

Beyond the Haze: Students' Perceived Effectiveness of Distance Learning in English Language Teaching at SMP Negeri 2 Sampit

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Abstract

Recurring haze from forest and peatland fires in Central Kalimantan periodically disrupts face-to-face schooling, making distance learning a repeated alternative in English language teaching (ELT). This study aimed to describe students' perceived effectiveness of distance learning in ELT at SMP Negeri 2 Sampit and to test whether it differs by gender and is related to internet access. A descriptive quantitative survey design was used. A sample of 76 eighth-grade students (from a population of 312), selected through proportionate stratified random sampling, completed a 20-item, five-point Likert-scale questionnaire covering five dimensions: learning materials, teacher-student interaction, technology and internet access, motivation and engagement, and language skills development. The instrument showed adequate validity and high reliability (Cronbach's $\alpha = .89$). Data were analyzed with descriptive statistics, an independent-samples t-test, and Pearson's correlation. Among the 76 respondents, students perceived distance learning as moderately effective overall ($M = 3.33$, $SD = 0.55$). Learning materials ($M = 3.72$) and teacher-student interaction ($M = 3.48$) were rated highest, whereas technology and internet access was rated lowest ($M = 2.94$), and speaking was the skill perceived as least supported ($M = 2.89$). Perceived effectiveness did not differ by gender ($t(74) = 0.86$, $p = .390$), but it correlated positively with internet access ($r(74) = .46$, $p < .001$). Distance learning can therefore serve as a viable contingency measure in ELT when it is backed by reliable connectivity and more interactive speaking activities.

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1. INTRODUCTION

Distance learning has shifted from a niche delivery mode to a routine contingency in schools around the world. The COVID-19 pandemic pushed millions of students to study from home, and the research that followed shows that the quality of those experiences varied widely with preparation, resources, and pedagogy [1], [2]. Hodges et al. [3] draw a useful distinction between emergency remote teaching, a temporary shift made under crisis conditions, and online learning that is carefully designed in advance. The distinction matters when interpreting what students report, because their evaluations reflect both the technology they used and how well the shift was planned.

In Indonesia, such disruptions are not limited to pandemics. In Central Kalimantan, forest and peatland fires recurrently produce dense haze during the dry season, and the resulting air pollution

has at times led local authorities and schools to suspend face-to-face meetings and ask students to study at home. SMP Negeri 2 Sampit, a state junior high school in Sampit, East Kotawaringin Regency, operates in this setting. For English, a foreign language that most students meet mainly in the classroom, an interruption of face-to-face lessons is especially consequential because opportunities for exposure and practice outside school are limited.

Previous studies offer several lenses for understanding distance learning. Moore's theory of transactional distance [4] holds that the psychological gap between teacher and learner is shaped by dialogue, course structure, and learner autonomy. The Community of Inquiry framework describes effective online learning as the interplay of teaching, social, and cognitive presence [5], and the technology acceptance model suggests that perceived usefulness and ease of use determine whether learners embrace a technology [6]. Empirical work in the Indonesian EFL context points in a similar direction. Atmojo and Nugroho [7] found that EFL teachers delivered online classes through attendance checks, material delivery, and assessment, but that the lack of preparation and planning limited their effectiveness. Mulyono et al. [8] reported that university students accepted WhatsApp as learning support and felt connected to learning when they found it useful and received adequate support. Elsewhere, Basilaia and Kvavadze [9] documented a rapid school-level transition to online education, while Bao [10] stressed careful instructional design, adequate support, and contingency planning. Sun and Chen [11], in a review of online education research, concluded that effective online instruction depends on well-designed content, motivated interaction between teachers and learners, supported instructors, and dependable technology.

Despite this body of work, three gaps remain. First, most of the studies above concern pandemic-era emergency remote teaching, when whole school systems moved online at once, and they say little about distance learning that is triggered repeatedly by a local environmental hazard such as haze, a recurrent and seasonal disruption. Second, the empirical evidence comes largely from university students [8], [10] or from teachers' viewpoints [7], so junior high school students' own perceptions of their English lessons remain under-examined. Third, the studies reviewed here tend to examine a single platform or one aspect of online teaching, so little is known about how students judge several dimensions side by side (learning materials, interaction, technology, motivation, and skills development) or how perceived support differs across the four English skills. To the authors' knowledge, little research has combined these elements in a haze-affected school. Students' perceptions deserve attention because they are the ones who experience the lessons, and perceived usefulness is closely tied to continued engagement [6]. This study addresses these gaps by providing a multidimensional quantitative profile of students' perceived effectiveness of distance learning in a haze-affected school, including their perceived support for each of the four English skills, and by testing whether these perceptions differ by gender and relate to internet access.

Based on this background, the study addresses the following problem: how do students at SMP Negeri 2 Sampit perceive the effectiveness of distance learning in ELT, and what factors are associated with those perceptions? Two hypotheses were tested. H1: students' perceived effectiveness differs between male and female students. H2: there is a positive relationship between students' technology and internet access and their perceived effectiveness of the other aspects of distance learning. Accordingly, the objectives of this study are (1) to describe the overall level of students' perceived effectiveness of distance learning in ELT, (2) to identify the dimensions and English skills

perceived as most and least supported, (3) to test differences by gender, and (4) to examine the relationship between internet access and perceived effectiveness.

2. METHOD

2.1 Research Design

This study employed a descriptive quantitative survey design. A survey is appropriate when the aim is to describe the attitudes and perceptions of a population at one point in time without manipulating any variable [12], [13]. The research flow, from problem identification to conclusion, is summarized in Figure 1.

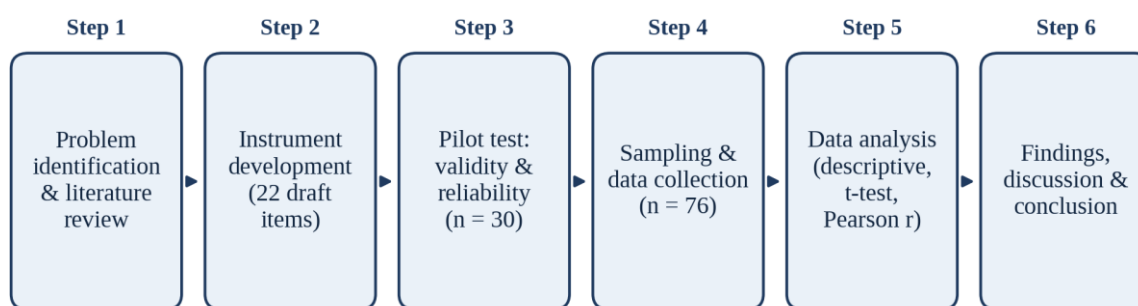


Figure 1. Research flow of the study

2.2 Population and Sample

The population comprised all 312 eighth-grade students of SMP Negeri 2 Sampit, distributed across ten classes, all of whom had experienced at least one period of distance learning in English. The sample size was calculated with the Slovin formula at a 10% margin of error [14]: $n = N / (1 + Ne^2) = 312 / (1 + 312 \times 0.10^2) = 312 / 4.12 = 75.7$, rounded up to 76 students. Proportionate stratified random sampling was applied with classes as strata, so that seven or eight students were drawn at random from each of the ten classes, giving 76 respondents in total.

2.3 Research Instrument

Data were collected with a closed-ended questionnaire using a five-point Likert scale [15], from 1 (strongly disagree) to 5 (strongly agree). The 20 items were written in Indonesian to ensure comprehension and were organized into five dimensions of four items each, as shown in Table 1. Higher scores indicate more favorable perceptions of distance learning. The dimensions were derived from the literature. Learning materials draw on research on effective online instruction [11] and on multimedia learning [16]; teacher–student interaction draws on transactional distance theory [4] and the teaching presence element of the Community of Inquiry framework [5]; technology and internet access draws on perceived ease of use in the technology acceptance model [6] and on the need for dependable technology [11]; and motivation and engagement draws on the social and cognitive presence elements of the Community of Inquiry [5] and on motivated interaction in online learning [11]. The language skills dimension covers the four English skills of listening, speaking, reading, and writing, with one item for each skill. Each dimension was broken down into specific indicators, which are listed in Table 1. A short profile section asked about gender, main device, main learning platform, and source of internet connection.

Table 1. Instrument blueprint and reliability of each dimension

Dimension	Focus of the indicators	Items	Cronbach's α
Learning materials	Clarity of content and instructions; variety of formats (text, audio, video); relevance of the materials to English lessons	1–4	.78
Teacher–student interaction	Teacher feedback on tasks; responsiveness to students' messages; opportunities to ask questions	5–8	.81
Technology and internet access	Availability of a suitable device; stability of the internet connection; ease of using the learning platform	9–12	.86
Motivation and engagement	Interest in learning English; persistence in completing tasks; self-regulation of study at home	13–16	.79
Language skills development	Perceived progress in listening, speaking, reading, and writing (one item per skill)	17–20	.74
Total scale		1–20	.89

2.4 Validity and Reliability

Validation was carried out in three steps. First, the initial instrument, which contained 22 items, was submitted for content validation to two English education lecturers and one English teacher, who checked whether each item matched its indicator, was clearly worded, and was suitable for eighth-grade students. Second, the revised instrument was piloted with 30 eighth-grade students who were not part of the final sample, and construct validity was examined with item–total (Pearson) correlations, which were compared with the critical value of $r = .361$ ($n = 30$, $\alpha = .05$). Two items fell below this value and were removed, leaving 20 valid items, four for each dimension.

Third, reliability was estimated with Cronbach's alpha for each dimension and for the whole scale. Alpha ranged from .74 to .86 across dimensions and reached .89 for the total scale (Table 1), all above the commonly accepted threshold of .70 [17]. These values indicate that the items within each dimension measure it consistently and that the instrument was adequate for the survey.

2.5 Data Collection and Ethical Considerations

After permission was obtained from the school, the questionnaire was administered through an online form whose link was shared in class WhatsApp groups, with the English teacher present to help students who had difficulty. Participation was voluntary, respondents gave informed consent, and responses were anonymous. All 76 sampled students returned complete questionnaires, giving a response rate of 100%.

2.6 Data Analysis

Data were analyzed with SPSS version 26 [18]. Descriptive statistics (mean, standard deviation, frequency, and percentage) were interpreted using five equal-interval categories with a class width of 0.80: 1.00–1.80 (very low), 1.81–2.60 (low), 2.61–3.40 (moderate), 3.41–4.20 (high), and 4.21–5.00 (very high) [14]. Normality was checked with the Kolmogorov–Smirnov test. Hypothesis H1 was tested with an independent-samples t-test, and H2 with Pearson's product–moment correlation between the technology and internet access dimension and the mean of the other four dimensions. The significance level was set at .05.

3. RESULTS AND DISCUSSION

3.1 Respondent Profile

Table 2 presents the characteristics of the 76 respondents. Female students made up slightly more than half of the sample (53.9%). Nearly nine in ten students relied mainly on a smartphone (86.8%), more than three-quarters used mobile data rather than home Wi-Fi (77.6%), and WhatsApp groups were the most common learning platform (68.4%). This profile mirrors the findings of Mulyono et al. [8] that WhatsApp is a low-barrier, widely used channel for learning in Indonesia, and it suggests that students' experiences were shaped largely by the cost and quality of mobile data.

Because respondents were drawn proportionately from all ten classes, the profile can be taken as a reasonable picture of the eighth-grade cohort. Even so, it reveals conditions that matter for distance learning: a small group of students (5.3%) depended on a shared family device, which can limit their ability to join lessons at fixed times, and only 22.4% had access to home Wi-Fi. These figures set the stage for the results on technology and internet access reported below, and they show that distance learning at the school was carried out largely on personal phones and mobile data rather than on dedicated learning infrastructure.

Table 2. Characteristics of respondents (N = 76)

Characteristic	Category	<i>f</i>	%
Gender	Female	41	53.9
	Male	35	46.1
Main device	Smartphone	66	86.8
	Laptop	6	7.9
	Shared family device	4	5.3
Main learning platform	WhatsApp group	52	68.4
	Google Classroom	16	21.1
	Video conference (Zoom/Google Meet)	8	10.5
Internet source	Mobile data	59	77.6
	Home Wi-Fi	17	22.4

3.2 Overall Perceived Effectiveness

Overall, students perceived distance learning in ELT as moderately effective ($M = 3.33$, $SD = 0.55$). The distribution of individual scores shows the same picture: 35 students (46.1%) fell in the moderate category, 28 students (36.8%) in the high or very high categories, and 13 students (17.1%) in the low category, while no student fell in the very low category. In other words, distance learning was neither rejected nor strongly endorsed. This moderate verdict is consistent with the idea that remote teaching organized in response to a crisis tends to be less effective than online learning planned from the outset [3], and it echoes the conclusion of Atmojo and Nugroho [7] that limited preparation and planning hold back online EFL classes. It also fits the broader review by Adedoyin and Soykan [1], who describe online learning as offering real opportunities alongside persistent technological and pedagogical challenges.

3.3 Perceived Effectiveness by Dimension

Table 3 and Figure 2 show how the five dimensions compare. Learning materials received the highest rating ($M = 3.72$, high), followed by teacher–student interaction ($M = 3.48$, high). Language skills development ($M = 3.38$) and motivation and engagement ($M = 3.15$) were rated moderate, and technology and internet access received the lowest score ($M = 2.94$), together with the widest variation among students ($SD = 0.83$).

Table 3. Descriptive statistics of students' perceived effectiveness by dimension (N = 76)

Dimension	Items	<i>M</i>	<i>SD</i>	Category
Learning materials	4	3.72	0.61	High
Teacher–student interaction	4	3.48	0.68	High
Technology and internet access	4	2.94	0.83	Moderate
Motivation and engagement	4	3.15	0.74	Moderate
Language skills development	4	3.38	0.66	Moderate
Overall	20	3.33	0.55	Moderate

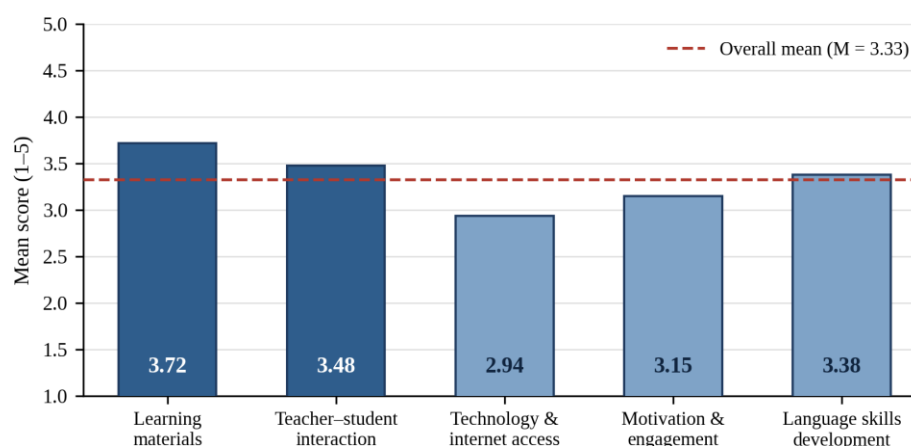


Figure 2. Mean scores of the five dimensions of perceived effectiveness (scale 1–5)

The strong showing of learning materials suggests that teachers succeeded in packaging English content in formats that students could open on a phone, such as short readings, voice notes, and video links. Combining words with audio and images supports learning more effectively than words alone [16], and well-designed content is one of the conditions that Sun and Chen [11] identify for effective online instruction. Teacher–student interaction was also rated high, which indicates that teachers remained reachable through messaging and replied to questions. In terms of Moore's theory [4], this dialogue reduced transactional distance, and in terms of the Community of Inquiry, it reflects teachers' ability to maintain teaching presence even when the classroom moved to a chat group [5].

Technology and internet access was the weakest dimension, and its relatively large standard deviation indicates an uneven experience: some students studied comfortably, while others struggled with data quota, unstable connections, or shared devices. This is the familiar digital divide that Dhawan [2] and Adedoyin and Soykan [1] identify as a main barrier to online learning. Motivation and engagement, rated only moderate, show that access to materials does not by itself ensure that students stay involved when they study at home without the routines and peer presence of the classroom. Bao [10] makes a similar point in arguing that online teaching

needs deliberate designs to engage learners and a contingency plan for when conditions change, and Basilaia and Kvavadze [9] likewise note that a successful transition depends on the readiness of platforms and users.

3.4 Perceived Support for Language Skills

Table 4 breaks down the language skills development dimension. Reading ($M = 3.61$), listening ($M = 3.52$), and writing ($M = 3.49$) were all rated high, whereas speaking was the lowest and fell in the moderate category ($M = 2.89$, $SD = 0.91$). The receptive skills benefit from asynchronous resources that students can replay and revisit at their own pace, and writing tasks can be submitted and commented on later. Speaking, by contrast, depends on real-time interaction, immediate feedback, and a listener, all of which are difficult to provide in a text-based group chat on limited mobile data. The standard deviation for speaking was also the largest of the four skills, which may indicate that some students found ways to practice, for instance by recording voice notes or reading aloud at home, while others hardly spoke English at all during the closure. Taken together, the figures suggest that the skills most easily delivered through files and messages were the ones students felt were best supported.

Table 4. Perceived support for each English skill (N = 76)

Skill	<i>M</i>	<i>SD</i>	Category
Reading	3.61	0.70	High
Listening	3.52	0.74	High
Writing	3.49	0.77	High
Speaking	2.89	0.91	Moderate

This pattern accords with Warschauer and Healey's view [19] that the value of technology in language learning depends on how it is integrated into pedagogy, not on the tool itself. It also resonates with the observation of Atmojo and Nugroho [7] that online EFL classes were often built around simple activities rather than carefully planned interactive tasks. For a foreign language like English, where speaking practice in daily life is scarce, the weaker support for speaking is the most pedagogically important gap in the findings.

3.5 Gender Differences (H1)

Preliminary tests showed that the data were normally distributed (Kolmogorov–Smirnov, $p > .05$) and that variances were equal across groups (Levene's test, $p = .46$). Female students reported a slightly higher mean ($M = 3.38$, $SD = 0.52$) than male students ($M = 3.27$, $SD = 0.58$), but the difference was not statistically significant, $t(74) = 0.86$, $p = .390$, with a small effect size (Cohen's $d = 0.20$). H1 is therefore not supported. Students of both genders shared the same school, curriculum, and technological conditions, so differences in access and teaching practice, rather than gender, appear to account for variation in their perceptions.

3.6 Internet Access and Perceived Effectiveness (H2)

The technology and internet access dimension correlated positively and significantly with the mean of the other four dimensions, $r(74) = .46$, $p < .001$. Internet access thus explained about 21% of the shared variance ($r^2 = .21$), a moderate relationship. H2 is supported: students with more dependable devices and connections judged the materials, interaction, motivation, and skill support of distance learning more favorably. This result is in line with the technology acceptance model, in which ease of use shapes perceived usefulness [6]. When the platform is

easy to reach, students can concentrate on learning English rather than on getting online. It also supports Sun and Chen's conclusion [11] that dependable technology is a precondition for effective online instruction, and it underlines that the effectiveness of distance learning is shaped as much by infrastructure as by instruction.

3.7 Implications and Limitations

Three practical implications follow. First, because haze episodes recur, the school could prepare a contingency plan before the dry season begins, including low-bandwidth materials that can be downloaded in advance and a clear schedule of teacher availability. Second, speaking should be scaffolded deliberately, for example through short voice-note or video tasks with individual feedback, and through brief synchronous sessions when connectivity allows. Third, support for connectivity, such as data quota assistance or lending devices to students with limited access, would address the dimension that students rated lowest. This study has limitations: it covered one school and one grade level, relied on self-reported perceptions rather than learning outcomes, and was cross-sectional, so causal claims cannot be made. Future research could include several schools, combine perceptions with achievement data, and use interviews to explain why speaking and access were rated lowest.

4. CONCLUSION

Students at SMP Negeri 2 Sampit perceived distance learning in ELT as moderately effective. Learning materials and teacher–student interaction were its strongest aspects, whereas technology and internet access, motivation and engagement, and speaking practice were the weakest. Perceived effectiveness did not differ between male and female students, but it increased with better internet access. These findings indicate that distance learning can function as a workable response when haze prevents face-to-face teaching, provided that connectivity barriers are reduced and speaking activities are redesigned to be more interactive. Schools and local education authorities should therefore treat connectivity support and speaking-oriented tasks as priorities in planning for future disruptions.

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