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Did you take "good" notes?: On methods for evaluating student notetaking performance

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Meta-analyses of research show that notetaking enhances listening, active learning, and recall (e.g., Kobayashi, 2006). Unsurprisingly, taking notes leads to better performance than not taking notes (e.g., Fischer & Harris, 1973). However, the notion of what constitutes "good" notes remains unclear, particularly from the perspective of EAP teachers. Various methods for evaluating the quality of student notes have been proposed by teachers and researchers, including total notations, content words, information units, and test answerability (e.g., Crawford, 2015; Dunkel, 1988). Some teachers also give grades for student notes, and focus on aspects such as legibility and organization.

This paper considers the benefits and drawbacks of several methods for evaluating notes. It then promotes the notion of "information unit" (IU) as arguably the most relevant method for teaching EAP. The paper illustrates how notes can be evaluated through IU analysis using excerpts from a TED Talk and samples of an EAP student's notes. Other methods are also applied to the note samples in order to demonstrate that IU analysis is a more useful measure of lecture comprehension. This analysis also describes why certain entries in student notes may or may not qualify as IUs, thereby illustrating the concept in practice.

1. Introduction

Taking notes while listening has been a common strategy used to stimulate recall and compensate for memory challenges. The ability to listen, record information in writing, and then rely on and use that information later is a ubiquitous and essential cognitive tool for academic as well as work and personal life. From an educational perspective, notetaking engages students when listening, enhances active learning, and stimulates recall, and these benefits apply whether a listener is listening to and/ or writing notes in their first language (L1) or second language (L2). Furthermore, notetaking is often recognized as the distinguishing characteristic of learning at university (van der Meer, 2012) and thus a priority for EAP students and teachers. Its importance, particularly for L2 users, continues to grow along with the number of English as a medium of instruction (EMI) courses offered at universities worldwide and the increasing amount of L2 English users who study abroad in countries where English is the L1 (e.g., students from China studying overseas in Canada).

While the importance and frequency of notetaking is difficult to deny, determining the quality of a given set of notes is far less clear. What constitutes "good" notes? A reasonable answer could arguably be that high quality notes include a high number of complete ideas expressed by a speaker, although this can vary depending on the purpose of notetaking. Who has

the authority to decide that notes are good or bad? Notes are first and foremost meaningful to the individual notetaker, and others may or may not be able to extract the same information from the notes as the original taker. If notes help stimulate the recall of certain information *for the notetaker*, is that criteria alone sufficient to designate the notes "good"? Or can someone other than the notetaker, such as a teacher or researcher, place labels on the quality of notes?

A common sense, everyday approach to judging notes might be that as long as the notetaker can decipher their own notes, those notes serve their purpose. This description likely applies to most situations outside of an educational context. However, within an educational context, students with "good" notes typically perform better on tests (e.g., Hayati & Jalilifar, 2009) and may be viewed positively by their teachers as compared to students who take "bad" notes (or worse, none at all). As Kobayashi (2005) points out, "many students believe in the positive effect of note-taking process itself on the learning performance" *(sic)* (p. 243). The general notion of "good" and "bad" notes is often a subjective judgment made by someone external to the notetaking act itself. Yet L2 teachers in some parts of the world need to assign grades to notes. Part of a teacher's job, then, may be to identify both good and bad notetaking behavior, praise the positive, and design and implement instruction to help the "bad" notetakers improve.

In order to analyze notes themselves (rather than knowledge- and/or skill-related tasks that notes may be used for, such as tests) in objective ways, several methods have been devised for quantifying the information contained in a given set of notes. The purpose of this paper is to review those methods and point out strengths and weaknesses of each. Based on this discussion, the notion of "information unit" (IU) is promoted as arguably the most appropriate indicator of notetaking quality and helps to address the question of what makes "good" notes, particularly in the field of L2 education.

To illustrate the concept of IUs, samples of student notes taken while listening to a TED Talk will be compared to a transcript of that speech (Gary Kovacs, retrieved from https://www.ted.com/talks/gary_kovacs_tracking_the_trackers). Comparison between analyses of the notes using different methods will demonstrate that the IU provides a more complete representation of comprehension. Factors involved in scoring procedures will be exemplified and explained in an attempt to provide teachers with a practical and objective method for making judgments on "good" notes and to move the growing research body on notetaking in a direction where consistency in scoring notes is possible.

2. Background

The skill of notetaking has received a surge of attention in the English as a foreign language (EFL)/English as a second language (ESL) field in recent years. Courses with titles such as "Academic listening" and "Lecture notetaking" have become commonplace in EFL contexts, particularly for high school and university-aged students. Intensive English Programs (IEPs) have also become important departments, preparing EFL/ESL students for and funneling them into mainstream university courses. Publishers and materials writers have rushed to create textbooks and semi-authentic lecture recordings for lecture notetaking. For EFL students, the opportunity to study overseas at university in English-speaking countries has generated the need for academic skills classes to prep students to perform on campus in several contexts. In addition, English is the medium of instruction on numerous academic programs worldwide; thus, having adequate notetaking skills and/or receiving instruction to improve, can be decisive factors when it comes to student success (e.g., Crawford, 2015; Kobayashi, 2006).

Teachers and students both recognize the importance of notetaking for academic success. Research into English notetaking practices in EFL contexts has demonstrated that students believe notetaking will benefit their futures and that they desire more explicit instruction for the skill (e.g., Crawford, Ducker, MacGregor, Kojima & Siegel, 2016; Siegel, 2016, pp. 277–284). While EFL/ESL teachers generally agree that notetaking is crucial to a student's future, they also report a lack of pedagogical competence for teaching students how to take notes (Siegel, in press). The topic of notetaking has also received media attention in L1 contexts, with a recent Wall Street Journal article emphasizing the importance of notes: "I'd be an 'A' student if I could just read my notes" (The Wall Street Journal, 19 March 2018). The article highlights tensions between faculty and students who use laptops and tablets in lectures as well as student struggles with taking notes by hand.

Teachers of EAP courses often have various goals of instruction for their students in terms of academic listening and notetaking. One goal of instruction related to notetaking is a strategic approach. That is, in theory, the introduction and practicing of notetaking strategies (e.g., noting keywords, using abbreviations and/or symbols) in the EAP classroom can transfer to authentic listening opportunities. Students may practice certain strategies at a micro-level with a focus on demonstrating strategy acquisition. Strategies are then applied to lecture content, for example, in an effort to use them in a more holistic listening and notetaking activity. This progression is similar to the three stages of skill acquisition: a cognitive or declarative stage; an associative or procedural stage; and an autonomous or automatic stage (e.g., DeKeyser, 2007). A second instructional goal is increasing learners' metacognitive awareness while listening, which encourages students to plan, anticipate, monitor and reflect on their listening performance (Vandergrift & Goh, 2012). These meta-cognitive steps can also be applied to notetaking development and instruction. In other words, being aware of options for notetaking, anticipating what the speaker will say and what information will need to be noted, reviewing notes, and reflecting on note quality with a view to future improvement are all important instructional goals. In addition, teachers, especially those teaching Content and Language Integrated Learning (CLIL) courses, may focus on transmission of information from a more knowledgeable source (e.g., a lecturer, video recording, news broadcast, etc.) to students. From a knowledge transmission perspective, IUs (discussed in more detail below) may be used to assess whether and the extent to which students have selected and recorded important pieces of information from the content to which they are listening. Depending on student listening proficiency level, purposes