Upon entering university, students encounter many aspects of academic life to which they may have been previously unaccustomed, not least of which is the language specific to the context. For those students who are language learners (LLs) studying abroad, this can be especially challenging because academic English may be different from their previous experience with the language (Hyland 2009), and they must quickly become proficient in the production and comprehension of academic discourse across all four language skills to be successful in their studies. However, comprehension of academic spoken English, such as that found in lectures, may be one of the most challenging aspects of studying at English-medium universities (Dang and Webb 2014; Flowerdew 1994). Moreover, academic listening comprehension is vital because so much of what university students need to understand and learn is conveyed through the lecture (Hyland 2009). Although LLs will likely have previously developed their listening skills and knowledge of the spoken form of the language through the study of English for academic purposes (EAP), at university they face the daunting task of concentrating on and understanding long stretches of academic spoken English from lecturers who do not make allowances for the L2 listeners in the class (Field 2011).

In this chapter, the lecture is conceptualized as a primarily monologic learning event that takes place in a classroom with 40 or more students (Hyland 2009; Lynch 2011). Although the focus of this chapter is on listening comprehension in lectures, much of what is presented can certainly be applied to listening in other academic situations (e.g., seminars, tutorials, group discussions, and meetings with staff) where comprehension of spoken discourse is necessary (Lynch 2011).

**Listening in an academic context**

In order for students to comprehend a lecture, they must invoke the processes associated with general listening comprehension. These are fundamentally inferential processes in which the listener constructs meaning from available knowledge sources (Lynch 2006). Knowledge sources can be differentiated as either linguistic or non-linguistic. Linguistic sources of knowledge can include phonological, lexical, syntactic, semantic, and discourse knowledge. Non-linguistic sources can include topical, contextual, and world knowledge (Buck 2001). The different types of knowledge are utilized through top-down and bottom-up processing in a complex interaction that the listeners use to create a mental representation of the input (Park 2004; Vandergrift 2004). Bottom-up processing begins with decoding phonemes to identify individual words and construct a literal understanding of what is spoken. Top-down processing is dependent on the background knowledge students bring to the listening event.
Background knowledge allows the listener to make inferences based on what they hear (Long 1990). Although the contributions from top-down and bottom-up processing are not constant and their relative contribution can change within different parts of a listening event, these two processes are used simultaneously to construct meaning (Brindley 1998). When sufficient information has been processed through top-down and bottom-up processing, comprehension can occur (Buck 2001).

There are a number of factors that can affect the ability of LLs in academic settings to successfully use bottom-up processing. These include familiarity with the accent of the speaker, the clarity of pronunciation, the presence of hesitations, the extent to which reduced forms are used, the occurrence of the prosodic elements of speech, the speech rate of the speaker, and the length of the listening event (Buck 2001; Jordan 1997; Lynch 2011). Because the ability to recognize individual words and formulaic sequences and recall their meanings is key to the utilization of bottom-up processes in aural texts, the vocabulary knowledge of the listener is another factor that has been shown to affect bottom-up processing, and consequently listening comprehension (Buck 2001). Research has indicated a relationship between comprehension, LLs’ vocabulary size, and the percentage of words that are known in an aural text (Bonk 2000; Milton et al. 2010; Stehr 2009; van Zeeland and Schmitt 2013). Moreover, insufficient vocabulary knowledge is believed to be one of the largest factors contributing to a lack of comprehension of academic spoken English (Goh 2013; Vidal 2011).

Through top-down processes, LLs make use of what they already know to contextualize and understand what they hear (Lynch 2006). There are a number of different sources of background knowledge that can affect the comprehension of academic spoken discourse (Lynch 2011), but two are of particular relevance for EAP programs. The first is knowledge of the content of the lecture. This may come as a result of prerequisite classes attended before the course, participating in previous lectures in the course, or completion of the pre-reading assigned before the lecture (Bruce 2011). Developing content knowledge is often outside the purview of most EAP programs, but those that cater to technical fields may help to develop background knowledge through teaching discipline-specific content. The second source is knowledge of the structure of the discourse genre. In this case, understanding the structure of academic lectures can help students to improve their listening comprehension. For many LLs studying abroad, the differences between the academic culture of their home country and the country they are studying in can lead to unfamiliarity with how information is presented in lectures and what is expected of students in a lecture (Nattinger and DeCarrico 1992). EAP programs have a responsibility to teach students about lecture discourse structure and how information is conveyed in this genre of discourse.

Although comprehension of lectures is reliant on general listening processes, academic listening is obviously not a purely aural experience. Students also have visual sources of information that they can make use of to increase their comprehension. Research has indicated that one visual component of the lecture, paralinguistic information, can assist comprehension (Sueyoshi and Hardison 2005). A study by Ockey (2007) investigated the differences in the way LLs reacted to having either images or video of the lecturer present when listening to two university lectures. The time the ESL students spent observing the sources of visual input was measured, and the students reported on whether they believed the imagery helped or distracted them, as well as which visual cues they used while listening. Ockey found that the majority of the students spent considerably more time watching the video than looking at the still images. The learners did not report using any visual cues with the stills but reported using a variety of cues with the video to gain more information about the lecture. These cues included lip movements, hand motions, facial gestures, and body gestures.
Listening to lectures

The information presented aurally in lectures is also often accompanied with another visual source of information in the form of slides from presentation software such as PowerPoint (Field 2011; Jordan 1997). While the amount and type of information included on lecture slides is very much related to the individual lecturer and the academic discipline, the slides by and large support the aural input in a summative role. Main points are presented on the slides, with the lecturer paraphrasing and elaborating on the written information. Intuitively this may seem like something that would improve comprehension for LLs but this would likely depend on the degree to which there was conformity between the aural and visual information. However, incongruity between what is presented on the screen and what the students hear may lead to comprehension difficulties, because it can be cognitively taxing for L2 listeners to link the two forms of input (Field 2011).

For teachers, there is often the dilemma of whether to concentrate on bottom-up or top-down skills when preparing students for academic listening situations in English. The reality is that lower proficiency L2 listeners need help with both. Less proficient listeners are weaker in bottom-up processing and need more contextual support early on to make up for a lack of automatic linguistic decoding skills (Lynch 2006; Tsui and Fulilove 1998). They need to learn to lessen their reliance on prior knowledge, or using guessing from context strategies, and increase their ability to rapidly and accurately decode linguistic input.

One area of EAP instruction that can help improve comprehension through bottom-up processing is vocabulary instruction. A principled approach to teaching vocabulary involves developing students’ vocabulary size to allow them to cope with the lexical challenges of academic spoken discourse. This can include teaching vocabulary from frequency lists, as well as words appropriate for academic discourse or a specific discipline. EAP teachers also need to ensure that students have appropriate knowledge of the discourse genre that they are trying to understand and learn from (Hyland 2009). This means that EAP students should be taught what a lecture entails in the context that they are preparing to study in, and how lecturers in this context present the information that is most important to the students.

In addition to time spent developing LLs’ ability to make use of the processes involved in listening, EAP programs should also devote time to preparing students to better utilize both the aural and visual information they encounter in lectures (Field 2011; Jordan 1997; Lynch 2011). This involves direct instruction in note-taking skills (Flowerdew 1994), and the obvious benefits that accompany the process of noting and recording the salient information presented by a lecturer.

Vocabulary knowledge and lecture comprehension

Insufficient vocabulary knowledge has been identified as a major factor contributing to unsatisfactory comprehension of academic spoken English (Evans and Morrison 2011; Stæhr 2009). To address this, it is advisable for EAP programs to set vocabulary learning as a principal goal towards preparing LLs for academic listening. However, in order for an EAP program to develop LLs’ lexical knowledge, it is first essential to have an idea of the vocabulary size necessary for comprehension of a lecture.

Two recent studies have investigated the lexical coverage of academic listening texts (Dang and Webb 2014; Webb and Paribakht 2015). Lexical coverage, or percentage of words known in a text, is useful because it indicates the vocabulary size necessary for comprehension of a text. Of all factors affecting comprehension, coverage may be the most influential (Laufer and Sim 1985). Drawing on the British Academic Spoken English (BASE) corpus, Dang and Webb (2014) investigated the vocabulary size necessary to reach two levels of lexical
coverage. They used the benchmarks of 95 percent and 98 percent coverage to represent minimal and ideal coverage (Laufer and Ravenhorst-Kalovski 2010) because these levels have been identified in other studies of lexical coverage (Hu and Nation 2000; Nation 2006; cf. Schmitt et al. 2011; Stæhr 2009; van Zeeland and Schmitt 2013). Dang and Webb found that, on average, a vocabulary size of 4,000 word families plus proper nouns and marginal words provides 95 percent coverage, and 8,000 word families plus proper nouns and marginal words provides 98 percent coverage of academic spoken English.

These findings are supported by those of Webb and Paribakht (2015) who investigated the lexical profiles of listening passages from an English proficiency test. The passages, which included interviews, announcements, dialogues, and short lectures, were taken from CanTEST which is used for admission purposes at many Canadian universities. They found that a mean vocabulary size of 4,000 word families was necessary to reach 95 percent coverage, and knowledge of 10,000 word families was needed to reach 98 percent coverage. The findings from these two studies indicate that learners need to know 1,000 to 2,000 more word families to reach 95 percent and 98 percent coverage of academic spoken English compared with general spoken English (Nation 2006; Webb and Rodgers 2009a, 2009b). This is supported by an earlier study that found that learners need a larger vocabulary size to deal with academic discourse than they do for general conversation (Adolphs and Schmitt 2004).

Even with an idea of the vocabulary size necessary for comprehension of academic spoken language, setting a target vocabulary size for EAP students remains difficult. This is because the findings from the studies by Dang and Webb (2014) and Webb and Paribakht (2015) also indicated that the vocabulary size required for comprehension can vary considerably by text and academic subject. Dang and Webb, for example, found that the vocabulary size necessary to reach 95 percent and 98 percent lexical coverage in the life and medical sciences field was 5,000 and 13,000 word families. However, 95 percent coverage was provided by 3,000 word families and 98 percent coverage by 5,000 word families in the social sciences. Webb and Paribakht also observed substantial variation between the lexical profiles of the listening passages for different test items. This is not surprising because variation in the vocabulary size necessary to reach the same levels of coverage has been observed for different texts and genres in other forms of spoken discourse including movies (Webb and Rodgers 2009b) and television programs (Webb and Rodgers 2009a). These findings indicate that students that may have the vocabulary knowledge necessary for adequate comprehension of lectures in one discipline may have difficulties with comprehension of lectures from other disciplines (Hyland and Tse 2007).

The differences in lexical demands of the academic disciplines indicate how difficult it might be for EAP teachers to set a blanket vocabulary goal for their students. Moreover, the lexical demands between lectures from the same course are also likely to vary; having adequate comprehension of one lecture does not ensure that the level of comprehension of other lectures will be similar. This indicates that developing vocabulary knowledge is likely critical for comprehension of academic spoken discourse.

Teaching vocabulary from word lists may be more effective and efficient than to try and raise L2 learners’ vocabulary knowledge to 4,000 or 5,000 word families. The best known and most widely used list of academic vocabulary is the Academic Word List (AWL: Coxhead 2000). The AWL includes the most frequent general academic vocabulary (570 word families). However, while learning the AWL may be an effective way of reducing the lexical demands of academic written text, little is known about the extent to which knowledge of the AWL can improve comprehension of academic spoken text. Dang and Webb (2014) examined the potential value of the AWL for improving comprehension of academic spoken
English and found that the AWL accounted for only 4.41 percent of the tokens in the lectures they analyzed. They point out that this is about half the coverage the AWL provides in other studies of academic written corpora (cf. Coxhead 2000; Hyland and Tse 2007). Therefore, learning the AWL may not have the same value for understanding academic spoken English that it does for comprehension of academic written English. The amount of coverage that the AWL provides for academic spoken English was also found to vary considerably by discipline.

There is little in the way of pedagogically friendly alternatives to the AWL, especially for spoken discourse, but a number of lists of academic formulaic language have recently been developed. The Academic Formulas List (Simpson-Vlach and Ellis 2010) is made up of 607 three-, four-, or five-word phrases. Two hundred and seven of these phrases are core for both written and spoken academic language, and a further 200 items represent the top spoken formulaic sequences. In order to facilitate the list’s use in EAP programs, the sequences are ranked according to a measure of utility called ‘formula teaching worth’, and are classified in a pragmatic functional taxonomy (e.g., expressions for framing attributes, expressions for specifying quantity). Another larger list is the Academic Collocation List (Ackermann and Chen 2013) which consists of the 2,468 most frequent and pedagogically relevant lexical collocations. Collocations in this list are defined as words that co-occur plus or minus 3 words from the node word and include noun, verb plus noun/adjective, verb plus adverb, and adverb plus adjective combinations. While the list does not differentiate between the collocations that appear more commonly in spoken academic language, the Pearson International Corpus of Academic English, from which the list is compiled, is made up of 37 million words of academic written and spoken texts from five English-speaking countries.

These broad-spectrum lists of word families and formulaic language are useful for teachers in EAP programs because they provide guidance for choosing items that are the most beneficial for comprehension of academic discourse. However, vocabulary that is important for one academic discipline may not be as important for another (Charles 2012). For this reason, discipline-specific or technical vocabulary lists are important pedagogical resources for LLs preparing to study a specific subject (Hyland and Tse 2007). While there are numerous studies that identify the technical vocabulary for different disciplines including those for medicine (Wang et al. 2008), engineering (Ward 2009), chemistry (Valipouri and Nassaji 2013), and nursing (Yang 2015), there is still the need for more lists across a wider range of academic disciplines.

Studies examining the vocabulary in academic spoken texts underscore the need for sufficient vocabulary knowledge to increase the possibility of lecture comprehension. The research points to the vocabulary size a student in an EAP program should set as a learning goal. Dang and Webb (2014) recommend knowledge of the most frequent 4,000 word families (95 percent coverage) as the minimum vocabulary size a learner should have to adequately comprehend academic aural texts. Learners, however, can reach 95 percent coverage of lectures and seminars with a vocabulary size of the most frequent 3,000 word families and knowledge of the AWL. Similarly, once an EAP student has a vocabulary size of 3,000 words, another option may be to choose to learn the vocabulary from a list of technical vocabulary. It should be noted that studies of the lexical challenges of understanding academic speech do not account for other factors that may affect comprehension. However, support for comprehension would also come from communication strategies, handouts, pre-reading, lecture slides, dictionaries, and viewing gestures and facial expressions.

The challenge for EAP teachers is to identify the list of words that would be most useful for their students’ understanding of their future academic discipline. Because a vocabulary size
of at least 4,000 words is likely required for comprehension of academic spoken discourse, and there is insufficient classroom time to teach thousands of words, it is recommended that students are also encouraged to learn strategies to effectively and efficiently learn vocabulary on their own. Maximising the opportunities for encountering and practicing recognition of the spoken form of words may be of greatest benefit in improving vocabulary knowledge, and in turn comprehension of lectures (Field 2008; Lynch 2011).

The discourse of lectures

The discourse structure of academic lectures is, at its simplest, designed to inform (Lee 2009), and if students are experiencing comprehension difficulties then its objective is not being realized. Successful academic listening has long been linked to the ability to identify relationships between elements of lecture discourse, and to recognize the role of discourse markers in indicating the structure of a lecture (Crawford Camiciotti 2004; Richards 1983; Vandergrift 2011). Compared with other types of spoken discourse, discourse markers in lectures have a more prominent role, occur more frequently, and provide more listening support (Biber et al. 2004; Nattinger and DeCarrico 1992). Students need to be able to recognize these discourse markers in extended discourse, take notes, and incorporate other information sources such as the lecture slides or supplemental material from handouts (Flowerdew 1994). The ability of an LL to do this is very much dependent on their knowledge of the discourse that is specific to the academic setting and applying this knowledge to understand how the lecture is likely to develop (Goh 2013). This, in turn, can lead to improved comprehension, note-taking, and recall of lectures (Jung 2003).

There are, however, a number of factors that may make recognition and use of lecture discourse markers difficult. The first factor is that the type and frequency of occurrence of the discourse markers employed is dependent on the style of lecture (e.g., conversational, rhetorical, reading), and the style employed is often related to the discipline and the country in which a lecture takes place (Dahl 2004; Hyland 2006; Lin 2012). The second is that even when learners recognize the discourse markers, the unique pragmatic function (understanding the function of an utterance and its intended effect) of some markers in lectures may mean that they are serving a function in the lecture unfamiliar to the LLs’ (Nattinger and DeCarrico 1992). This highlights the importance of L2 learners understanding the unique pragmatic characteristics of lectures to interpret what is said and to react appropriately (Goh 2013). The third factor is that students in lectures are not always aware that they are experiencing comprehension difficulties. Due to insufficient knowledge of the discourse markers for spoken academic language, students miss relationships signaled by these markers (Nattinger and DeCarrico 1992).

Recent corpus-based studies provide information that can be used by EAP programs to alleviate the difficulties that some L2 learners experience. The results from research by Barbieri (2015) illustrate how the use of discourse markers can be dependent on the context in which the lecture takes place. Barbieri investigated the relationship between the use of involvement markers in lectures and three situational factors: academic discipline, level of instruction, and class size. Involvement was operationalized by the presence of certain linguistics markers (e.g., intensifiers, slang, confirmation checks) deemed to represent the interpersonal dimension of classroom discourse. Barbieri found that the use of these markers is widespread regardless of the situational factor, with more involvement markers present in small humanities and social sciences classes, and in graduate courses. This indicates that there can be a high degree of interactivity in lectures and seminars in the North American context,
Listening to lectures

and EAP instruction would be well served to raise students’ awareness of how requests for involvement are marked in the classroom. However, teachers should also inform EAP students that the amount of interaction asked of them may vary according to their discipline, the size of the class they are attending, and that the country they are studying in may have a different culture of interactivity in lectures from their own.

The value of understanding the pragmatics of lectures is illustrated in a pair of studies by Deroey and Taverniers (2012) and Deroey (2015) that investigated the use of metapragmatic markers used to indicate the importance or relevance of points made in lectures. Deroey and Taverniers identified a wide range of relevance markers with metalinguistic nouns with the link verb is (e.g., the key is…) and verbs with clausal complementation (e.g., I need to stress that this is…) occurring most frequently. Deroey found that most importance markers were oriented towards the listeners (e.g., you should bear in mind…) or towards the content (e.g., the point is…) over orientation towards the speaker (e.g., I want to stress…) or the speaker and listeners (e.g., I ask you to bear in mind…). The researchers highlight the significance of this line of research by pointing out that while teaching EAP students to recognize important points in a lecture is crucial, EAP materials tend not to feature metapragmatic markers based on corpus findings but include archetypal markers which are actually relatively uncommon (e.g., you should note…). They state that while these markers may not come intuitively to mind for EAP instructors or material writers, the value of these authentic and multifunctional discourse markers for lecture comprehension is obvious.

A study by Martinez et al. (2013) highlights the difficulties that students can have identifying discourse markers in lectures. They examined the linguistic patterns that lecturers in British universities use to define key terms or concepts, and found that there was considerable variation and complexity in the ways this was achieved. Methods of defining terms fell into three categories. The first was to use phrases where the intention to explain the terms is relatively transparent. This is accomplished through the use of verbs such as call, define, and mean (e.g., …by which I mean…) but these occurred relatively infrequently. More common were phrases that did not include the more explicit defining verbs which would make it less obvious for a listener to discern that something was being defined. The final method was through long, oblique discussions of the term in question with little overt signaling that a concept was being defined. The results from this study illustrate how students may miss relationships signaled by the discourse markers. To alleviate this, LLs need to be taught that concepts may be defined not using the explicit terms that are frequently taught in EAP textbooks, but, rather, lecturers may use more subtle and less obvious means.

These corpus-based studies provide useful guidance about the structure of lecture discourse that should be presented to L2 learners. However, the reality is that most EAP listening programs are based upon commercial textbooks. The downside of this is that these textbooks tend to present the structure and language of the lecture as simply organized and transparently coherent. Actual lectures, however, are a much less tidy form of discourse. Based around this simplified conceptualization of spoken academic discourse, EAP listening textbooks are commonly made up of note-taking activities based on short scripted lectures (Flowerdew and Miller 1997). Ideally, however, students should be exposed to longer samples of authentic lectures (preferably from the academic discipline of the students’ chosen field), allowing them to encounter relevant and authentic discourse markers as they occur in spontaneously delivered, non-scripted spoken language (Field 2011; Flowerdew and Miller 1997; Nattinger and DeCarrico 1992).
Note-taking in lectures

While there may be more to academic listening than the limited definition of attending a lecture and taking notes (Peek and Salehzadeh 2001; Lynch 2011; Vandergrift 2004), recording the information presented in a lecture in note form is still a significant part of what students do in the university setting. In its simplest form, note-taking is transcribing what the lecturer says or writes on the board (Jordan 1997). In reality, note-taking is a more personal and complicated process that serves to enhance the clarity of the information presented through summarization of long stretches of information, paraphrasing the lecturer’s words, and highlighting certain items to make them more salient (Jordan 1997). Ultimately, students need a set of notes from which they are able to review and apply the information presented in the lecture at a later date. Note-taking can be a particularly challenging activity for EAP students given that they must simultaneously integrate aural input with the visual input and decide what to record in their notes (Gruba 2004). There are, however, a number of benefits of note-taking beyond having a record of the lecture available for posterity that may benefit the EAP listener. Note-taking has been shown to provide opportunities for the students to organize the lecture content as they listen, aid the memory’s encoding process (Chaudron et al. 1994; Dunkel and Davy 1989), maintain attention during the lecture, and consolidate knowledge of the information encountered in the lecture pre-reading (Dunkel and Davy 1989).

Producing a quality set of notes is very much a skill that EAP students need to develop. This is important because the quality of a student’s notes has been shown to correlate with better long-term recall of the lecture information (Chaudron et al. 1994). To take good notes, the student must learn to distinguish between the more and the less important information presented in a lecture, and then record the information deemed significant at a point in the lecture where they can avoid missing other equally or more important information. The goal is to record this information in a brief and clear format, utilizing a consistent personal shorthand allowing for later utilization of the notes (Chaudron et al. 1994; Jordan 1997). It is clear that EAP students would have to be proficient at L2 listening in order for them to effectively take notes in this manner. Research by Song (2012) highlights the interconnectivity of listening ability and note-taking. Song found that ratings of note quality taken during short lectures were good indicators of academic listening proficiency. The ability to identify and record topical ideas was shown to be a better indicator of listening proficiency than recording details or inferential information. These findings indicate the importance of explicit note-taking instruction in EAP programs, in particular to have learners not only record details like a stenographer, but to more importantly discern and document the topics and sub-topics presented.

Some of what has been previously described as important for note-taking may now be out-dated, however. The widespread use of PowerPoint and other recently developed software has changed the nature of what students do in a lecture (Lynch 2011; Vandergrift 2007, 2011). In many cases, the lecture materials are made available on learning management systems such as Blackboard or Moodle prior to the class, and students take notes directly on the lecture handout or printed copies of the actual slides. For the EAP student, this reduces the strain of having to record all the important information. However, it may change the type of information that needs to be recorded and may be even more taxing for the L2 listener. Because lecturers tend not to read directly from their slides but rather paraphrase them while embellishing main points with definitions and examples, note-taking has become the ability to recognize the spoken information that is not presented on the slides (Field 2011).
In general, EAP students need to be trained in note-taking skills (Flowerdew 1994). Although EAP students would have an easier time understanding lectures if they were all structured the same way, they are more likely to encounter a variety of structures depending on the academic discipline and the lecturer. EAP teachers should endeavor to raise awareness about the unique types of lectures that students might encounter in university, and how the information is presented differently in them (Hyland 2009; Jordan 1997). As well, the recent shift in the way that lectures are delivered, and the resulting change in the way notes are taken, means that EAP students should receive instruction in reading PowerPoint slides and taking notes from them. From an academic listening perspective, the lecturer’s paraphrasing of the information presented on the slides may be more difficult for learners to comprehend (Field 2011) so direct instruction in extracting the relevant information from paraphrased lecture materials is vital.

**Future research directions**

Research investigating the lexical coverage provided by the AWL indicates that it does not offer the same support for comprehension of academic spoken text that it does for academic written text. While formulaic language lists have been developed to be beneficial for understanding both spoken and written text, there is a need for an Academic Spoken Word List (ASWL) (Dang and Webb 2014). An ASWL would ideally be made up of a manageable number of word families that provide good coverage of spoken academic texts across a variety of university contexts. The difference in coverage provided by the AWL across different disciplines also signals a need for the development of more technical vocabulary lists especially those that have specific relevance for spoken discourse.

The results from recent corpus studies provide guidance for teachers attempting to alleviate the difficulties that EAP students may have with the recognition and application of discourse markers found in lectures. However, they unfortunately do not indicate how their findings and recommendations bear out in practice. To this end, there is a need for classroom-based research on the effectiveness of teaching discourse markers, and the effects of this on lecture comprehension (Martinez et al. 2013). In addition, there is a lack of studies that investigate whether the use of discourse markers differs from country to country and by academic discipline (Deroey and Taverniers 2012; Martinez et al. 2013). Findings from this line of research would allow EAP teachers to tailor their instruction of lecture discourse to the individual needs of their students.

Because the way that lectures are delivered has changed, research into how this affects note-taking and listening comprehension needs to be examined (Lynch 2011; Vandergrift 2011). Lectures are becoming increasingly more multimodal with the use of PowerPoint slides, integrated video and audio content, and embedded hyperlinks to externally hosted content such as webpages and podcasts. Questions that can drive this line of research include:

1. Does taking notes by annotating copies of presentation software slides affect lecture comprehension compared with more traditional approaches of note-taking?
2. Because the proliferation of tablets and notebook computers in the classroom has changed the way that lecture information is recorded, does taking notes using these devices change the quality, type, and amount of notes taken, and does this have implications for lecture comprehension for EAP students?
3. What are the implications for the different aural and visual input sources present in a multimodal lecture for note-taking and listening comprehension in general?
4 What are the keys to taking notes from PowerPoint-based lectures that can be taught to EAP students? In relation to this, are there different styles of PowerPoint presentations that are more prevalent in certain academic disciplines, and how does that affect the note-taking training?

Further reading

Goh (2013); Lynch (2011)

Related chapters

14 Acquiring academic and disciplinary vocabulary
20 Multimodal approaches to English for academic purposes
24 Lectures
26 Seminars

References

Listening to lectures


