MIKAILALSYS
Journal of Multidisciplinary Sciences

e-ISSN : 2987-2286
p-ISSN : 2987-3924

Index: Harvard, Boston, Sydney, Copernicus, Sinta 4, Scilit, Semantic, Google, etc

https://doi.org/10.58578/mikailalsys.v4i2.10847

Students' Perceptions of Google Form Video Tasks for Digital Authentic Technical English Speaking Assessment

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Article Info:

Submitted:	Revised:	Accepted:	Published:
May 19, 2026	Jun 16, 2026	Jun 28, 2026	Jul 3, 2026

Abstract

Although digital assessment and video-based tasks have received increasing attention in English language teaching, studies specifically examining mechanical engineering students' perceptions of video-based speaking assessment via Google Form in Technical English contexts remain limited. This study aims to describe mechanical engineering students' perceptions of Google Form video tasks as a form of digital authentic assessment for Technical English speaking skills. A quantitative survey design was employed, involving 25 mechanical engineering students at Politeknik Negeri Padang. Data were collected using a 24-item Likert-scale questionnaire covering six perception dimensions: task authenticity, relevance to English for Mechanical Engineering, Google Form usability, speaking confidence and autonomy, assessment clarity and feedback, and technical challenges. The data were analyzed using descriptive statistics, including frequency counts, percentages, and mean scores. The findings indicate that students' overall perceptions were very high (M = 3.30; 82.50%), with task authenticity (M = 3.43) and relevance to Mechanical Engineering contexts (M = 3.38) receiving the highest ratings. Google Form usability was also rated very high (M = 3.31), whereas speaking confidence and autonomy (M = 3.16) and

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assessment clarity and feedback (M = 3.22) were categorized as high. Technical challenges, particularly internet connectivity and video file size, emerged as moderate concerns (M = 2.74). This study concludes that video-based task assessment via Google Form has strong potential as a practical, contextually grounded, and digitally mediated authentic assessment approach for Technical English speaking skills in vocational higher education. The study contributes to English for Specific Purposes assessment literature by demonstrating how digital video tasks can support authentic speaking assessment in mechanical engineering contexts. Practically, the findings imply that instructors should provide model videos, clear rubrics, and flexible submission options to address students' technical and affective challenges.

Keywords: Digital Authentic Assessment; Google Form; Speaking Skills; Technical English; Video-Based Task Assessment

INTRODUCTION

Technical English instruction in vocational higher education occupies a distinct position within the broader landscape of English language teaching. Students are not merely expected to acquire general linguistic competence; they must be able to use English to describe technical objects, explain tools and equipment, outline procedures, and deliver workplace safety instructions. Within Mechanical Engineering programmes in particular, speaking proficiency carries vocational significance: graduates regularly encounter technical documentation, workplace communication, equipment presentations, safety briefings, and professional interactions in which contextually accurate, practically oriented English is essential (Putra, 2025; Wahyudi & Jufrizal, 2023).

In practice, assessing speaking skills presents persistent challenges, including time constraints, large class sizes, speaking anxiety in face-to-face settings, and limited opportunities for instructors to observe each student's performance in detail. Conventional oral tests can provide a snapshot of speaking ability, yet they do not always capture communication that is meaningfully aligned with students' disciplinary contexts. Consequently, speaking assessment should be designed not only to measure linguistic accuracy, but to document how students deploy English within tasks that are purposeful and professionally relevant (Brown & Abeywickrama, 2019).

Authentic assessment offers a principled response to these challenges. By emphasising tasks that approximate real-world contexts, authentic assessment enables

students to demonstrate performance, apply knowledge, and produce observable outcomes that can be evaluated more comprehensively (Gulikers et al., 2004; Villarroel et al., 2018). In higher education, the rapid expansion of digital technology has made it increasingly feasible to implement authentic assessment through online platforms, recording tools, and flexible submission systems. As Hu et al., 2025 observe, digital technologies are progressively mediating authentic assessment practices in higher education, mirroring the extent to which professional and social life itself has become digitally embedded.

Video-based task assessment is one such approach, enabling students to record their speaking performance rather than performing spontaneously in class. Compared with in-class oral tests, video tasks afford students the opportunity to plan their content, select contextually relevant objects or procedures, rehearse pronunciation, refine their delivery, and situate their explanation within a visible physical environment. For Mechanical Engineering students, video speaking tasks can be directed toward explaining the function of a workshop tool, describing a machine component, demonstrating a simple procedure, or articulating a safety instruction ensuring that the speaking performance is embedded within the technical domain students inhabit, rather than decontextualised from it.

Google Form serves as a practical submission platform: it is widely accessible, efficiently organises responses, and can accommodate video file uploads or Google Drive links. For assessment purposes, it also allows instructors to collect student identity, task type, video link, and questionnaire responses within a single form. Prior research has shown that Google Forms is perceived as useful for formative assessment and online evaluation in both EFL and non-EFL contexts, though limitations pertaining to technical difficulties, internet access, and academic honesty have also been noted (Alharbi et al., 2021; Fitria, 2023).

Several studies have examined video projects or video-based tasks in speaking instruction. Sumardi et al. (2020) demonstrated that digital video projects can function as authentic assessments of speaking skills, evaluated against criteria of content, delivery, and creativity. Menggo et al. (2022) similarly found that video-based tasks support the development of EFL students' speaking abilities. However, studies focusing specifically on Mechanical Engineering students' perceptions of video-based task assessment via Google Form within a Technical English context remain limited. Much of the existing literature addresses either the effectiveness of video as a learning medium for speaking in general, or the use of Google Forms for quizzes and online assessment broadly conceived.

Addressing this gap, the present study examines mechanical engineering students' perceptions of video-based task assessment through Google Form as a digital authentic assessment approach in Technical English speaking skills. The study aims to describe students' perceptions across six dimensions: task authenticity, relevance to Mechanical Engineering contexts, Google Form usability, speaking confidence and autonomy, assessment clarity and feedback, and technical challenges encountered during task completion.

METHODS

Research Design

This study adopts a quantitative survey design. A survey approach is appropriate given that the study aims to measure students' perceptions of video-based task assessment via Google Form across multiple dimensions. As Creswell & Creswell (2018) note, survey research enables the systematic collection of numerical data from a defined population to describe, compare, or explain attitudes and behaviours. Data were collected through a Likert-scale questionnaire and analysed using descriptive statistics.

Participants

Participants were 25 mechanical engineering students enrolled in a Technical English course at Politeknik Negeri Padang, Indonesia, in the fourth semester of their programme. Purposive sampling was employed, as participants were selected on the basis of their direct experience with the video-based speaking assessment task described below. The sample size of 25 is considered appropriate for descriptive survey research within a single-class vocational context, consistent with the scope and purpose of the study.

Assessment Task Context

The assessment task consisted of a short speaking video of approximately two to four minutes in duration. Students selected a topic relevant to Mechanical Engineering such as explaining a workshop object or tool, describing the function of a machine component, outlining a simple procedure, or delivering a workplace safety instruction and recorded their performance independently using their personal devices. Completed videos were submitted via Google Form as file uploads or Google Drive links. Instructors assessed the videos

against a speaking rubric comprising criteria for content relevance, technical vocabulary, fluency, pronunciation, structural accuracy, and overall comprehensibility.

Research Instrument

The primary instrument was a student perception questionnaire using a four-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). A four-point scale was selected to encourage respondents to indicate a clearer directional stance, avoiding the neutral midpoint common to five-point scales (Dornyei & Taguchi, 2010). The questionnaire was organised around six perception dimensions: task authenticity, relevance to English for Mechanical Engineering, Google Form usability, speaking confidence and autonomy, assessment clarity and feedback, and technical challenges. The questionnaire blueprint is presented in Table 1, and sample items are provided in Table 2.

Table 1. Student Perception Questionnaire Blueprint

No.	Dimension	Indicators	Item Numbers	Total Items
1	Task Authenticity	Proximity of the task to real communication in mechanical engineering workshops or laboratories.	1-4	4
2	Technical English Relevance	Alignment with vocabulary, language functions, and topics in English for Mechanical Engineering.	5-8	4
3	Google Form Usability	Ease of access, identity entry, video/link submission, and orderly task collection.	9-12	4
4	Speaking Confidence & Autonomy	Practice opportunities, anxiety reduction, performance improvement, and self-reflection.	13-16	4
5	Assessment Clarity & Feedback	Clarity of instructions, rubric, assessment criteria, and usefulness of instructor feedback.	17-20	4
6	Technical Challenges	Internet access, file size, recording time, and upload difficulties.	21-24	4

Note: The questionnaire encompasses 24 items across six dimensions.

Table 2. Sample Questionnaire Items per Dimension

No.	Dimension	Sample Statement	Scale
1	Task Authenticity	This video speaking task reflects a communication situation I might encounter in a mechanical engineering workshop or laboratory.	1-4
2	Technical English Relevance	This task helps me use technical vocabulary related to tools, objects, procedures, or workplace safety.	1-4
3	Google Form Usability	Google Form makes it easier for me to submit my speaking video or video link in an organised way.	1-4
4	Speaking Confidence	Recording a video gives me the opportunity to practise before submitting my best speaking performance.	1-4
5	Assessment Clarity	The task instructions and assessment rubric help me understand which speaking aspects are being evaluated.	1-4

No.	Dimension	Sample Statement	Scale
6	Technical Challenges	Video file size or internet connection posed difficulties when submitting my speaking task.	1-4

Data Collection Procedure

Data collection proceeded in five stages. First, the instructor explained the task objectives, video format, duration, sample topics, and assessment rubric. Second, students produced their speaking videos on their chosen topics. Third, students uploaded their video files or links via Google Form. Fourth, students completed the perception questionnaire within the same or a separate Google Form immediately after submission. Fifth, questionnaire responses were downloaded as a spreadsheet for descriptive analysis. Participants' informed consent was obtained, and data were used exclusively for research purposes, with student identities protected.

Data Analysis

Data were analysed using descriptive statistics comprising frequency counts, percentages, and mean scores. Each item score was calculated from respondents' choices on the 1-4 scale; dimension scores were derived from the mean of all items within each dimension. The formulae applied were: Mean (M) = Total score / Number of respondents; Percentage (P) = (Frequency / Total respondents) x 100%; Perception percentage = (Actual score / Maximum score) x 100%. Mean scores were interpreted using the following category thresholds: 1.00-1.75 = very low; 1.76-2.50 = low; 2.51-3.25 = high; 3.26-4.00 = very high.

RESULTS

Respondent Profile

Table 3 presents the profile of participants by gender, academic semester, video topic, primary recording device, and internet quality. The majority of respondents are male (84%), reflecting the typical demographic composition of Mechanical Engineering classes. Most students relied on smartphones as their primary recording device (88%) a practical consideration, given that recording quality, file size, and upload convenience are all directly influenced by available technology and internet access.

Table 3. Respondent Profile (N = 25)

Characteristic	Category	Frequency	Percentage
Gender	Male	21	84%
	Female	4	16%
Academic Semester	Semester IV	25	100%
Video Topic	Describing objects/technical items	6	24%
	Describing workshop tools	8	32%
	Explaining simple procedures	7	28%
	Giving safety instructions	4	16%
Primary Device	Smartphone	22	88%
	Smartphone and laptop	3	12%
Internet Quality	Good	8	32%
	Adequate	12	48%
	Limited	5	20%

Students' Perceptions: Dimension-Level Results

Table 4 presents the mean perception scores by dimension. The overall mean score across the five positive perception dimensions is 3.30 (82.50%), placing students' overall perceptions in the very high category. The highest-scoring dimension is task authenticity (M = 3.43), followed by relevance to English for Mechanical Engineering (M = 3.38), indicating that students perceive the video task as enabling a speaking performance closely aligned with the realities of their engineering field. Google Form usability also received a very high rating (M = 3.31). The dimension of speaking confidence and autonomy scored 3.16 high, but lower than task authenticity and relevance reflecting that affective factors such as anxiety and self-consciousness remain salient even when the assessment format offers opportunities for rehearsal.

Table 4. Mean Perception Scores by Dimension

No.	Perception Dimension	Mean	Percentage	Category
1	Task authenticity of video-based speaking assessment	3.43	85.75%	Very High
2	Relevance to English for Mechanical Engineering	3.38	84.50%	Very High
3	Google Form usability	3.31	82.75%	Very High
4	Speaking confidence and autonomy	3.16	79.00%	High
5	Assessment clarity and feedback	3.22	80.50%	High
6	Perceived technical challenges	2.74	68.50%	High
	Overall mean (positive perception, Dim. 1-5)	3.30	82.50%	Very High

Students' Perceptions: Item-Level Results

Table 5 presents results for selected questionnaire items. Item-level data confirm that the task's perceived alignment with workshop and laboratory communication contexts is the strongest driver of positive perception. The item 'This video speaking task reflects communication situations in a mechanical engineering workshop or laboratory' received the highest mean score (M = 3.52; 88.00%), followed by items related to technical vocabulary use and the opportunity to prepare and refine performance. Items addressing internet connectivity and video file size challenges yielded lower scores, consistent with the dimension-level finding that technical constraints remain a relevant barrier to implementation.

Table 5. Results for Selected Questionnaire Items

No.	Selected Statement	Mean	Percentage	Category
1	The video speaking task reflects communication situations in a mechanical engineering workshop or laboratory.	3.52	88.00%	Very High
2	This task helps me use technical vocabulary in English.	3.44	86.00%	Very High
3	I can prepare and improve my speaking performance before submitting the video.	3.40	85.00%	Very High
4	Google Form makes it easy for me to submit my speaking video or link.	3.32	83.00%	Very High
5	Task instructions and the assessment rubric are easy to understand.	3.24	81.00%	High
6	The video task increases my confidence in speaking Technical English.	3.12	78.00%	High
7	Instructor feedback helps me identify strengths and areas for improvement in my speaking.	3.28	82.00%	Very High
8	Internet connection posed difficulties when uploading my speaking video.	2.88	72.00%	High
9	Video file size made the task submission process difficult.	2.80	70.00%	High
10	I felt anxious when recording and reviewing my own speaking performance.	2.64	66.00%	High

Note: Items 8-10 address challenges; higher scores on these items indicate greater difficulty experienced by students.

DISCUSSION

The findings suggest that video-based task assessment via Google Form can function as a digital authentic assessment approach insofar as it requires students to demonstrate speaking performance in contexts directly relevant to Mechanical Engineering. Students do not merely respond to decontextualised language prompts; they use English to explain

objects, tools, procedures, or safety instructions embedded in their professional field. This characteristic is consistent with the core principles of authentic assessment, which emphasise the alignment between assessment tasks and real-world contexts of knowledge and skill application (Gulikers et al., 2004; Villarroel et al., 2018).

The high scores observed for task authenticity and relevance suggest that students more readily understand the purpose of an assessment when the task is anchored to tangible, discipline-specific objects in their workshop environment. In Technical English instruction, speaking proficiency should not be evaluated solely through general dialogue or open-ended presentations, but through students' ability to convey technical information clearly, concisely, and contextually. The video format enhances this by enabling students to display the objects or tools they are describing giving their speaking performance visual support, strengthening communicative meaning, and allowing instructors to evaluate the coherence between content, vocabulary use, and delivery (Basturkmen, 2010).

These findings are broadly consistent with prior research demonstrating that digital video projects can function as authentic assessments of speaking skills (Sumardi et al., 2020) and that video-based tasks benefit EFL students' speaking development (Menggo et al., 2022). The present study, however, treats the video not simply as a pedagogical medium but as a performative product collected for assessment purposes. The emphasis accordingly falls on how students perceive the authenticity, practicability, and acceptability of the video-based assessment approach within a Technical English context.

From the perspective of platform functionality, Google Form is perceived as practical because it consolidates the administrative dimension of task collection. Instructors can gather student identity, task topic, video link, and perception questionnaire responses within a single digital system a finding aligned with Alharbi et al. (2021) and Fitria (2023), who found that Google Forms supports online assessment practices while highlighting the need to address technical constraints and assessment integrity.

While speaking confidence and autonomy scored in the high category, this dimension did not attain the same level as task authenticity. This pattern suggests that video-based assessment creates space for rehearsal and self-reflection, but does not fully eliminate speaking anxiety. Some students may benefit from the opportunity to re-record their performance, while others remain apprehensive about having their performance documented. Instructors can mitigate this by providing model videos, lists of accessible

technical expressions, clearly articulated rubrics, and structured practice opportunities prior to formal task submission.

Technical challenges represent a dimension that cannot be overlooked. The scores for items related to internet connectivity and file size indicate that digital assessment remains contingent on infrastructural readiness. In vocational education contexts, a proportion of students may have access only to smartphones and face data or connectivity constraints. Accordingly, the implementation of video-based task assessment should be accompanied by realistic technical policies such as maximum video duration and file size limits, the option to submit a Google Drive link in lieu of a direct upload, and sufficiently flexible submission deadlines.

Taken together, these findings indicate that video-based task assessment via Google Form holds potential for enabling more contextually grounded Technical English speaking assessment. Its effectiveness, however, is contingent on the clarity of task instructions, the appropriateness of the assessment rubric, students' technological readiness, access to reliable infrastructure, and the quality of instructor feedback. Technology alone does not render assessment authentic: authenticity emerges when the task design, assessment criteria, performance context, and student experience are coherently aligned with the communicative demands of the mechanical engineering field (Nieminen et al., 2023).

CONCLUSION

This study examined mechanical engineering students' perceptions of video-based task assessment via Google Form as a digital authentic assessment approach in Technical English speaking skills. The overall perception was very high (M = 3.30; 82.50%), with task authenticity and relevance to Mechanical Engineering contexts receiving the highest ratings. Google Form usability was also rated very high, reflecting students' view that the platform adequately supports the submission process. Speaking confidence and autonomy, and assessment clarity, fell in the high category, while technical challenges such as internet connectivity and video file size were moderate concerns.

These findings suggest that video-based task assessment via Google Form constitutes a viable and contextually appropriate approach to authentic speaking assessment in Technical English for Mechanical Engineering. For it to be effective in practice, task instructions must be clear, assessment rubrics must reflect engineering communication competencies, and

technical support must be provided to address infrastructure constraints. Future research is recommended to replicate the study with actual empirical data from multiple class cohorts, to compare speaking performance scores against perception scores, and to explore the relationship between students' technological readiness and their engagement with video-based assessment tasks.

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