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Learner's Cognitive Strategies in Interpreting Implied Meaning in an English Listening Course among University Students

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ABSTRACT

Understanding what speakers imply rather than state is a persistent difficulty for EFL university students in listening, yet little is known about how learners themselves experience and resolve such meaning. Most existing studies measure strategy use and listening performance quantitatively, and few connect pragmatic theories of implied meaning with cognitive strategy frameworks at the level of learners' lived experience. This study aims to explore EFL university students' experiences in interpreting implied meaning (e.g., idioms, sarcasm, and indirect remarks) in an English listening course from the perspective of cognitive strategies, and how they perceive barriers and strategies to combine when they resolve such meaning. Using a qualitative phenomenological design, six students at an Indonesian university were selected purposively and interviewed through asynchronous semi-structured WhatsApp voice notes, and the data were analyzed using reflexive thematic analysis. Participants perceived vocabulary, speech rate, and accent as barriers that preceded difficulty with implied meaning; they relied on inferencing, tone of voice, and context to resolve ambiguity, combined keyword focus, prediction, and imagery, and used translation according to their confidence in processing English directly. The novelty of this study lies in integrating Gricean implicature with O'Malley and Chamot's cognitive strategy taxonomy into a three-stage account of implied-meaning interpretation: decoding under load, gap detection, and strategy deployment. The study concludes that implied meaning should be taught as an explicit component of listening instruction.

Keywords: Cognitive Strategies; Implied Meaning; Listening Comprehension; Phenomenology; Psycholinguistics

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INTRODUCTION

Listening is one of the important skills required in English as a Foreign Language (EFL) learning because it involves the ability to decode spoken input, construct meaning, and respond appropriately in real time (Bozorgian et al., 2022). For university students, listening plays an important role in understanding lectures, following discussions, and processing spoken information in academic contexts. Learners are expected not only to recognize words and grammatical structures but also to interpret implied meanings, inferences, and speaker attitudes embedded in spoken discourse (Rost, 2016). Recognizing words and grammar only gets a student partway there. Speakers rarely state their full meaning outright; they lean on tone, context, and shared assumptions to make a point (Grice, 1975), and a student who misses this misreads a lecturer's intent, misunderstands an instruction, or misses a social cue. That gap shows up in grades and in everyday conversations (Goh & Vandergrift, 2022; Rost, 2016).

Even though EFL university students may have developed basic grammatical and lexical knowledge, listening comprehension remains a challenging skill. Namaziandost et al. (2019) found that even advanced EFL learners struggled with speech rate, unfamiliar vocabulary, and accent. Wiraatmaja et al. (2022) found EFL classroom learners rated listening as their hardest skill, ahead of reading, writing, and speaking. Learners often struggle with factors such as unfamiliar vocabulary, different accents, reduced forms, rapid speech, and meanings that are implied rather than explicitly stated (Rost, 2016). From a psycholinguistic perspective, these challenges can be understood through Menn & Dronkers' (2016) view of language processing, which suggests that listeners must rapidly recognize speech sounds, activate relevant lexical and semantic knowledge, and integrate incoming information to construct meaning in real time. When the listening input contains unfamiliar or complex features, this process becomes more demanding, a pattern consistent with what Sweller (1988) describes in Cognitive Load Theory as the limited capacity of working memory when processing is not yet automatic (see also Sweller et al., 2019). As a result, students who cannot identify important information or

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interpret speakers' intended meanings during listening activities risk misreading a lecturer's point, misapplying an instruction, or withdrawing from class discussion altogether.

To manage these difficulties, students often use cognitive strategies such as focusing on key words, making predictions based on context, and relating new information to prior knowledge (Goh & Vandergrift, 2022; Menn & Dronkers, 2016). Recent studies also show that learners combine cognitive strategies such as inferencing and note-taking with metacognitive strategies such as monitoring to improve listening comprehension (Fung & Lo, 2023; Sari et al., 2024). However, many learners are not fully aware of the strategies they use or do not apply them consistently. Therefore, research on students' cognitive strategies in listening is important because understanding how learners process spoken input can help teachers design more effective listening activities, materials, and strategy instruction. According to Menn & Dronkers' psycholinguistic framework (2016), understanding language starts with a process they call spreading activation. When listeners hear a string of sounds, they first recall the sound form of the word, and this activation triggers recall of the word's meaning and grammatical function (Menn & Dronkers, 2016). Listening is therefore an active mental process rather than passive reception of information.

Anderson's (1985) three-phase model breaks listening comprehension into perceptual processing (attending to and holding the raw speech signal in short-term memory), parsing (converting sounds into meaningful mental representations such as words and phrases), and utilization (relating that representation to existing knowledge to arrive at meaning). Menn & Dronkers' theoretical framework of spreading activation fits within this model: parsing and utilization happen almost simultaneously rather than as separate steps, consistent with how demanding real-time listening feels for EFL learners.

Speech unfolds quickly, and listeners rarely have time to process every sound with full accuracy. To keep pace, the brain relies on interactive activation: it decodes incoming sounds and fits them into a larger linguistic picture at the same time. This means the listener is doing two things simultaneously: decoding incoming sounds and mapping those sounds into existing linguistic knowledge (Menn & Dronkers, 2016). We use something called bottom-up processing when we decode those physical sounds entering the ear, and top-down processing (where our background knowledge & expectations about language kick in) to fill in the gaps if information is incomplete (Menn & Dronkers, 2016). These two processes do not run in sequence; listeners combine them continuously to interpret speech. Under normal conditions, bottom-up and top-down processing run together rather than in sequence. But Sweller's (1988) Cognitive Load Theory suggests that when bottom-up decoding demands most of a listener's working memory, top-down interpretation has little capacity left to run alongside it. In practice, the two processes can look staged even though they are not sequential by design.

That interactive process is what helps the student figure out those implied meanings. In the real world, speech is often fast or unclear; listeners cannot rely on the acoustic signal alone and must draw on background knowledge to infer what a speaker means (Menn & Dronkers, 2016). When learners are struggling with language and have little time to think, they rely on the social context of the conversation to anticipate what a speaker will say, applying top-down processing to predict. This ability allows listeners to detect hidden meanings, what the speaker actually intends or feels, even when the speech is informal of difficult to perceive clearly. This interaction between bottom-up and top-down processing connects listening comprehension to the cognitive strategies discussed in the next section. When bottom-up processing fails because an accent is unfamiliar or a word has not yet been acquired, top-down processing does not switch off. Instead, listeners lean more heavily on strategies that let them compensate, such as inferencing from context or elaborating on partial input using prior knowledge (O'Malley & Chamot, 1990; Rost, 2016). The cognitive strategies examined in this study sit at the junction between these two levels of difficulty, which is why the research question frames, for example, accents, vocabulary, and idioms as different routes into the same underlying process of interpreting implied meaning.

O'Malley & Chamot (1990) classify language learning strategies into three types: cognitive, metacognitive, and socio-affective. Cognitive strategies are the mental operations learners apply directly to incoming information to comprehend, learn, and retain it. Unlike metacognitive strategies, which regulate and evaluate the learning process, cognitive strategies operate directly on linguistic input during comprehension (O'Malley & Chamot, 1990).

Among the cognitive strategies identified by O'Malley & Chamot (1990), inferencing and elaboration are relevant to this study. Inferencing lets learners fill gaps in the input using contextual cues; elaboration lets them connect new input to what they already know by using their existing knowledge and experiences. Rost

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(2016) describes inferencing in listening as a process of hypothesis generation: listeners form a provisional interpretation of a speaker's meaning from partial input, then revise it as the utterance unfolds. This framing suits a study on implied meaning because it treats inferencing as an ongoing, revisable process, closer to how participants are likely to describe their own experience. Inferencing connects most directly to interpreting implied meaning. It draws on the same top-down process Menn & Dronkers (2016) describe: using contextual and background knowledge to fill gaps left by incomplete or ambiguous linguistic input. Elaboration supports overall comprehension by helping learners integrate new input with prior knowledge. Monitoring, a metacognitive strategy in O'Malley & Chamot's (1990) taxonomy, helps learners track whether their comprehension stays on course. Inferencing, though, is what lets learners arrive at meanings a speaker never states explicitly.

Implied meaning refers to meaning that is not directly stated and must be understood through context, tone, and pragmatic cues. The most influential theoretical explanation of implied meaning comes from Grice's (1975) Cooperative Principle, which holds that conversation is guided by an implicit assumption that speakers are being cooperative, informative, relevant, and clear. When a speaker does not say something explicitly or appears to say less than might be expected, listeners generally interpret that the speaker intends to convey a meaning nonetheless. Consequently, they infer additional meaning beyond the literal words. Grice (1975) refers to this as conversational implicature: a listener recovers unstated meaning when a speaker appears to flout one of the cooperative maxims of quantity, quality, relation, or manner. This aligns with the theoretical explanation of top-down processing by Menn & Dronkers (2016) and helps explain why EFL learners, who already carry a heavier cognitive load when decoding an L2 (Sweller, 1988), may need to rely more heavily on cognitive strategies to reach an interpretation a native listener reaches with less conscious effort. Research on L2 pragmatics confirms that recovering implicature is a distinct challenge for learners. Bouton (1994) found that even fairly proficient L2 learners often misread conversational implicatures, and Taguchi (2008) showed that learners who decode an utterance correctly may still miss the intended meaning when they overlook contextual and prosodic cues. More recent studies report that pragmatic comprehension varies with proficiency and strategy use: higher-proficiency learners combine multiple strategies and world knowledge, whereas lower-proficiency learners rely more on intuition (Tai & Chen, 2021), and learners with similar language backgrounds recognize implicatures at different rates depending on how they use context (Yang, 2022). Implicature comprehension is also closely related to broader academic comprehension among university students (Çiftlikli & Demirel, 2022). Accordingly, Grice's theory of conversational implicature is used as the theoretical basis for explaining implied meaning in the present study, since it maps most directly onto the idioms, indirect remarks, and context-dependent cues participants are likely to describe from their own listening experience.

Most existing studies on EFL listening focus on quantitative measures of strategy use, listening difficulties, and listening performance rather than on learners' personal experiences in interpreting implied meaning (Alfian & Nurchaerani, 2024; Meng et al., 2023; Sari et al., 2024), and studies of pragmatic comprehension have largely relied on tests and questionnaires (Çiftlikli & Demirel, 2022; Tai & Chen, 2021; Yang, 2022). Qualitative studies in Indonesian higher education have documented learners' listening difficulties, such as unfamiliar vocabulary, accent, and speech rate (Latifa et al., 2025), and process-oriented studies elsewhere show that listeners combine several strategies rather than using them singly (Fung & Lo, 2023; Rukthong, 2021). However, few studies connect the pragmatic theories of implied meaning (Grice, 1975) with the cognitive strategy framework of listening comprehension (O'Malley & Chamot, 1990) at the level of individual learners' lived experience. There is therefore a gap between what is expected of university listeners, namely recovering speakers' intended meanings in real time, and what is known about how they actually experience and manage this task. The novelty of this study lies in examining implied-meaning interpretation through learners' own accounts and integrating Gricean implicature with O'Malley and Chamot's cognitive strategy taxonomy into a three-stage account of how barriers and strategies combine. Theoretically, the study contributes a learner-centred account that links listening processing, pragmatic inference, and strategy use; pedagogically, it informs listening instruction that treats implied meaning as an explicit teaching target.

Therefore, this study aims to explore EFL university students' lived experiences in interpreting implied meaning in an English listening course from the perspective of cognitive strategies, and to describe how they perceive barriers and strategies to combine when they resolve implied meaning. Specifically, it addresses two research questions: (1) What are the students' experiences in interpreting implied meaning (e.g., idioms, sarcasm, and indirect remarks) during an English listening course from the perspective of cognitive strategies?

(2) How do students describe the way cognitive strategies and barriers combine into a sequence when they resolve implied meaning?

METHOD

Research Design

This study adopted a qualitative descriptive phenomenological design, which is suitable for exploring and describing students' lived experiences in using cognitive strategies to interpret meaning during an English listening activity (Creswell & Creswell, 2018). Phenomenology focuses on how individuals perceive, experience, and make sense of a particular phenomenon, in this case, the interpretation of implied meaning in an English Listening course. The data were analyzed using reflexive thematic analysis (Braun & Clarke, 2006, 2019, 2021). Thematic analysis was chosen because it is theoretically flexible and can be applied within an experiential orientation that stays close to participants' own accounts; this fits the descriptive aim of phenomenology while providing a transparent, step-by-step procedure for identifying patterns of meaning across participants.

Participants

The participants were six EFL university students at an Indonesian public university who had completed an English Listening course. They were coded Student 1 to Student 6 (S1–S6 in the tables). They were selected using purposive sampling based on the following criteria: having experience in English listening tasks and the Semantic & Pragmatic Course, and being willing and able to explain their listening experiences and strategies in English. To capture a range of perspectives, participants with different self-reported levels of listening proficiency were selected on the basis of the screening questionnaire; because this criterion relied on self-report rather than an objective score, it is acknowledged as a limitation. To complement the self-reports, participants' final grades in the English Listening course were obtained from their grade transcripts, with their verbal permission, and are reported in Table 1. Because the grade reflects overall course performance rather than a standardized listening test, it is used only to describe the sample and not to classify participants into proficiency groups.A sample of six is consistent with phenomenological research, which prioritizes depth of individual experience over breadth (Creswell & Creswell, 2018). Table 1 presents the participant profile.

Before data collection, the researchers explained the study's purpose, procedures, and voluntary nature to each participant. Informed consent was obtained through a consent statement in the screening questionnaire, and separate permission to record the voice notes was requested before the interview. Participants could withdraw at any point without penalty, and all recordings and transcripts were stored under participant codes rather than names. Before data collection, the researchers explained the study's purpose, procedures, and voluntary nature to each participant. Informed consent was obtained through a consent statement in the screening questionnaire, and verbal permission to record the voice notes and to access participants' grade transcripts was requested before the interview. No formal ethical approval or research permission letter was obtained for this study, and the permissions for recording and grade access were verbal rather than documented. Participants could withdraw at any point without penalty. Transcripts were labelled with participant codes (S1-S6) and contained no names or phone numbers. The original voice notes were stored on the first author's password-protected device and were accessible only to the first author and the research team.

Table 1. Participant profile

Code	Gender	Semester	Self-reported listening proficiency	(English Listening Grade)	English exposure (from interview)
S1	Female	6	Quite challenging, but it also helped me improve my listening skills	B	Listened to materials more frequently before class.
S2	Female	6	I consider my listening ability moderate. I can understand familiar topics, but I sometimes have difficulty with fast speech.	C	Not reported
S3	Female	6	My listening ability is fairly good, but I still struggle to understand unfamiliar words and different accents.	B	Not reported

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Code	Gender	Semester	Self-reported listening proficiency	(English Listening Grade)	English exposure (from interview)
S4	Female	6	I consider my listening ability moderate. I can understand the main ideas, but I sometimes miss specific information.	C	Films; school-based learning centered on translation and vocabulary memorization; uses AI for clarification.
S5	Female	6	My listening ability is good, especially when the speaker speaks clearly and uses familiar vocabulary.	A	Not Reported
S6	Male	6	I consider my listening ability very good. I can generally understand different varieties of English and follow spoken English in different contexts.	A	Extensive direct exposure; British and American English; YouTube since early childhood

Instruments

In this study, implied meaning was operationally defined as meaning that a listener must infer beyond the literal words of an utterance, such as idioms, sarcasm, and indirect remarks (see the Introduction for the Gricean framework). This definition frames what counts as implied meaning for the interview questions; it does not predetermine the categories used to analyze participants' responses. The strategies participants describe are identified inductively from the interview data itself, and only interpreted in relation to O'Malley & Chamot's (1990) cognitive strategy taxonomy in the discussion section, after the themes have already taken shape. This study adopts the instrument format from Awinindia's study (2023), which paired a strategy questionnaire with a semi-structured interview in an EFL listening context, and in this study, the researchers adapt that format to address the research questions.

Before the main data collection, the researchers administered a screening questionnaire through Google Forms to identify participants who met the study's inclusion criteria. The questionnaire gathered demographic information (age, gender, semester, and study program), listening course experience, self-reported listening proficiency, and willingness to take part in a follow-up interview. A cognitive strategy questionnaire adapted from Awinindia (2023) was included in the same form and consisted of four close-ended items rated on a four-point agreement scale ranging from Strongly Agree to Strongly Disagree; its items are provided in Appendix A. The cognitive strategy questionnaire served only to support screening and to give participants an initial vocabulary for discussing their strategies during the interview. This study analyzes the interview data exclusively; questionnaire responses did not enter the thematic analysis. Because the questionnaire listed strategy names before the interview, it may have primed the vocabulary participants used to describe their strategies. This risk is acknowledged as a limitation.

These questions let the researcher confirm that each selected participant had relevant experience with listening tasks involving implied meaning. The screening process also supported purposive sampling by surfacing participants with different listening performance levels and learning backgrounds, which helped capture a range of perspectives on how they interpreted implied meaning. The researcher invited only participants who met the inclusion criteria to complete the cognitive strategy questionnaire and take part in the semi-structured interview.

The semi-structured interview guide was developed for this study's specific focus: interpreting implied meaning, as operationally defined above, in a listening course. It consists of six main questions, each followed by conditional probes that branch on the participant's response. The full interview guide is presented in Appendix B.

Data Collection

The researchers distributed the screening questionnaire and the cognitive strategy questionnaire together through Google Forms. Within the same form, participants indicated whether they were willing to take part in a follow-up interview. The researchers then contacted willing participants through personal WhatsApp to schedule the voice-note interview. Before the interview began, the researchers asked participants for permission to record their voice notes for transcription and analysis. Participants responded to the six main questions and their conditional probes asynchronously through WhatsApp Voice Notes, which gave them time

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to recall their listening experiences in detail rather than answer under the pressure of a live session (Salmons, 2015). The trade-off was the researchers' inability to probe a vague answer immediately. Data were collected between February and May 2026. The six interviews lasted 78 minutes in total, ranging from 10 to 16 minutes per participant, with an average duration of 13 minutes. The voice notes were transcribed by the first author using a clean-verbatim approach, retaining the substantive content of participants' responses while omitting unnecessary fillers, repetitions, and other non-content features. Because participants responded in English, no translation was required.

Data Analysis

The data were analyzed following the six phases of reflexive thematic analysis (Braun & Clarke, 2006, 2021): (1) familiarization, in which the transcripts were read repeatedly and initial notes were made; (2) generating initial codes for statements related to listening barriers, cognitive strategies, and implied meaning; (3) constructing candidate themes by grouping related codes; (4) reviewing the themes against the coded extracts and the full data set; (5) defining and naming the themes; and (6) writing up the analysis with illustrative extracts. For example, Student 1's statement "after listening to the audio again, paying attention to the intonation… I realized that the speaker was actually expressing disappointment" was coded as re-attending to intonation, grouped under the sub-theme tone overriding literal meaning, and developed into the theme Tone as the Cue That Resolves Ambiguity. Table 2 in the Results and Discussion summarizes the themes and their distribution across participants. To answer RQ2, a second interpretive step was carried out: the RQ1 themes were ordered according to the temporal markers in participants' accounts (e.g., "at first", "after listening to the audio again") and the relationships participants described between barriers and strategies, and this ordering was then read against Anderson's (1985) and Menn and Dronkers' (2016) processing accounts. The resulting three-stage model is therefore an interpretive synthesis of participants' perceived sequences rather than a direct observation of real-time processing.

Trustworthiness

This study followed Lincoln & Guba's (1985) criteria for trustworthiness. For credibility, the researcher's academic advisor cross-checked the coding against the transcripts and discussed any disagreement in theme assignment until both reached consensus, which served as peer debriefing. In addition, member checking was conducted (Birt et al., 2016) through WhatsApp by sending participants brief summaries of the researchers' interpretations of their interview responses and asking them to confirm whether the summaries accurately reflected their experiences. For dependability and confirmability, the researchers kept an audit trail of coding decisions, from initial codes through final themes. Transferability rests on the thick description in findings and discussion, which lets readers judge how far the findings apply to other EFL listening contexts.

RESULTS AND DISCUSSION

RQ 1: What are the students' experiences in interpreting implied meaning (e.g., idioms, sarcasm, and indirect remarks) during an English listening course from the perspective of cognitive strategies?

Six themes were identified in participants' accounts. Table 2 summarizes the themes, their sub-themes, and their distribution across the six participants; each theme is then discussed in turn.

Table 2. Themes, sub-themes, and distribution across participants

Theme	Sub-theme	S1	S2	S3	S4	S5	S6
1. Decoding barriers perceived as preceding implied-meaning difficulty	Unfamiliar vocabulary, speech rate, and accent	✓	✓	✓	✓	✓	✓
	Barriers perceived as occurring before implied-meaning difficulty	✓		✓	✓	✓	
	Accent variety (British vs. American) as the main barrier						✓
2. Concrete encounters with implicature repair	Words decoded correctly, intent recovered only through tone/pauses	✓				✓	
	Inconsistent implicature repair						✓
3. Inferencing unfamiliar expressions from context	Continuing to listen and inferring from context	✓	✓	✓	✓	✓	✓
	Resourcing after listening (dictionary, online search)				✓	✓	
4. Tone as the cue that resolves ambiguity	Tone identified as central to interpretation	✓	✓	✓	✓	✓	✓
	Misreading a message by focusing on literal words	✓	✓	✓	✓	✓	

5. Keyword focus, prediction, and imagery as a combined strategy	Combination of keyword focus, prediction, and imagery	✓	✓	✓	✓	✓	✓
	Imagery (visualizing the situation)	✓	✓	✓		✓	✓
	Note-taking	✓			✓		
6. Translation as a confidence-dependent strategy	Relies on translation and reports its cost		✓		✓	✓	
	Avoids translation; prefers direct processing			✓			✓
	Manages the trade-off deliberately	✓					

Decoding Barriers Perceived as Preceding Implied-Meaning Difficulty

All six students named the same three obstacles: unfamiliar vocabulary, fast speech, and unfamiliar accents. Four of them, Student 1, Student 3, Student 4, and Student 5, perceived that pragmatic-interpretation difficulty surfaced only after low-level decoding had already been disrupted by unfamiliar vocabulary, accent, or speech rate. Student 3 explicitly places these difficulties alongside implied meaning when stating that *"the most difficult aspects for me were the speed of the audio, different accents, and understanding implied meanings."* Student 4 similarly reports being overwhelmed *by "unfamiliar vocabulary, unfamiliar expressions, fast-paced audio, and implied meanings,"* indicating that difficulty at the lexical and perceptual levels accompanies difficulty in recovering intended meaning. Student 1 explains that fast speech and unfamiliar vocabulary or accents make listening difficult, while understanding implied meaning requires additional attention to *"intonation, pauses, and context."* Student 5 likewise describes speed, accent, and vocabulary difficulties together with problems identifying meanings that differ from the literal words. These accounts indicate a perceived ordering in which difficulty at the decoding level can precede or contribute to difficulty with implied meaning, rather than showing an independently occurring pragmatic problem.

This perceived ordering aligns with Sweller's (1988) Cognitive Load Theory: when decoding remains effortful, working memory stays occupied at the acoustic and lexical levels, leaving less capacity for interpretation above them. The other two said nothing about where implied meaning fits, so the ordering relative to implied meaning cannot be confirmed from this data alone; even so, no participant described implied meaning as the main difficulty. Graham (2006), Goh (2000), and Hamouda (2013) identified the same cluster of vocabulary, speech rate, and accent as the primary listening barriers reported by EFL learners in different contexts; Latifa et al. (2025) reported the same obstacles among Indonesian university students, and Meng et al. (2023) identified vocabulary recognition as one of the most prevalent listening barriers. This suggests these obstacles are not specific to this sample. None of these studies, however, measured where implied meaning falls relative to these barriers. This perceived sequence can be explained through Anderson's (1985) three-phase model, which treats perceptual processing and parsing as prerequisites for utilization, the stage at which a listener relates the decoded input to existing knowledge to build meaning.

Goh (2000) locates the constraint more precisely, arguing that word-recognition and parsing problems continue to limit meaning construction even once a listener moves past the acoustic signal. Han & Qian (2024) add that aural vocabulary knowledge predicts listening success more strongly than most other measured variables. Both threads support what participants described: in their accounts, difficulty with implied meaning was not reported on its own but typically after lexical or perceptual processing had already broken down.

Student 6 adds a variation worth noting. The main barrier was accent variation between British and American English rather than raw speed or vocabulary, pointing to a decoding cost tied specifically to dialectal exposure rather than general unfamiliarity which supports Menn & Dronkers' (2016) theory that bottom-up and top-down processing interact rather than run independently. Goh (2000) similarly found that listening problems cluster at the perception, parsing, and utilization stages, corroborating the staged breakdown that Anderson's (1985) model predicts for this sample.

Concrete Encounters with Implied Meaning as Evidence of Implicature Repair

Grice's (1975) Cooperative Principle holds that a listener assumes a speaker stays cooperative even when the words carry less than the speaker means. It infers the rest, the conversational implicature, from context and delivery. Student 1 and Student 5 each described a case where a neutral-sounding line, *"Well, that could have gone better"* and *"That's interesting,"* turned out to signal disappointment or sarcasm once tone and pauses entered the picture. In both cases, every word was decoded correctly, and the interpretation still failed until the vocal delivery corrected it, which is exactly the repair process Grice's framework predicts. Bouton (1994) found that even fairly proficient L2 learners often misread conversational implicatures, because recovering

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them takes more than literal comprehension. Yang (2022) reports the same unevenness. Participants with comparable language backgrounds recognized implicatures at noticeably different rates. Stimulated-recall data in that study traced the difference to how much a listener leaned on context and background knowledge to fill the gap, the same behavior Student 1 and Student 5 described in this study.

The participants' experiences are consistent with Taguchi (2008), who found that second-language learners frequently decode the literal meaning of an utterance correctly but fail to recognize the speaker's intended meaning because they overlook pragmatic cues such as tone and context. This supports Grice's (1975) claim that conversational implicature is recovered through contextual and prosodic information rather than through literal meaning alone. It refines Menn & Dronkers' (2016) bottom-up and top-down theory by showing that the two processes can resolve at different moments: bottom-up decoding finished cleanly for Student 1 and Student 5 while top-down interpretation was still working.

Student 6 described the reverse pattern: The student can sometimes read these cues correctly but often cannot, which suggests implicature repair is a skill still under development rather than a stable competence across this sample. This split between successful and unsuccessful repair supports Menn & Dronkers' (2016) argument that top-down processing, rather than bottom-up accuracy, determines the resolution of ambiguity. Bouton (1994) found that conversational implicatures remain difficult even for advanced learners, which is consistent with Student 6's account of inconsistent implicature repair despite general English proficiency. Student 6 does not contradict this pattern. Both Taguchi (2008) and Yang (2022) treat implicature repair as a skill that develops unevenly, shaped by proficiency, pragmatic awareness, and how much exposure a learner has had. Student 6's mixed success fits that description better than a fixed competence would.

Inferencing Unfamiliar Expressions from Context

Faced with an idiom, joke, or cultural reference, all six students described continuing to listen and inferring meaning from the context rather than stopping, although Student 2 did so only after an initial moment of panic. Student 1 explains that she *"continues listening and tries to infer the meaning from the context,"* while Student 2 reports that, after an initial moment of panic, she *"continues listening"* and uses the surrounding context and prediction to work out the meaning. Student 3 similarly reports that she infers meaning from *"the context, the surrounding conversation, the situation, and the reactions of other speakers."* Student 4 describes replaying the audio and then using *"context and the way it is delivered"* to understand difficult expressions. Student 5 reports that she continues listening and *"tries to infer the meaning from the context,"* while Student 6 explains that he uses the context, the reactions of other speakers, and information before and after the expression to infer its meaning. This pattern is illustrated by Student 3's account*: "I try to infer the meaning from the context, the surrounding conversation, the situation, and the reactions of other speakers."* This matches O'Malley & Chamot's (1990) definition of inferencing as a cognitive strategy that works directly on incoming input to build meaning from cues that are partial or ambiguous, and Rost's (2016) framing of the process as hypothesis generation, a tentative interpretation formed early and revised as the utterance continues. Graham & Macaro (2008) reported the same behavior among learners who received strategy instruction: active hypothesis generation sustained rather than abandoned once comprehension became difficult. Vandergrift (2006) adds that inferencing draws on greater linguistic resources than literal comprehension, since it requires holding decoded information in mind while reasoning about what it implies.

Yang (2022) extends this pattern to pragmatic comprehension specifically: learners leaned on contextual information, background knowledge, and inferential reasoning to work out conversational implicatures, the same combination this sample uses to interpret implied meaning. Inferencing functions here as the default response to unfamiliar input, not a specialized routine.

Student 4 and Student 5 add a second layer once inferencing alone falls short: both described consulting a dictionary or searching online after the listening activity ended. This is resourcing, a related but distinct cognitive strategy in O'Malley & Chamot's (1990) taxonomy, one that draws on an external reference rather than the surrounding input. Student 4's account also mentions asking a stronger English speaker for help, which falls under socio-affective strategies rather than cognitive ones and sits outside the scope of this study.

Vandergrift (2006) and Graham & Macaro (2008) describe inferencing as something that happens during listening, in real time. Several participants here extended it past the listening task itself, opening a dictionary, searching online, or asking a stronger speaker once the activity ended. Inferencing and resourcing worked as a pair rather than as competitors.

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Tone as the Cue That Resolves Ambiguity

All six students identified tone of voice as central to interpreting implied meaning. Five of them (all but Student 6) said that they had at some point misread a message by focusing only on the literal words. The accounts of Student 1 and Student 5, which included the exact utterances, are reported in the section on concrete encounters above; those of Student 2, Student 3, and Student 4 are summarized here. Student 2 reports that she *"focused too much on vocabulary and individual words"* and consequently overlooked the speaker's tone, while Student 3 similarly states, *"I focused too much on the words themselves and ignored the speaker's tone."* Student 4 also reports focusing too much on the words themselves while overlooking tone.This recurrence across the sample is consistent with Grice's (1975) claim that listeners repair gaps between literal and intended meaning using cues beyond the words themselves. Tone does not just supplement word meaning; it can override it when the two conflict. This is consistent with Menn & Dronkers' (2016) view of bottom-up and top-down processing as interactive: prosodic information, which is decoded bottom-up, feeds the top-down interpretation of speaker intent throughout listening rather than only after decoding is complete. Taguchi (2008) ties this directly to prosody: successful interpretation depends on integrating contextual and vocal information, not lexical knowledge alone. Bouton (1994) found implicatures going unresolved even when literal comprehension was intact, for lack of pragmatic awareness, and Yang (2022) reports the same split by how well learners read context beyond the literal utterance.

Keyword Focus, Prediction, and Imagery as a Combined Strategy

Every student reported some combination of keyword focus, prediction, and mental visualization. Sari et al. (2024) report a similar cluster (prediction, keyword focus, and note-taking) as the strategies EFL learners use most often when facing fast or unfamiliar input, and Fung and Lo (2023) found that effective listeners combine several strategies rather than relying on one. This also aligns with Graham et al. (2008), who found that successful listeners combine multiple strategies, such as prediction and monitoring, rather than relying on any single technique. Five of the six students, all but Student 4, who instead emphasized note-taking, explicitly described visualization or imagining the situation being discussed. Student 1, for example, explains, *"I also try to visualize the situation in my mind because creating a mental picture helps me understand the dialogue more easily."* In O'Malley and Chamot's (1990) taxonomy, visualization corresponds to imagery, a cognitive strategy in which learners use mental images to understand and remember new information. Keyword focus, by contrast, corresponds to selective attention, which O'Malley and Chamot classify as a metacognitive strategy. The cluster reported here therefore combines cognitive strategies (prediction as a form of inferencing, and imagery) with a metacognitive one (selective attention), indicating that participants' interpretation of implied meaning drew on both levels of strategy use.

Graham & Macaro (2008) describe the same coordination in proficient listeners generally: prediction, inferencing, and selective attention running together throughout listening rather than in sequence. Vandergrift (2006) adds that effective listeners keep revising an interpretation as new information arrives rather than settling on one early guess. The strategies observed here extend that pattern from general listening comprehension to interpreting speaker intent specifically.

Student 1 and Student 4 both mentioned note-taking as a way to hold on to unfamiliar material for later review, which O'Malley and Chamot also classify as a cognitive strategy in its own right. Taken together, these accounts suggest keyword focus, prediction, and imagery function as one combined process rather than three separate techniques, each reinforcing the others as the student builds an interpretation.

Translation as a Confidence-Dependent Strategy

O'Malley & Chamot (1990) list translation as a cognitive strategy that converts input into a more familiar code to support comprehension, and this sample shows a clear split in how students use it. Student 2, Student 4, and Student 5 described relying on translation and paying a cost for it: slower processing, divided attention, or missed information further along in the conversation. Student 3 and Student 6 rejected translation outright, both citing direct English processing as their preference, while Student 1 described managing the trade-off deliberately rather than choosing a side. Student 4 states, *"I frequently translate English into Indonesian while listening,"* whereas Student 3 explains, *"I generally do not translate English into Indonesian while listening."* This matches Sweller's (1988) cognitive load argument: translation adds a conversion step between hearing English and understanding it, competing for the same working memory that is already strained by speech rate. The split also lines up with a confidence pattern. Student 3 and Student 6, the two who avoided translation, both attributed that choice to extensive direct exposure to English, while Student 2 and Student 4 described

translation as closer to a necessity. This suggests translation use in this sample tracks a student's confidence in processing English directly rather than a fixed strategy applied uniformly across learners.

Existing research says little about why learners choose to translate mentally in the first place. Most treatments simply list translation among the available cognitive strategies O'Malley & Chamot (1990). This sample suggests a reason: translation use tracks a learner's confidence in processing English directly, not a fixed habit applied uniformly. Participants with more exposure to English favored direct processing; those with less confidence leaned on translation despite recognizing what it cost them.

Read together, these six patterns describe implied-meaning comprehension as a sequence rather than a single skill. Barriers at the vocabulary, accent, and speed level come first and determine how much capacity remains for interpretation. Once a student notices a possible gap between literal and intended meaning, tone and context supply the material needed to close it. Inferencing operates as the default response to unfamiliar material, with resourcing as a backup once inferencing alone falls short. Keyword focus, prediction, and imagery work as one combined process that draws on both cognitive and metacognitive strategies. Translation offers a shortcut whose cost depends on how confident a student already feels about processing English directly.

Across all six students, no single strategy operated in isolation. Each one addressed a different part of the same underlying problem: recovering a speaker's intended meaning from cues that the words alone do not fully carry.

RQ 2: How do students describe the way cognitive strategies and barriers combine into a sequence when they resolve implied meaning?

The previous section catalogued six patterns. This section asks how those pieces connect. Read as a process instead of a list, participants' accounts can be synthesized into three perceived stages: decoding under load, gap detection, and strategy deployment (Figure 1). This model is an interpretive synthesis constructed by the researchers from the temporal markers and relationships participants described (see Data Analysis); it is not a direct observation of real-time processing.

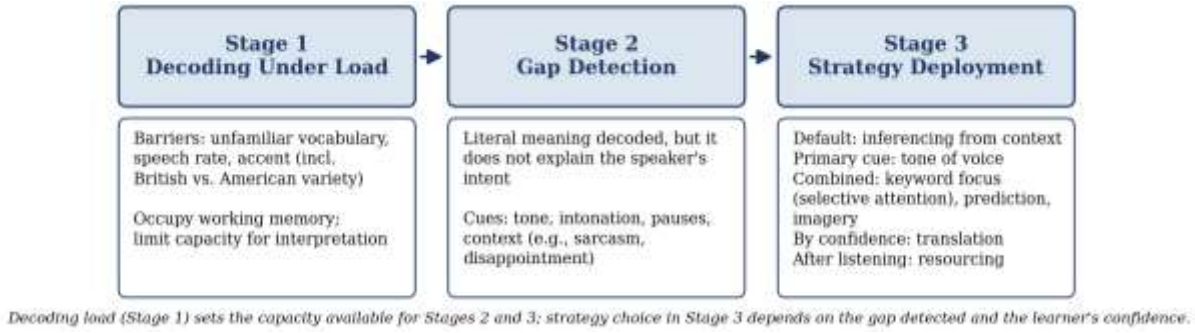

Figure 1. Perceived three-stage process of interpreting implied meaning (interpretive synthesis of participants' accounts)

Stage 1: Decoding Under Load

Vocabulary, accent, and speech rate create processing demands before a listener can build an interpretation. Rukthong (2021) found the same demand in both stronger and weaker listeners: word recognition and parsing drew on processing capacity even while higher-level strategies were already active. Cai & Lee (2012), using stimulated recall with 20 Chinese L2 learners, found that lexical-level difficulty pushed learners to draw on inferencing and background knowledge during listening, not after it. Student 6 shows the same cost from a different source. The main barrier was British versus American pronunciation, not vocabulary or speed; therefore, the decoding cost came from the acoustic form of the input itself.

Stage 2: Gap Detection

Once decoding clears, a listener may still find that the literal meaning does not explain what the speaker meant. Student 1 described this directly: "At first, I thought it was simply an ordinary comment. However, after listening to the audio again, paying attention to the intonation... I realized that the speaker was actually expressing disappointment." Student 5 reported the same shift with a different line, moving from "a positive response" to disappointment or sarcasm once she attended to tone and pauses. In both cases, word recognition

finished cleanly. The interpretation stayed open. Rukthong's (2021) interaction finding and Cai & Lee's (2012) account of flexible use of contextual and background knowledge both support this pattern: word recognition finishing does not mean interpretation has finished with it.

Stage 3: Strategy Deployment

Once a gap opens, students close it. Inferencing is the default (see *Inferencing Unfamiliar Expressions from Context*, above); tone-reading is the primary cue (see *Tone as the Cue That Resolves Ambiguity*, above); and keyword focus, prediction, and imagery function as one combined move rather than three separate techniques (see *Keyword Focus, Prediction, and Imagery as a Combined Strategy*, above). Cai & Lee (2012) found inferencing to be the strategy their participants relied on most for unfamiliar input. Their learners combined immediate context, broader context, and background knowledge rather than any single source, a pattern close to what Student 1, Student 4, and Student 5 described in this sample. Rukthong (2021) reports the same combination: inferencing, elaboration, and monitoring worked together rather than alone.

Translation and resourcing sit further down this stage. Students use them unevenly, depending on how confident they feel processing English directly (see *Translation as a Confidence-Dependent Strategy*, above). Student 3 and Student 6 avoided translation and named early, direct exposure to English as the reason. Student 2 and Student 4 relied on it and accepted the cost: slower processing, divided attention, and occasionally missed information further along in the conversation.

Decoding load in Stage 1 sets the capacity available for Stage 2 and Stage 3. A gap detected in Stage 2 triggers the strategy choice in Stage 3. Which strategy a student reaches for tracks the barrier that produced the gap, along with that student's confidence in processing English directly. Kwon & Yu (2024) combined eye-tracking with interviews across 57 Korean EFL learners and found listening comprehension involves continuous adjustment of attention rather than a single fixed pass through the input. Their study looked at visual cues, not implied meaning specifically, but the finding supports the same view of listening as an active, ongoing process.

None of the strategies catalogued in the previous section work alone. Each answers a specific point in this sequence, which is why some students resolve a speaker's meaning in one pass while others need several. Inferencing, tone-reading, and translation are already documented separately in prior research. This sample connects them to the specific barriers EFL learners face as they move from what they hear to what a speaker means. Because the data are retrospective self-reports, this sequence describes how participants perceived and reconstructed their processing; online methods such as stimulated recall or think-aloud protocols would be needed to confirm it as real-time processing (Gass & Mackey, 2017).

CONCLUSION

This study explored how EFL university students experience and interpret implied meaning in an English listening course from the perspective of cognitive strategies. Regarding the first research question, participants perceived unfamiliar vocabulary, fast speech, and unfamiliar accents as barriers that preceded their difficulty with implied meaning. Once they noticed a gap between literal and intended meaning, they closed it mainly through inferencing supported by tone of voice and context; they combined keyword focus, prediction, and imagery, and used translation according to their confidence in processing English directly. Regarding the second research question, participants' accounts can be synthesized into a three-stage process: decoding under load, gap detection, and strategy deployment.

These findings suggest that implied meaning should be taught as an explicit component of listening, through pragmatically rich materials and tasks that reduce lower-level decoding demands while directing students' attention to tone, context, and inference. The study is limited by its small sample from one institution, its reliance on asynchronous and retrospective self-reports, possible priming by the screening questionnaire, and self-reported proficiency. Future research could involve larger and more varied samples and use stimulated recall or think-aloud methods to test the proposed sequence in real time.

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