

Is note-taking in the TOEFL iBT test useful?

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Abstract

Note-taking in the TOEFL iBT test is optional. Literature and research on relationship between the efficacy of note-taking and listening comprehension reveals that many factors influence the effectiveness of note-taking on listening comprehension. This paper investigates the perceptions of 11 students in an intensive academic English program on the importance and usefulness of note-taking in the TOEFL iBT test and their perceived sense of anxiety when they do not take notes in the test. It reviews the literature on note-taking for academic purposes and describes the approach taken by the program to teaching note-taking in preparation for the TOEFL iBT test.

Key words

TOEFL iBT test, Note-taking

I. Introduction

Considering the widespread use of language proficiency tests throughout the world and the need for test-takers to gain satisfactory scores to pursue their academic goals, there is a need to comprehend what can affect a test-taker's performance in order to assist them in obtaining their goals. Language proficiency tests seek to assess listening abilities in various ways. Not only the comprehension of details and facts, but quite commonly the comprehension of - vocabulary used, the structure and organization in a listening passage (the coherence of main ideas and supporting ideas) and the inferences about content and relationships in a listening passage. The TOEFL iBT test is designed as a simulation of the academic situation, a setting in which note-taking is prevalent if not encouraged, and as such is an option the test-taker can take advantage of. Note taking is an academic skill and this is the reason why it is probably included in the TOEFL iBT test. In the academic context, note-taking is generally considered to promote the process of learning, retaining and recalling of information. Without it, the question could arise as to whether the TOEFL iBT test, with its long academic lectures, were not also testing memory capacity. Having the option of note-taking throughout the TOEFL iBT test, may be a strategic test-taking tool available to the test-taker in some of the integrated

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questions. Note-taking is a variable in the TOEFL iBT test that needs to be understood by instructors and employed to the best effect by test-takers. Much of the research on note-taking when listening or note-taking as an academic skill focuses on the relationship between the efficacy of note-taking and listening comprehension. Test-takers may perceive note-taking as a strategy to successfully completing the speaking and writing integrated questions.

This paper will discuss how note-taking for listening passages can be useful in the TOEFL iBT test. Being optional, some students may feel that they need not take notes, and others, not having the skill of note-taking, may not employ it adequately which may affect their test performance. The paper will briefly review what research reveals about note-taking, L2 note-taking and the effect of it on listening comprehension. The paper describes the approach to listening passage note-taking in an English intensive course of which TOEFL iBT test preparation was a component. It reports on the findings of a number of surveys of note-taking when listening in the the TOEFL iBT test. The surveys examined students' perception of the need for and benefit of doing note-taking in the TOEFL iBT test listening section, and when doing the speaking and writing section integrated questions of the TOEFL iBT test which include modules of listening.

II. Note-taking as a feature of the TOEFL iBT

The current TOEFL iBT format was introduced in 2005 and gradually phased in through 2006. What prompted the adoption of the current form was the realization that a test of English for academic purposes should not only be a measure of language proficiency but also needed to simulate the simultaneous use of language skills commonly found in the academic setting (Zareva, 2005). The endorsement of note-taking throughout the test was one of these revisions and it is probably most necessary in the integrated tasks where the assimilation of sundry information sources is essential. The ETS sponsored research project into the effects of note-taking in TOEFL listening comprehension tasks by Carrell, Dunkel & Mollan (2002) is credited with influencing the move to include note-taking in the TOEFL iBT test. Reporting on the advantages of note-taking for students, the report found an increased comfort and ease with listening tasks on the part of test-takers and that taking notes and referencing them could influence their test performance on lectures and information recall. Note-taking is and has always been a component of the classroom but with its inclusion in the TOEFL iBT test, it has gained formal recognition and the attention of researchers and teachers alike. Its status at the very least as a skill needed to succeed in the TOEFL iBT test is secure. If TOEFL iBT preparatory courses do not actually give training in note-taking, there is at the very least mention of it and students are encouraged to develop this academic skill. Research into note-taking and its influence on listening comprehension has drawn the attention

of scholars and increased. (Carrell, et al., 2002; Carrell, 2007; Hayati & Jalifar, 2009; Song, 2011)

The TOEFL iBT format is organized around the four language skills and assesses them both independently and in combination. Only the reading section of the TOEFL iBT test exclusively tests reading. Each of the other test sections include integrated tasks with modules of the other language skills. A module of listening though, is a component in every integrated question. Note-taking is the lesser twin to listening in these multi-skilled tasks were test-takers are required to assimilate information from various sources to complete the question task. Although note-taking is allowed throughout the test, this paper's interest is exclusively the note-taking done when listening.

III. The act of note-taking in an academic setting

Note-taking activity is a frequent occurrence in daily life and has a prominent role in academic contexts. Students rely on taking notes for preparation for exams and recall of the lectures (Dunkel and Davy, 1989; Carrell et al., 2002) and, as such it is of fundamental importance to success in tertiary education. For students, the purpose of taking notes is; to focus on the lecture, to increase their understanding of the content and retention of the lecture, to derive the main points of the lecture, and to help with the coherence of the lecture (Van Meter et al. 1994). Note-taking is actually a two-part process, the first phase is the action of taking notes, an encoding process, and the second phase is the external storage for later review or reference. As defined by Di Vesta and Gray (1972), note-taking is comprised of these two functions: an encoding function (the act of note-taking) and an external storage function (an external repository for later reference and review). Their hypothesis is that the encoding function facilitates information processing and they further hypothesize that information retrieval is facilitated by the external storage function i.e. the reviewing of the notes. The tenet of this hypothesis is that note-taking supports learning in two ways. The first is that the effort of note-taking (the encoding function) aids learning in that it requires concentration and attention and engages the cognitive processes of coding, integrating, synthesizing and the conversion of data from the lecture into personal notes. The other benefit of note-taking (the external storage function) is that when reviewed, there is the potential to stimulate recall and retrieve from memory the original information heard (Kiewra 1989; Boch & Piolat 2005). The cognitive process involves the comprehension of key ideas and the correlation of understanding with previous key ideas in the lecture and with existing knowledge of the topic (Suritsky and Hughes, 1991; Armbruster, 2009). Note-taking is a complex task involving the listening comprehension, cognitive processing and synthesis of information, a written record of information and the review of the noted information. It facilitates the student in reorganizing, and further developing and incorporating personal

interpretations of newly received information.

The observation that should be made by L2 teachers is that note-taking is by itself a complex cognitive process and one that can be immeasurably challenging for L2 learners who have to already dedicate a considerable amount of cognitive processing to the task of listening. It can further be a hindrance to an L2 learner when the skill and techniques of note-taking are not automated. The immediate questions for the TOEFL iBT instructor and test-taker are whether note-taking is an impediment to listening and whether there are any benefits for the test-taker to be derived from note-taking in the test.

IV. The effects of note-taking on listening

1. Does note-taking interfere with listening comprehension?

The task of note-taking could be a distraction if the test-taker is not adept at note-taking and the test-taker could be hindered by trying to write too much as may be the case with low proficiency test-takers (Sadgehti et al., 2015) or struggling with the techniques of note-taking. Some test-takers may not feel confident enough to handle both listening and note-taking simultaneously (Aminifard, Y. & Aminifard, A., 2012; Lin, 2004). Some studies have concluded that note-taking could have a negative influence. Hale and Courtney (1991) suggested that allowing note-taking impaired test-takers' listening performance. Sadgehti et al. (2015) surmises that since the non-note-taking group outperformed the note-taking group in his study, the note-takers may not have been able to take down important information as they tried to focus on the incoming stream of speech. A suggestion that the two processes may be competing for attention. However, there are other studies that do not find note-taking to be a distraction. Ching Ko (2007) in an analysis of the effects of note-taking on students' foreign language listening comprehension of EFL university students, came to the conclusion that taking notes did not distract students but instead helped them maintain their attention to the lecture.

2. Does note-taking effect the listening comprehension outcome?

Research has looked into whether listening comprehension is facilitated by note-taking and although there are studies that seem to indicate not, or only minimally so (Hale and Courtney (1991; Chaudron, Cook, and Loschky 1988; Dunkel 1986), others indicate that there are benefits to note-taking (Carrell et al., 2002; Liu, 2001 cited in Liu 2015).

In a study investigating the effect of note-taking on listening comprehension of test-takers in TOEFL mini-talks, Hale and Courtney (1991) found that allowing participants to take notes had little effect on test performance but concluded that the results may be due to the type of questions asked. The performance evaluation of the TOEFL mini-talks referenced the test-takers general understanding of the passage rather than specific details, such as names and dates. If anything, the study points to the fact that a note-

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taking benefit is dependent on the types of questions asked. Note-takers may only be focusing their note-taking on data. In Dunkel's (1986) study, students were permitted to take notes, but the study defined when they could refer to them, before or during the test. The study did not find a positive effect of note-taking on listening comprehension and it concluded that the opportunity to take notes does not necessarily produce beneficial effects. Although note-taking may take place, these studies seem to suggest that the value of the notes depends on the content (types of questions) and when the test-takers referred to the notes. Liu and Hu (2012), in their study of the effects of note-taking on the listening comprehension of lower intermediate students, found a significant effect of note-taking on summary questions and a positive but an insignificant effect on multiple-choice questions that examined details. They surmise that the subjects' level of listening comprehension prohibited them from grasping the detailed information but allowed them to pick up on key words and thus gain an overall idea of the passage.

Carrell et al. (2002) demonstrated a facilitating effect on L2 listening comprehension of note-taking in lectures when exploring the effects of note-taking, passage length and topic. In this study, participants, listeners of both higher and lower-proficiency, performed significantly better on test items when allowed to take notes during the listening passage. Note-taking had a greater impact when it was allowed with short passages. The benefit was less when not allowed to take notes on short passages, as well as on longer passages, regardless of whether note-taking was permitted or not. Shorter lectures produced a higher percentage of correct scores than did longer. The lecture topic also influenced performance outcomes, students performed better on arts and humanities topics when note-taking was allowed, and showed virtually no difference in performance on physical science topics when note-taking or not. These results seem to show that note-taking may be less helpful depending on the length of the listening passage and the familiarity of the content but these factors are not necessarily detrimental to the performance outcome. Liu, (2001, cited in Liu 2015) studied the encoding and the external storage functions of note-taking and the content of Chinese L2 listeners' notes. In the study, one group was permitted to take notes; the second group took notes but did not review them thus employing the encoding function of note-taking only, while the third group both took and reviewed the notes employing both the encoding and external storage functions of note-taking. It was found that taking and having notes for reference to answer questions had a significant effect on the recognition of specific information but no significant effect for general information in a multiple-choice test performance. Killikaya and Kokal-Kardas (2009) in a comparison study with 44 Turkish EFL students noted that participants who were allowed to take notes outperformed their counterparts who were not allowed to do so while listening to lectures. A survey of the note-taking group revealed that more than half admitted to remembering enough of the lecture to answer

the questions from memory. In their study, Carrell et al. (2002) investigated the variables of listening comprehension proficiency and short-term memory and found that there was no significant effect of short-term memory. Although some studies seem to indicate no benefit from note-taking and others would indicate that when there are, the relationship is complex.

3. Is note-taking a burden on the L2 learner?

When examining L2 listening comprehension and note-taking, researchers should be aware of the additional cognitive burden note-taking activity places on L2 test-takers (Carrell 2007). Note-taking in a lecture requires that the L2 listener not only listen and try to process the incoming speech stream but simultaneously must write it down which in itself is a complex cognitive task simply noting that the rate of speech and writing are vastly different. Liu (2015), noting the difference between short term memory and working memory, investigated the use of listening comprehension strategies and note-taking to recall the content of a passage in advanced and intermediate learners. In Lui's study, the findings reveal that the participant's proficiency level did contribute to the difference in test scores. They made better use of their notes and were better at recalling the gist of a lecture and could process linguistic information beyond the sentence level. Similarly, in a study of advanced learners Andringa *et al.* (2012) found that L2 learners with a greater working memory had greater success in perceiving the cues of in spoken discourses and using them to facilitate their listening comprehension. With good listening comprehension strategies, L2 listeners are able to employ their working memory to recall information (Liu, 2015). Other L2 research has failed to find a relationship between working memory and note-taking (Dunkel, Mishra, and Berliner 1989; Carrell et al., 2002). L1 research into this relationship suggests that possibly the reason may be that long-term memory resources for writing speed, background knowledge, and language comprehension, play a more important role than short-term memory (Peveryly et al. 2013 cited in Crawford, 2016). L2 test-takers may need to depend on not just employing advanced listening comprehension strategies, but also on a fluent note-taking ability and just as it is necessary for training and practice in the former, it is also necessary for the latter. If the effort of note-taking is not a distraction and the test-taker is proficient and accustomed to note-taking, then the act of note-taking can facilitate attention and comprehension of the lecture and thus, aid recall (Van Meter, Yokoi, and Pressley 1994).

4. What role does the quality of notes or note-taking style play in answering listening comprehension questions?

Note-taking research has investigated the relationships between the effect of listening comprehension and note-taking, and in most studies listening comprehension is measured

in terms of test performance. Language proficiency, the length of the passage, the question types and note-taking quality are all factors interacting with the effect of note-taking. For example, Hale and Courtney (1994) surmised that the failure to find a note-taking effect may have been affected by the relatively short length of the short lectures in their study which were less than 2 minutes, and comprehension questions which were not based on factual information and details. Research seems to indicate that as a reference source, depending on their quality, notes may not provide the answers to the test questions. Carrell (2007) compared various ways of note-taking and the performances. The participants were tested and were asked to take notes while listening to the talks. The researcher analyzed the content of the notes as well as the candidates' performances and formulated a list of important note-taking strategies. For example, Carrell identified the noting of content words (written out, abbreviated or symbolized) from the passage as a note-taking strategy. This study argued that the test-takers who scored better on the tasks, were the ones whose notes contained more task relevant information. The overall results revealed a complex relationship, depending upon the note-taking strategy and the task. This suggests a significant relationship between assessment tasks performance and the number of test answers found in the notes. Dunkel (1986) determined that good notes can be compact and brief, recording only relevant information as compared to a test-taker who just intensely takes notes without considering the content or quality. This kind of note-taking would not have any positive effect. Lecture cues and discourse markers also effect note-taking. When examining the effect of lectures cues, Titsworth, B. S. (2004) found that students recorded more details and organizational points when listening to lectures with prominent organizational cues. The number of details and organizational points recorded in students' notes were strongly related to performance outcomes in the study. Some research has looked at note-taking methods to determine if these may influence the outcome. Aminifard, Y and Aminifard, A (2012) investigated the Sentence Method of note-taking in a study of Iranian high-beginner English language learners and found this style of note-taking to be unsuitable and inapplicable. They suggest that the students may have preferred to rely on memory and abandoned any effort at note-taking with the Sentence Method. Hayati, M, and Jalilifar, A, (2009) in their study of the relationship between note-taking and listening comprehension examined the Cornell note-taking method as component of their study. Of three study groups one was given instruction in the Cornell method and the study shows that this group performed better.

Note-taking ability may be a hindrance or ineffective if not done well and needs to be supported by effective listening comprehension strategies, such as knowing what to listen for and recognizing information markers given by the lecturer. Song (2011) found that test-takers with a lower level of proficiency were disadvantaged in note-taking. Note-taking is more than simple verbatim recording or a mass collection of

random information. It is a written product of the listener's interpretation of the passage through the application of specific listening comprehension and cognitive strategies. The relationship between the quality of L2 students' notes and their listening ability and is closely connected.

The above research review indicates a complex relationship between the effect of taking notes and listening comprehension. Teachers should bear in mind that note-taking as a practiced skill does not necessarily inhibit listening comprehension. Note-taking will help the test-taker or listener focus attention when listening. The act of note-taking can potentially support recall and depending on the quality of the notes may advantage the test-taker in test performance although this will depend on the listening support and cues given in the lecture and the types of questions measuring the listening performance. Note-taking is a skill to be learned and operates in tandem with a strong listening comprehension ability.

V. Note-taking as a strategy in the TOEFL iBT test

The TOEFL iBT is a standard test and as such, it has certain predictable features and design structures which the test-taker can take use to his or her advantage. When doing the integrated questions of the speaking and writing sections, a test-taker with a good knowledge of the test questions and tasks can take notes with a specific information focus and use the notes to complete the task.

The integrated speaking tasks are of two kinds: those that combine, listening, reading and speaking and those that are a combination of listening and speaking. Of the four speaking tasks, all include a module of listening which may be either a conversation or a lecture passage. The four speaking tasks respectively require the test-takers to restate speakers' opinions, restate their suggestions to a solution of a problem and state their preferred solution, explain how a lecturer's example supports or refutes an academic passage and to make a summary of a lecture. Note-taking is permissible in the TOEFL iBT test so test-takers can take notes during the listening components of any of these four speaking questions. The listening audio, regardless of whether it is a conversation or lecture is between 1-2 minutes, it is not repeated and almost immediately after the listening audio completes – test-takers are only given 30 seconds to prepare to speak – test-takers are required to begin recording their spoken responses. Listening in these questions is task-oriented and the test-taker, if having understood the prompt correctly will target specific information in the audio. For example, question 5 of the speaking section, requires test-takers to summarize a problem, state the two possible solutions mentioned in the conversation in their response and state with their reason which solution they would recommend. Test-takers trained in note-taking can use it as test-taking strategy. For example, using a T-style (Cornell Method) of note taking, they can

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mark out an outline of their listening goals and task requirement before they enter the listening task. This note outline then guides and focuses their listening, helping them to filter out distractors and unrelated information and zero in on the information needed for task completion. The TOEFL iBT listening audios are loaded with listening cues that mark the task information which test-takers can learn to recognize. Test-takers can learn task specific T-style formats and practice note-taking using them. Note-taking used in this way becomes a test-taking strategy. In her literature review, Song (2011) notes that research advocates supporting students with note outlines. She notes that an outline format is better for higher level students. A note-taking strategy such as this may only be suitable for advance learners. The TOEFL iBT test lends itself to this design format and test-takers equipped with question appropriate listening strategies can do well in the questions and better if supported by relevant note-taking strategies. The students in the GBIC program were taught to not only to note take for recall but also to take notes with the task requirements in mind and to make use of their notes as speech memos.

In the writing section of the TOEFL iBT test, there are two questions. The first is an integrated question consisting of an academic reading passage (250–300 words) and a 1–2 minute lecture. Although the topics of the reading and listening passages are related, the listening is not a repetition of the reading. The task is to summarize and connect the information from both passages in an essay of 150–225 words. As a standardized test, the TOEFL iBT follows a format. In the integrated writing question, the lecture will most often cast doubt on or support the key points of the reading. If the test-taker is able to divine these from the reading, he or she will have a lecture outline for the listening module of the question and can use this outline as a listening guide for the key points of the lecture. Having these notes will greatly assist in writing the essay as they are essentially a rough draft of the essay. To complete this task successfully, not only are listening comprehension strategies needed, but also skills a strong note-taking ability is a requirement.

The listening section of the TOEFL iBT test does not have any integrated questions and is aimed at testing listening comprehension only. Note-taking here is solely for the purpose of noting information from the listening passages in order to answer the multiple-choice questions that follow.

This test section consists of six listening passages followed by five or six listening comprehension questions. Depending on whether the passages are conversations or lectures, the length is different. The conversations are between two to four minutes and lectures can be anywhere between four to six minutes. These are notably longer than the conversations and lectures in the integrated sections. The listening section consists of two parts with each containing a conversation and two lectures. (Philips, 2013) Listening comprehension is examined through variety of types of questions in a mostly multiple

answer choice format. ETS (Educational Testing Service) has in its series of *Inside the TOEFL® Test*¹, seven short YouTube videos (TOEFL® Listening Questions) each detailing a standard type of TOEFL listening comprehension question. These question types can be classified into questions of basic comprehension (e.g. understanding the gist, details), questions of pragmatic understanding (inference, function and attitude questions) and questions related to organization and structure of the lecture (organization questions, summary questions). Note-taking is allowed and recommended in the listening section as well. The lectures can be long and since they are academic, the topics may be complex and in a field unfamiliar to the test-taker. As a test-taking strategy, if the test-taker is familiar with the types of questions, he or she may be guided by what to take notes on. A T-style (Cornell Method) of note-taking organization might be easier for the conversations and the Outline Method for the lectures. Note-taking may not be beneficial or relevant as a source for all the types of questions though, as generally it will focus on details and the key points. It may not be useful for pragmatic questions unless the test-taker using listening comprehension strategies, intentionally notes this information. This would require the test-taker to use metacognitive listening strategies to organize and manage his or her listening comprehension (Murakami, 2014). Liu (2015) in a comparison of the difference in the ability to recollect content of TOEFL test-takers at varying language proficiencies while using listening comprehension strategies, noted that advanced learners were more adept at referring to their notes and more likely to recall the gist of a lecture, its details and to make inferences.

The note-taking strategy used in the integrated questions of the speaking section and the writing sections is different from that of the listening section. The listening content genre and the tasks of the speaking questions define the note-taking styles and intensity. In the listening section, note-taking differs in that the test-taker is note-taking to answer listening comprehension questions rather than perform tasks. Note-taking as a skill is needed for the TOEFL iBT test but note-taking can be used as a strategy in answering the questions or performing the tasks of the integrated questions. It is possible that test-takers may choose not to do note-taking in the test or only to do so selectively. As the tasks or questions to be answered are done without much of a time-lapse, test-takers may decide not to take notes but rather focus on the audio and rely on short term memory when doing some questions. On the other hand, depending on the training of the test-taker, note-taking may be so strongly associated with taking the TOEFL test that test-takers may feel reluctant or insecure if they did not do so.

VI. The research Questions

The purpose of this was study to examine the decisions students make about note-taking in the various sections of the TOEFL iBT test, their perceptions of the need for

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note-taking in the TOEFL iBT test, its usefulness as a test-taking tool and as a task preparation source.

1. After extensive preparation training and experience in the TOEFL iBT test, what decisions will the students make on note-taking in the TOEFL iBT test listening section and integrated tasks of the speaking and writings sections that include a component of listening?
2. Would students trained in taking notes when listening feel anxious if they do not take notes during the TOEFL iBT test?
3. With training in note-taking, listening development training and extensive test practice, would there be a difference in the test performance of students when they do questions from the listening section of the TOEFL iBT test while taking notes and without taking notes?

VII. Methodology

1. The Surveys

To investigate how students in the GBIC English program employed note-taking in each of the sections of the TOEFL iBT test with modules of listening, three surveys were prepared. The survey questions were adapted from the survey used in Murakami (2014) (see the appendix for the surveys). The speaking and listening surveys (20 questions each) made a distinction between note-taking during conversations and note-taking during lectures. The writing survey consisted of 12 questions. Many of the questions on the three surveys overlapped, covering common topics of investigation in this area of study but were worded to be specific to the particular test section being surveyed. All questions were measured on a 4-point Likert-type scale with a selection of choices from “strong agreement” to “strong disagreement”. Following the practice of Sakurai (2018), who cites research showing the cultural prevalence of Japanese students is to select a non-comital option, the “neither agree or disagree” neutral option was not included in the list of options on the surveys.

2. Procedure

Materials used for the listening were taken from sections of the *Longmans TOEFL Preparation* textbook (Philips 2013) which the students had not previously done. For the investigation of note-taking in the speaking sections, the students did two sessions of integrated speaking questions 3 through 6, speaking question 3 (SQ3) and speaking question 5 (SQ5) being conversation listening questions and speaking question 4 (SQ4) and speaking question 6 (SQ6) being lecture listening questions. In the first session, they were not allowed to take notes whereas in the second session, they were instructed to do so. Each listening session used a different set of questions. After the two sessions,

they completed the speaking related survey. The procedure was the same for the writing section. In this section, they only did writing question one (WQ1) which is the integrated question. For the listening section, two lecture passage questions and two conversation questions were chosen from the *Longmans TOEFL Preparation* textbook (Philips 2013). As before, in the first session, the students did conversation and lecture listening questions without taking notes. In the second session, they then took notes while listening to different conversation and lecture listening questions. After each section they answered the listening comprehension questions. The students performed the TOEFL iBT tasks according to the test-taking requirements of the TOEFL iBT test, the questions were done under timed conditions and proctored. The students made digital recordings of the speaking tasks and submitted them. They also submitted their writing question essays and submitted their listening question answers. These answers were scored to note whether there was any difference in listening comprehension scores when note-taking or not. The speaking question and writing question submissions were appraised and feedback given to the students even though the results are not relevant to this study.

VIII. The participants and note-taking instruction

The participants of this research project were 11 students who are in the Global Business Intensive Course (GBIC) which is an intensive English program for the purpose of preparing students to study undergraduate courses in English at affiliate universities. The students in the GBIC program all volunteered to join a 10-day extra-curricular TOEFL preparation course which was conducted in the summer vacation (GBIC TOEFL summer intensive course). Note-taking is a challenging task and not all students take notes in the same way or are effective note-takers. It is further complicated by the need for simultaneous real time listening comprehension. Researchers call for the explicit teaching of listening strategies and note-taking guidance (Dunkel, 1988; Clerehan, 1995; Kiewra, 2002).

In the GBIC TOEFL summer intensive summer course, the students were given specific instruction in the techniques of note-taking and methods of note-taking such T-style notes and the Organization Method. In the GBIC TOEFL summer intensive course, the listening materials were taken from previous TOEFL tests so they could practice listening and note-taking with materials related to the goal of the GBIC program. They were trained to use the T-style note-taking method with the TOEFL conversations and in the semester that followed, the GBICs worked through the *Longmans TOEFL Preparation* textbook (Philips 2013) in extra-curricular evening workshops where they were encouraged to apply and practice their note-taking skills learned in the intensive course. In the GBIC fall semester (15 weeks) listening course, they received training in

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the metacognitive management of the listening comprehension process, which involves four steps: selecting, organizing, integrating, and monitoring information (Wolvin, 2010). As note-taking was also part of the GBIC fall listening course, attention was given to practicing and improving this skill. Common activities were for the instructor to model how note-taking was done while listening. Students would also in groups use their notes to report what they remembered from the lecture while the other students in the group could add missed information to their notes and when listening again confirm it. Often students discussed how they were taking notes and compared their note-taking features with partners or in small groups (Kiewra, 2002). In a semester of 15 weeks, the GBICs regularly practiced and developed their note-taking skill in all of the TOEFL iBT integrated questions with a listening module. Listening comprehension and note-taking were taught in tandem.

During the fall semester, the GBICs took two simulation TOEFL iBT tests (TOEFL Practice online²) and sat an official TOEFL iBT test at an external testing site. The students in this research project are familiar with the test, have been in the GBIC intensive program for a year and have had extensive practice and opportunity to develop their academic note-taking skill. All of them are scheduled to study abroad at affiliate universities in English. Table 1 below lists the average of the overall TOEFL iBT score and the listening section score for the three TOEFL iBT tests they took and the total score TOEFL iBT and listening section score for the last test they took. The final TOEFL iBT test was taken one week after this research project was conducted.

Table 1: Survey Participants TOEFL iBT test scores

Participants	Most recent TOEFL iBT test score		Average of 3 TOEFL iBT tests taken	
	Test Score	Listening section score	Test Score	Listening section score
Student A	45	6	46	9.3
Student B	46	7	46	8.6
Student C	47	6	51	8.6
Student D	52	8	45.3	5.3
Student E	57	10	48	8.6
Student F	60	18	60	14.3
Student G	61	11	52	11
Student H	71	20	66	15.6
Student I	75	18	72.6	17
Student J	76	19	68	14
Student K	92	23	80.3	21

IX. The Findings:

All the survey questions were measured on a 4-point Likert-type scale. For the purpose of analysis the “strongly agree” and “agree” on survey questions were combined into “agree” and likewise with the two “disagree” options.

Research Question 1:

The surveys endeavored to explore the students’ attitudes to note-taking in the TOEFL iBT test. What their perceptions is of the importance and value of taking notes in the test and how they felt when not taking notes. Since having been trained to takes notes in the TOEFL iBT test and to use them in the integrated questions to prepare their speaking task or written essay responses, the study investigates what is their perception of the need and usefulness of note-taking in the TOEFL iBT test. In all three surveys, all the students agree that note-taking is necessary for a good TOEFL iBT score (Q2 in all the surveys: *Taking notes is necessary to get a good TOEFL score.*). An issue discussed in the literature on the relationship between listening comprehension and note-taking is whether note-taking is a distraction or inhibits listening comprehension (Q1 in all the surveys: *Taking notes distracts me, then I cannot hear all the information*). In the two surveys of the speaking and writing sections, the majority of the students disagreed that note-taking was a distraction although some did agree, however all disagreed with the statement that making notes made completing the speaking tasks or writing the essay more difficult (see Q3 in the speaking survey and Q5 in the writing survey). In both these surveys 91% of the students felt that they needed notes to complete the questions (see Q7 & Q14 in the speaking survey and Q8 in the writing survey) and that having notes helped them to do so (see Q8 & Q15 in the speaking survey and Q9 in the writing survey). This would suggest that the students regard note-taking in the speaking and writing sections as a necessary component for the completion of the integrated questions.

With regard to the listening survey, the majority of the students felt listening was a distraction (see Q1 in the listening survey) and felt that note-taking made answering the question more difficult (see Q3 in the listening survey). In the listening survey, students have mixed feelings about the usefulness of note-taking:

Table 2: Questions from the listening survey

Survey	Question	Agree	Disagree
Q5 List	I need notes to do the listening questions with <i>conversations</i> .	72%	28%
Q6 List	I need notes to do the listening questions with <i>lectures</i> .	100%	
Q7 List	My notes helped me to answer the listening questions.	82%	18%
Q12 List	Notes are only helpful for some of the listening sections questions.	45%	55%
Q17 List	It is difficult for me to find answers in my notes.	55%	45%

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It would seem that some students feel that note-taking in the conversations is not necessary while all feel that note-taking in the lecture listening passages is a necessity. Although they may feel that note-taking is necessary, the results of question 12 and question 17 of the survey would seem to indicate that some did not find their notes very practical. The quality of notes and what was taken down when note-taking may play a role here. The resulting listening comprehension scores (discussed below) do not seem to indicate a strong benefit of having notes. Note-taking for the integrated questions is target focused as the test-takers know the question task and can focus on listening only for the information needed. But this is not the case with the listening comprehension questions of the listening section.

The surveys reveal that note-taking does seem to serve another role other than provide answers. The majority of the students felt that the act of note-taking helped them understand the listening content of both lectures and conversations and it helped them figure out the structure and organization of the lectures.

Table 3: Questions from the surveys understanding the listening content

Survey	Question	Agree	Disagree
Q10 Spk	Note-taking helps me understand the <i>conversations</i> .	91%	9%
Q17 Spk	Note-taking helps me understand the <i>lectures</i> .	91%	9%
Q10 List	Note-taking helps me understand the <i>conversations</i> .	82%	18%
Q11 List	Note-taking helps me understand the <i>lectures</i> .	91%	9%
Q16 List	Note taking helps me understand the <u>structure</u> of the <i>lecture</i> .	91%	9%
Q4 Write	Note-taking of the lecture helps me figure out the <u>structure</u> of the <i>lecture</i> .	100%	

These observations support the theory of note-taking as discussed above. Note-taking forces the listener to focus on listening for the key points and making a succinct summary which aids in the comprehension. Note-taking done in an organize manner with a method will reveal the structure, cohesion and organization of lecture.

Research Question 2:

In each of the surveys a question asked the students to grade the level of anxiety they felt when they did not take notes. They were asked to evaluate their feeling on a rating scale of 1 to 10, with 10 being the most anxious when not having notes. For example see question 20 from the speaking survey: “*I felt anxious when I did not take notes in the lectures*”. In the speaking and listening surveys, they were queried about their anxiety when not taking notes during the conversations and lectures. The average level of anxiety in all the surveys ranges between 8.15 and 8.9 for all questions related to anxiety except with regard to not taking notes in conversations in the listening section

(see Appendices I through III for the survey questions and results).

The anxiety level was low (5.5) when asked about not having notes from conversations in the listening section. By contrast, anxiety when not taking notes for the conversations in the speaking section (SQ3 & SQ5), was the highest at 8.9. The difference could be because as the conversations are short, students felt more confident in answering the comprehension questions typical to the listening section from memory whereas, the TOEFL test speaking tasks of speaking questions 3 and 5 require specific details, vocabulary and exact information for the completion of the task. Additionally, not having notes to help them organize their short speeches and to reference while speaking, may have been a greater cause for anxiety. In each of the surveys, not taking notes during the lectures produced high levels of anxiety.

Questions referring to reliance on memory to answer the conversation questions in the speaking and listening surveys also show that students may not feel a strong need for note-taking during the conversations depending on the task related to the listening. In question 9 (*I could do the speaking tasks with conversations (SQ3 & SQ5) without my notes even though I took notes.*) and question 12 (*I rely on my memory more than my notes when I am doing the speaking tasks with conversations (SQ3 & SQ5)*) of the speaking survey, almost all the students disagreed (91%). By contrast, in the listening survey question 8 (*I could answer the conversation listening questions without my notes even though I took notes.*) and question 13 (*I rely on my memory more than my notes when I am answering conversation listening questions*) reveal that the students feel more confident working from memory with questions related to conversations and less dependent on their notes. It would seem that the post-listening task requirement of the speaking question defines how the students will use their notes. In the speaking integrated questions, good notes can serve as speech notes. Question 8 (*My notes helped me to complete the tasks with conversations (SQ3 & SQ5)*) of the speaking survey shows agreement with this assumption. 91% of the students claimed that having notes helped them complete the task of the speaking assignments. The same questions regarding reliance on memory in the listening survey but referring to the lecture revealed a different attitude to taking notes. The listening survey results of question 9 (*I could answer the lecture listening questions without my notes even though I took notes.*) and question 14 (*I rely on my memory more than my notes when I am answering lecture listening questions*) on the listening survey both show a strong preference for having notes to answer the comprehension questions rather than trying to work from memory. Similar questions in the writing section (question 10) and speaking section (questions 16 and 18) surveys referring to lectures, showed the same results with all the students in disagreement. All the participants feel that in the lecture listening passages note-taking is necessary. It could be that the lecture genre as compared to the conversation genre

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is harder to remember, the academic content more complex and unfamiliar and also that the lectures are longer. It is clear that the students make some distinction between the need for notes during lectures and conversations. This could be based on the post-listening task as their attitude to note-taking in the conversations seems to suggest.

Research Question 3:

Although the sample of students taking part in the research project is too small to extrapolate definitive data, it was decided to investigate the question of whether note-taking influenced the results of the listening comprehension questions. As discussed above, many studies have considered whether note-taking has an influence on listening comprehension and drawn different conclusions. As this study is an investigation of note-taking in the TOEFL iBT test, it makes a distinction by noting the difference of the listening comprehension results of conversation and lecture listening passages. Table 4 below lists the listening comprehension scores on conversation and lecture questions in the listening section when students were allowed to take notes and when instructed not to take notes. Overall the difference of the average results on conversation listening scores when not taking notes (NNT) and taking notes (NT) is minimal. The students did

Table 4: Listening Comprehension test scores for the listening section of the TOEFL iBT test.

Participants	Listening comprehension results of research project. Conversations: maximum 6 points Lectures: maximum 7 points						
	NNT Conversation Maximum points: 6	NT Conversation	Percent difference (NT - NNT)	NNT Lecture	NT Lecture	Percent difference (NT - NNT)	
Student A	5/6 83%	3/6 50%	-33%	2/7 28%	3/7 42%	+14%	
Student B	4/6 66%	4/6 66%	0%	1/7 14%	3/7 42%	+28%	
Student C	3/6 50%	4/6 66%	+16%	0/7 0%	2/7 28%	+28%	
Student D	5/6 83%	5/6 83%	0%	0/7 0%	2/7 28%	+28%	
Student E	5/6 83%	4/6 66%	-17%	5/7 71%	3/7 42%	-29%	
Student F	6/6 100%	5/6 83%	-17%	1/7 14%	6/7 85%	+71%	
Student G	4/6 66%	3/6 50%	-16%	1/7 14%	1/7 14%	0%	
Student H	5/6 83%	4/6 66%	-17%	2/7 28%	4/7 56%	+28%	
Student I	5/6 83%	5/6 83%	-0%	4/7 56%	4/7 56%	0%	
Student J	4/6 66%	5/6 83%	+17%	2/7 28%	3/7 42%	14%	
Student K	3/6 50%	3/6 50%	0%	4/7 56%	6/7 85%	+29%	
Avg. %	74%	68%	-6%	28%	47%	+19%	

* NNT - non-note-taking

** NT - note-taking

marginally better when they did not take notes in the conversations. However, results of the listening comprehension scores in the lectures when not taking notes (NNT) and taking notes (NT) show a marked positive result for when taking notes. This would suggest that taking notes during lectures was advantageous. The minimal difference between the results of the listening comprehension scores on the conversation question seems to support the comments from students in the listening section survey (questions 8 and 13) that they do not necessarily need notes for the conversation passages in the listening section. The scores for the listening section lecture questions suggest that having notes may have helped the students. The survey results of questions 9 and 14 would suggest that the majority of the students are reluctant to rely just on their memory and imply that they referenced their notes (see appendix I).

X. Pedagogical Implications

Although note-taking is an option in the TOEFL iBT test, any preparation course should give serious attention to training in note-taking methods and techniques. Note-taking is a skill that takes time to develop and needs to be practiced and mastered over time so that it does not inhibit the test-taker but comes naturally. Teachers should think carefully how to train students in the techniques of note-taking, for example, having a brief introduction to abbreviating does not equip students with the ability to abbreviate and the sense of how to do so. Note-taking can only function in a supportive role to listening comprehension. If a student has a poor listening skill, the skill of note-taking will be of no benefit and a taxing experience. In a TOEFL preparation course, students need to be taught how to make notes for each of the integrated speaking tasks and the integrated writing essay and how to *make use of* their notes to complete the respective tasks. Students should be made aware of the value of note-taking in helping them understand and fully comprehend the listening passages and not just view the purpose of note-taking as a collection of data and facts. Advanced students should be advised on how to make decisions on when to take notes and when it may not be necessary for them. Students need strong listening comprehension and have to be skilled in note-taking for the listening section. They should be trained in note-taking techniques and methods and should be able to target key information and rapidly take notes. For future academic preparation, note-taking as is needed in the TOEFL iBT test probably does not exist in the modern classroom but note-taking taught for use in the TOEFL iBT is a valuable skill that can be adapted to future classroom situations. Note-taking is considered a component of the classroom environment and a necessary academic skill but this perception of note-taking in the TOEFL iBT test may not translate into active usage in other courses. Students should be urged to take notes in their other courses and if they are taking an all-English course, they should be encouraged to take notes in English. EFL educators

should add a component of note-taking to their listening courses.

XI. Conclusion

Note-taking does not guarantee a good score in the listening section but it should be used to as a step in the process of preparing for the integrated questions. It does not seem to influence the scores on the listening comprehension questions very much but it does seem to function as a source of self-perceived comfort and confidence for the students taking the test which allows them to demonstrate a higher level of performance. Having something to refer to when performing the speaking tasks and notes to work from when writing the integrated question seems to give them a measure of confidence and release them from the pressure of heavily relying on their memory. In this sense, note-taking in the integrated questions can be more beneficial and part of the process of preparing the solution to the task or question. Having notes may alleviate anxiety in the test-taker and offer a measure of support in a pressure situation.

Notes

- 1 TOEFL® Listening Questions, Inside the TOEFL® Test are the official ETS videos which describe the questions that could appear in the TOEFL iBT listening section. A quick search of these keywords will produce the videos.
- 2 TOEFL Practice Online (TPO) tests are previous official TOEFL iBT tests that can be purchased from ETS and done online as simulation TOEFL iBT tests. ETS will grade them and send the results.

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Appendix I: Survey about note taking in the TOEFL iBT Listening Section

- Question 20 on anxiety was measured on a rating scale of 1 to 10, with 10 being the most anxious. The average of the 11 participants (M) is denoted.
- All questions were measured on a 4-point Likert-type scale. The survey results presented in the table show the combination of the “strongly agree” and “agree” into “agree” and likewise with the disagree option.

	Survey Questions	Agree	Disagree
Q1	Taking notes distracts me, then I cannot hear all the information.	63%	37%
Q2	Taking notes is necessary to get a good TOEFL score in the listening section.	100%	
Q3	Taking notes made answering the listening questions more difficult.	28%	72%
Q4	I can do the listening questions without notes.	18%	82%
Q5	I need notes to do the listening questions with <i>conversations</i> .	72%	28%
Q6	I need notes to do the listening questions with <i>lectures</i> .	100%	
Q7	My notes helped me to answer the listening questions.	82%	18%
Q8	I could answer the <i>conversation</i> listening questions without my notes even though I took notes.	63%	37%
Q9	I could answer the <i>lecture</i> listening questions without my notes even though I took notes.	18%	82%
Q10	Note-taking helps me understand the <i>conversations</i> .	82%	18%
Q11	Note-taking helps me understand the <i>lectures</i> .	91%	9%
Q12	Notes are only helpful for some of the listening sections questions.	45%	55%
Q13	I rely on my memory more than my notes when I am answering <i>conversation</i> listening questions.	82%	18%
Q14	I rely on my memory more than my notes when I am answering <i>lecture</i> listening questions.	28%	72%
Q15	I felt anxious when I did not take notes in the <i>conversations</i> .	M = 5.5	
Q16	Note taking helps me understand the structure of the <i>lecture</i> .	91%	9%
Q17	It is difficult for me to find answers in my notes.	55%	45%
Q18	I only need to take notes for the <i>lectures</i> because the lectures are longer.	63%	37%
Q19	I don't need to take notes for the <i>conversations</i> because the conversations are shorter.	28%	72%
Q20	I felt anxious when I did not take notes in the <i>lectures</i> .	M = 8.5	

Appendix II: Survey about note taking in the TOEFL iBT Speaking Section

- Question 13 and 20 on anxiety was measured on a rating scale of 1 to 10, with 10 being the most anxious. The average of the 11 participants (M) is denoted.
- All questions were measured on a 4-point Likert-type scale. The survey results presented in the table show the combination of the “strongly agree” and “agree” into “agree” and likewise with the disagree option.

	Survey Questions	Agree	Disagree
Q1	Taking notes distracts me, then I cannot hear all the information.	28%	72%
Q2	Taking notes is necessary to get a good TOEFL score.	100%	
Q3	Taking notes made answering the speaking question tasks more difficult.		100%
Q4	Having a note-taking method for each speaking question helps me do the speaking task.	100%	
Q5	I can do the speaking tasks without notes.	9%	91%
Q6	I mainly use my notes to organize my speech.	91%	9%
Q7	I need notes to do the speaking tasks (SQ3 & SQ5) with <i>conversations</i> .	91%	9%
Q8	My notes helped me to complete the tasks with <i>conversations</i> (SQ3 & SQ5).	91%	9%
Q9	I could do the speaking tasks with <i>conversations</i> (SQ3 & SQ5) without my notes even though I took notes.	9%	91%
Q10	Note-taking helps me understand the <i>conversations</i> .	91%	9%
Q11	I don't need to take notes for the <i>conversations</i> (SQ3 & SQ5) because the conversations are shorter.	9%	91%
Q12	I rely on my memory more than my notes when I am doing the speaking tasks with <i>conversations</i> (SQ3 & SQ5).	9%	91%
Q13	I felt anxious when I did not take notes in the <i>conversations</i> (SQ3 & SQ5).	M=8.9	
Q14	I need notes to do the speaking tasks with <i>lectures</i> (SQ4 & SQ6).	100%	
Q15	My notes helped me to complete the speaking tasks with <i>lectures</i> (SQ4 & SQ6).	91%	9%
Q16	I could do the speaking tasks with <i>lectures</i> (SQ4 & SQ6) without my notes even though I took notes.		100%
Q17	Note-taking helps me understand the <i>lectures</i> .	91%	9%
Q18	I rely on my memory more than my notes when I am doing the speaking tasks with <i>lectures</i> (SQ4 & SQ6).		100%
Q19	I only need to take notes for the lectures (SQ4 & SQ6) because the <i>lectures</i> are longer.	63%	37%
Q20	I felt anxious when I did not take notes in the <i>lectures</i> (SQ4 & SQ6)	M = 8.15	

* SQ3 (speaking question 3) and SQ5 (speaking question 5) are conversation questions.

** SQ4 (speaking question 4) and SQ6 (speaking question 6) are lecture questions.

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Appendix III: Survey about note taking in the TOEFL iBT Writing section (WQ1) Section

- Question 12 on anxiety was measured on a rating scale of 1 to 10, with 10 being the most anxious. The average of the 11 participants (M) is denoted.
- All questions were measured on a 4-point Likert-type scale. The survey results presented in the table show the combination of the “strongly agree” and “agree” into “agree” and likewise with the disagree option.

	Survey Questions	Agree	Disagree
Q1	Taking notes distracts me, then I cannot hear all the information.	37%	63%
Q2	Taking notes is necessary to get a good TOEFL score.	100%	
Q3	Note-taking helps me understand the WQ1 lecture.		
Q4	Note-taking of the lecture helps me figure out the structure of the lecture.	100%	
Q5	Taking notes made writing the WQ1 more difficult.		100%
Q6	Notes from reading passage helped me to take notes of the lecture.	100%	
Q7	I could write WQ1 just as well with or without notes.	9%	91%
Q8	I need to take lecture notes to do WQ1.		100%
Q9	My lecture notes helped me to write the WQ1 essay.	91%	9%
Q10	I rely on my memory of the lecture more than my notes when I am writing the WQ1 essay.	9%	91%
Q11	I need to take notes for the lecture because the lecture is long.	100%	
Q12	I felt anxious when I did not take notes in the lecture of WQ1.	M = 8.27	

* WQ1 (writing question 1) in the integrated question in the writing section.

