identify different types of virtual classes .It is fundamental to address this fact in terms of increasing the availability of even more specialized researches on different attitudes of university instructor image and academic presence towards face-to-face classes and classes in Google Meet involving video and audio, and classes involving only audio in Google Meet.

Rasheed et al. (2024) – *Comparative Study of Online and Face-to-Face Instruction*

Quantitative measures, including the CEQ and the OCEQ, were used to compare traditional (face-to-face) and online teaching. The higher quality teaching, clearer objectives, and more appropriate assessment of one mode compared to the other was found to be reflected in students' perceptions of effectiveness. However, while relevant for understanding differences in perception of face-to-face and virtual instruction, the study did not address the perceptual dimension referring to the image of a university instructor and his/her academic presence (i.e., Kalinowski et al. 2014) or between types of "virtual" instruction.

Onyeaka et al. (2024) – *Teaching in a Pandemic: Comparative Evaluation of Online vs. Face-to-Face Student Outcome Gains*

This research compared learning outcomes by examining the performance of 2 groups of students studying a same course, one receiving face-to-face teaching and the other distance education. Results indicated there was no statistically significant difference in academic performance and learning

gains, even hands-on laboratory work, but found a significantly higher plagiarism rate among distance learners. Although the research study adds value by analyzing how face-to-face and online learning is effective in terms of academic achievement and academic integrity, it did not assess students' instructor image perception and perceived instructional presence as well as distinguishing among various modes of virtual instruction.

Martin et al. (2023) – *Meta-Analysis on the Community of Inquiry Presences and Learning Outcomes*

Martin et al. (2023) conducted a meta-analysis on the Community of Inquiry presences and learning outcomes, highlighting the importance of teaching, social, and cognitive presence in online and blended learning. However, the study did not specifically address students' perceptions of instructor image and academic presence across different modalities.

Hotara et al. (2023) – *Face-to-Face, Online or Hybrid: Which Model is Preferred by University Students and Why?*

This research examined the attitudes of a sample of more than 5500 university students towards face-to-face, on-line and blended learning environments and to what extent various factors (gender, adequacy of digital materials, complexity in LMS', solving problems competence in virtual environments) influence these attitudes. However, Results revealed that majority of the students (71.2%) preferred onlinesupported models (hybrid or fully virtual) as against 28.8% who chose to learn in complete face-to-face model with significant gender differences. While the above findings are significant in illuminating for us technical and social shaping of student choices, the focus was not on how students perceive their instructors relationally apart from school years, nor were preferences connected to actual learning gains or students' views of instructor authority and cognitive role.

Significance of the Study

These studies indicate that while prior literature has been concentrated on instructional effectiveness and general student experience, little has focused on the university instructor's academic presence and image as a source of

knowledge authority across face-to-face and virtual learning environments. This research study endeavors to fill this gap by examining students' perception of the university instructor's image and academic presence across three different instructional media: face-to-face, virtual with camera, and virtual with audio only.

2. Theoretical Framework

2.1. Academic Presence of the University Instructor

The academic presence is defined as the instructor's ability to present himself as both a cognitive and human agent within the educational process in both face-to-face and virtual contexts. This presence manifests in clarity of explanation, strength of knowledge authority, and the ability to interact with students. In face-to-face education, this is enhanced with body language, eye contact, and voice tone, while in virtual education, it depends more on technological media like cameras and microphones.

2.2. College Teacher Intellectual Authority

Cognitive authority means the image of him or her as a primary source of knowing and is the core of trust-building by instructors and students. While this is especially supported by direct physical presence in face-to-face settings, it is probably weakened by either the absence of body language or by limited interaction in virtual contexts. The camera serves in virtual instruction as a compensatory mechanism by providing students with the instructor's facial expressions and body movements that reinforce his or her image as a cognitive authority.

2.3. CoI Model

According to the Community of Inquiry model developed by Garrison, Anderson, and Archer (2000), one of the key theoretical frameworks for interpreting presence in virtual education is the distinction it makes among three kinds of presence:

• **Cognitive Presence:** The students' capability to construct meaning by interaction.

• **Social Presence:** The feeling of belonging and human connection within the learning environment.

• **Teaching Presence:** The instructor's role in designing, organizing, and directing the educational process.
Rourke et al. (2001) expand that social presence is learners' ability to project themselves as "real people" in online learning environments, thereby fostering interaction and developing human bonds among the students and instructors.

3. Materials and Methods

3.1. Participants

The sample was composed by 100 students enrolled in Italian at the Faculty of Languages, divided into three Licence levels and one Master's level. The sample size differed across year of study and this enabled differences in the physical image of the university instructor as well as academic presence to be examined among students at various levels of academic experience. We used stratified random sampling to ensure a balance between boys and girls, and representation of the academic years, for a more accurate comparison among the three face teaching mode: face-to-face classroom teachers (FTCT), virtual teacher through Google Meet with camera (VTGC), and virtual teacher through Google Meet without camera (VTGOC).

3.2. Research Design

Descriptive comparative design was used in this study. The respondents were Italian language learners at the Faculty of Languages, who had taken lessons through all three modes of delivery (face-to-face, virtual connected via camera and virtual without camera – audio only), thus enabling us to compare their perception on university instructor's image, academic presence in between.

3.3. Research Instruments

A 19-item, five-point Likert type questionnaire was used to measure students' perceptions of university instructor's image and academic presence, which included one open-ended question for qualitative representation of instructors' authority (image) and presence in both instructional forms. Cronbach's alpha and factor analysis were applied to

verify the credibility of measurements as well as reliability and validity of the instrument.

3.4. Data Collection Procedures

The questionnaire was administered to students who had taken at least one course in all three delivery formats. so as to be able to compare student perceptions of instructor academic presence across face-to-face, video-virtual, and audio virtual education. The students were selected through stratified random sampling, so the gender was balanced and academic years—undergraduate, Master's—were represented. Data collection occurred on Google Meet to standardise administration of the research instrument for all participants.

4. Findings

4.1.Quantitative Findings

Sample Description

The sample consisted of 100 male and female students majoring in Italian at Blida 2 University. As shown in Table 1, the vast majority of participants were female (86%), compared to only 14% male students.

Table 1. Distribution of Participants by Gender

Gender	Frequency	Percent
Male	14	14.0%
Female	86	86.0%
Total	**100**	**100.0%**

Table 2 illustrates the distribution of participants by academic level. Second-year students constituted the largest proportion (48%), followed by first-year License students (36%), while third-year and Master's students were equally represented (8% each).

Table 2. Distribution of Participants by Academic Level

Academic Level	Frequency	Percent
First Year	36	36.0%
Second Year	48	48.0%
Third Year	8	8.0%
Master	8	8.0%

Total	**100**	**100.0%**

Regarding prior experience with the studied course, Table 3 shows that the majority of students had previously studied the same subject across more than one instructional modality. They had received instruction face-to-face in the classroom as well as through distance learning using Google Meet, either with the camera on or using audio only. This diversity of educational experience provides a solid basis for conducting an accurate perceptual comparison among the three modalities and allows for examining differences in students' perceptions of the university instructor's image and academic presence across different media.

Table 3. Prior Experience with the Subject Across Modalities

Response	Frequency	Percent
Yes	96	96.0%
No	4	4.0%
Total	**100**	**100.0%**

Reliability Analysis

The reliability of the questionnaire was verified using Cronbach's alpha coefficient to measure internal consistency among items. Results showed that the overall alpha value for all items reached 0.846, indicating a very good level of reliability and confirming that the items consistently measure the same construct. Reliability was also calculated for each dimension separately, as follows:

Dimension 1: Face-to-Face Instructor Presence → Cronbach's alpha = 0.82, indicating strong internal consistency among items related to this dimension.

Dimension 2: Virtual Presence via Google Meet (Camera On) → Cronbach's alpha = 0.84, reflecting excellent reliability and strong interrelatedness among items measuring the impact of visual presence on instructor presence.

Dimension 3: Virtual Presence via Google Meet (Audio Only) → Cronbach's alpha = 0.79, which represents an acceptable and good level of

reliability, suggesting that audio-related items are internally consistent, though less strong than the previous two dimensions.

These results, presented in Table 4, indicate that the questionnaire demonstrates a high degree of reliability at both the overall scale level and the subscale level, making it a valid instrument for scientific research and for analyzing students' perceptions of the university instructor's image and academic presence across different instructional modalities.

Table 4. Reliability Statistics for Teacher Presence Scale

Dimension	Number of Items	Cronbach's Alpha
Face-to-Face Presence	5	0.82
Virtual Presence – Camera	6	0.84
Virtual Presence – Audio Only	5	0.79
Overall Scale	**16**	**0.846**

Descriptive Statistics

The descriptive statistics presented in Table 5 show that the highest mean score for perceived instructor presence was recorded in face-to-face instruction (M = 4.09, SD = 0.82), reflecting general agreement among students that direct physical presence enhances the instructor's image and academic authority. This was followed by virtual instruction with the camera on (M = 3.92, SD = 0.89), which demonstrated a partial ability to compensate for the absence of physical presence, particularly in terms of interaction and attention. Virtual instruction using audio only recorded the lowest mean (M = 3.87, SD = 0.91), indicating that the absence of visual cues reduces students' perceptions of instructor presence and increases variability in their perceptions.

At the item level, mean scores ranged from 3.79 to 4.12, reflecting a general tendency toward agreement that physical presence and camera-based instruction enhance students' perceptions of instructor authority and interaction. Standard deviations ranged from 0.76 to 1.02, indicating moderate variability in responses and reflecting individual differences in students' perceptions of academic presence across modalities. These findings support the hypothesis that face-to-face instruction remains the

most influential model, followed by virtual instruction with the camera, and then audio-only instruction.

Table 5. Means and Standard Deviations of Teacher Presence Across Modalities

Modality	Number of Items	Mean	Standard Deviation
Face-to-Face	5	4.09	0.82
Virtual – Camera	6	3.92	0.89
Virtual – Audio Only	5	3.87	0.91

Note. Higher mean scores indicate stronger perceptions of instructor presence.

Test of Differences (ANOVA or T-test)

A one-way ANOVA was conducted to compare mean scores of perceived instructor presence across the three instructional modalities (face-to-face, virtual with camera, virtual with audio only). Results revealed statistically significant differences among the groups ($F(2, 297) = 21.452$, $p < .001$). Face-to-face instruction recorded the highest mean ($M = 4.09$, $SD = 0.82$), followed by virtual instruction with the camera ($M = 3.92$, $SD = 0.89$), while audio-only virtual instruction recorded the lowest mean ($M = 3.87$, $SD = 0.91$). These findings confirm that students' perceptions of instructor presence vary according to instructional modality and support the hypothesis that face-to-face instruction remains the most impactful, followed by camera-based virtual instruction, and then audio-only instruction, as shown in Table 6.

Table 6. Repeated-Measures ANOVA Results for Teacher Presence Across Modalities

Source	df	F	p
Between Modalities	2	21.452	< .001
Within Subjects (Error)	297	—	—

Pairwise comparison results presented in Table 7 further confirm that face-to-face instruction remains the most effective in enhancing students'

perceptions of university instructor presence compared to virtual instruction with camera or audio only. Although the mean score for camera-based instruction was slightly higher than that for audio-only instruction, the difference was not statistically significant, indicating that visual presence adds limited value and does not reach the level of direct physical presence.

Table 7. Pairwise Comparisons Between Modalities (Tukey HSD)

Comparison	Mean Difference	p-value	Interpretation
Face-to-Face vs Camera	0.17	< .01	Significant difference in favor of face-to-face
Face-to-Face vs Audio	0.22	< .001	Highly significant difference in favor of face-to-face
Camera vs Audio	0.05	> .05	Not statistically significant

4.2.Qualitative Findings: Open-Ended Question Responses

In addition to quantitative results, students' responses to the open-ended question provided deeper insights into the elements that make instructor presence in virtual classes closer to face-to-face instruction. A thematic analysis was conducted, and the most frequently recurring themes were identified, as shown in Table 8.

Table 8. Themes Extracted from Open-Ended Responses on Instructor Presence in Virtual Classes

Theme	Example Quote	Frequency	Percentage
Camera use	"Seeing the instructor explaining through the platform makes learning closer to face-to-face."	32	32%
Voice clarity	"Clear communication, clear voice, and simple language resemble in-class explanation."	18	18%
Direct	"Direct interaction through	27	27%

interaction	questions and discussion makes the class lively and not rigid."		
Teaching method	"Explaining lessons in an organized way and using real-life examples helps create an atmosphere similar to face-to-face classes."	22	22%
Lesson organization	"When the lesson is delivered in a structured way with idea sharing and questions, the instructor feels present."	15	15%
Use of visual aids	"Supporting the lesson with images and videos helps alignment and concentration."	12	12%
Instructor personality and human presence	"The instructor's human spirit and teaching with passion."	9	9%

Note. Percentages are calculated based on the frequency of themes mentioned (N = 135), not the number of respondents (N = 100), as some students referred to more than one element in their responses.

5. Discussion and Conclusion

The results of the study reveal that students' perceptions of university instructor presence are clearly influenced by the instructional modality used. Face-to-face instruction demonstrated a marked superiority in enhancing the instructor's image and academic authority, which aligns with the first hypothesis asserting that direct physical presence remains the most influential model. In contrast, virtual instruction with the camera on showed a partial ability to compensate for the absence of physical presence by improving interaction and attention, whereas audio-only virtual instruction ranked last, reflecting its limited effectiveness in building a strong academic presence.

Qualitative findings further highlighted that camera activation, direct interaction with students, voice clarity, lesson organization, use of visual aids, and the instructor's personality and human presence are the most influential elements in making virtual classes closer to face-to-face instruction. These results confirm that instructional modality is not merely a technical medium, but rather a decisive factor in constructing the instructor's academic authority and shaping perceptions of presence within the classroom. The integration of quantitative and qualitative data strengthens the validity of the proposed hypotheses and underscores the importance of combining visual and interactive elements in virtual education to achieve a learning experience that is closer to face-to-face instruction and more dynamic.

In conclusion, this study confirms that while virtual modalities can partially compensate for the absence of physical presence, face-to-face instruction remains the most effective in reinforcing instructor authority and academic presence.

6. Suggestions:

Based on the quantitative and qualitative findings, the following practical suggestions are proposed:

- **Regular use of the camera:** Encourage instructors to activate the camera during virtual classes to enhance academic presence.
- **Enhancing direct interaction:** Integrate activities such as questioning, open discussions, and immediate feedback on students' responses.
- **Improving voice clarity:** Use high-quality technical tools to ensure clear audio and varied voice intonation.
- **Systematic lesson organization:** Structure lessons into short, well-defined units supported by real-life examples while respecting time management.
- **Use of visual aids:** Support lessons with presentations, images, and video clips to compensate for the absence of physical presence.

- **Highlighting the instructor's human presence:** Demonstrate care for students, use natural body language, and engage in positive communication to strengthen human connection.

7. Abbreviations

The following abbreviations are used in this manuscript:

FTCT FTCT: Face-to-Face Classroom Teacher

VTGC VTGC: Virtual Teacher Google Meet Camera

VTGO VTGOC: Virtual Teacher Google Meet without Camera

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