

DEVELOPING THE STUDENTS' NOTE-TAKING STRATEGIES

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Abstract: Having a good system of taking lecture and class notes should be considered as one of the main skills that tertiary education students should possess, as it can significantly contribute to improving the quality of their learning. This study has stemmed from an ESP teacher's concern with the often inefficient manner in which many of the learners take notes in the English class, as they may not realize how important it is to be an effective note-taker. Within the framework of a course whose main objectives include the development of the language learning and using strategic competence, particular focus is placed on designing and implementing activities meant to provide suggestions on the best ways to take solid notes and to use them efficiently, thus helping the trainees to expand and/or refine a range of useful note-taking strategies.

Key-words: note-taking skills, strategic competence, language learning strategies, language using strategies, note-taking strategies

Motto:

"I am not a teacher, but an awakener."
Robert Frost (American poet, 1874-1963)

1. Note-taking – a discussion of approaches

Students, especially in tertiary education, are often faced with the following typical situation: once their teachers have started to deliver the lecture, they listen to the first few words and then start taking notes – really copious ones, as shown by some authors [10], finishing by re-writing the listened text entirely. Unfortunately, one thing did not happen under those circumstances – namely, the students simply did not focus on the meanings transmitted and turned into mere ‘scribes’ of notes.

This seems to be quite a general problem with tertiary education students everywhere and with all disciplines: they are so afraid that they might miss an important point that they tend to write everything down. On the other hand, they do not come, in general, with an adequately developed note-taking strategy from secondary education, which they should re-shape in accordance with the requirements of university level and its particular features. Finally, they have (almost) never been taught how to adjust their note-taking system (if they have developed one by then) to the features of courses/practical courses/laboratories/seminars in faculties.

This is also a matter of anxiety and feelings of intimidation, as well. The first time in a large lecture hall can be rather difficult for many of the students, including those in the educational context described in this paper, viz. first-year Computer Science students of the Bucharest Polytechnic. They were used to smaller classes and groups in high school, therefore the need appears for them to develop new skills of listening, note-taking and using their notes appropriately, as strategies to be included in their repertoire that they make use of in the process of learning in universities.

Certainly, some professors really provide support to such first-year undergraduates, either by the way and manner they deliver the content, or by making it quite interactive or by developing awareness raising tasks in this respect, but there are numerous cases when, given the constraints of

some educational contexts, students face large classes, where their role is limited to simply listening and taking notes from what the ‘guru’ on the podium is presenting.

According to the literature [10], a brief definition of the *note-taking process* is to record the students’ understanding of the ideas and concepts discussed, for future uses such as essay writing, preparing to read, and studying for examinations and tests.

However, in practice the manner in which this purpose is attained can really challenging.

In our opinion, note-taking is an external manner of storing information, which facilitates its further processing and re-activating. It permits the structuring of the material, if well done, even at the very moment information is being delivered. In this way, the notes can be seen as a means of closing the gap between what the students already know about the topic and what they need to learn in order to perform the requirements of the academic system, as far as that discipline is concerned.

From a *psycho-pedagogical perspective*, though, success in learning based on notes taken in class can be barred by some factors. Thus, in spite of the fact that quite many teachers are capable to structure and deliver the material in such a manner as to help the students to understand and take appropriate notes, there are still cases when there is no total overlapping between what the teachers consider as meaningful and what the students are able to detect as such, as well as between the teachers’ expectations that the students should see their reasoning process and connections made while taking notes, and what really happens in class, respectively. Students are not always unable to prove that their critical thinking is alert, simply because in many cases they have never been trained to be critical while taking notes. Many students may realize what is going on quite rapidly and they may try – even successfully – to amend the situation to their benefit. However, it is, we believe, part of the teacher’s duties to support the learners to develop good note-taking strategies.

Many universities do have various centers of academic skills development, providing courses in this respect, as in many others. In our context, as teachers of a foreign language and of communication in that language, we should provide, even if at a minimal scale, some main skill-development activities in this respect to our engineering students.

As shown in the literature [2], there are many cases when, although the course provides the essential information and the central concepts, as well as the material that will certainly be included in the examination bibliography, the students are unable to realize the importance of note-taking and listening, as well as the fact that good notes can be a useful tool for preparing for exams.

On the other hand, if we try to analyze this aspect in a realistic manner, we should agree with the authors [5] who maintain that, as a general rule, students do not particularly like to take notes in class, to put the matter rather nicely – which seems to be particularly true in our country, and with students who have accessed the tertiary level without sitting for particularly difficult entrance examinations.

In such cases, it is, again, the teachers’ role to show their students that tests and other examination materials will be created and administered on the basis of the material presented to them. Hence, notes taken in class actually support the learners as they are forced to listen and try to understand what is being presented. Notes are also good reliable material for review before examinations. It is a matter of common knowledge that everybody understands better and studies in an easier manner on the basis of their *own* notes.

There are cases when the students are under the impression that, if they have understood everything that has been presented in class, they will remember it all. This is particularly true in the case of foreign languages practical courses, but, as the literature [2] points out, nothing could be more wrong. On the contrary, it is shown, learning to make notes effectively will help the learners to improve their study and work habits and to remember important information.

If the teacher decides to teach note-taking skills, then it is recommendable, in our opinion, to insert in the course certain note-taking strategies awareness tasks at various stages in the language practical course, harmonizing the content of each task with the stage at which it is used in class.

The students should understand that note-taking is not the same as short hand or, even worse, a sort of *parrot writing* of everything the teacher utters, but that it involves developing a

personal system, which should be kept consistent and which should be appropriately shaped in function of the discipline and purpose in note-taking.

There are many forms of note-taking, depending on the subject matter and other factors. They include one or more of the following: outlining the topic sentence/main idea, emphasizing major points/key words, providing sketchy notes for the sub-points that give details in support of the main points, providing patterns such as that of flowcharts, diagrams a.s.o., leaving room for margin notes/further opinions/comments/questions, highlighting etc.

2. The student perspective

In a potential long list of tips which a teacher should provide in order to help the students to understand note-taking connected issues, we should start from several pieces of advice that may increase the efficiency of the students in note-taking.

Thus, the person taking notes should try to be *effective as a listener*. This implies using the ability to think in order to summarize content during the lecturer's pauses, for instance. Similarly, passive listening should be totally avoided, first as a mentality, and second, as an attitude. Instead, one should listen for main ideas, key words, transitional phrases pointing to the structure and focus of the input a.s.o.

Next, the note-taker should be *alert* for (non)verbal clues, such as transitional phrases and words, body language, voice tone and pace, repetition of ideas, and the time spent on certain subjects. They also indicate structure, relationships among ideas etc.

Note-taking is also a matter of *selectivity* – the learner's purpose, ideas to be further clarified should be noted down in a well-organized manner. To this end, the person taking notes should develop their *critical thinking* skills and, implicitly, this will be conducive to writing in a better manner (of essays, project texts and written examinations materials).

It may be of importance to point out to our students that they should put down *their reflections* about the topic, as well as the possible *questions* they have to clarify with the teacher's support. Thus, the layout of the notes should allow for these purposes. It should also leave room enough for the students' own opinions/experiences/thinking on the given subject, as well as point of (dis)agreement.

As it is emphasized in the literature [11], the process of taking notes is part of the *learning process* for most people, as writing down the material that is discussed in class helps reinforce it in the learner's mind. Equally, looking at it later and thinking about it in the light of other readings is another way to absorb the material, before it is time to study for an exam. The notes are the only written document one may often have about the points and developments the professor intends to stress and will, most likely, expect students to focus on in the exam. Therefore, it is really useful to read the notes after class and before the next class, as this can help one to put what has been learned in a broader, more comprehensive perspective.

From the *learning* point of view, according to [7], students should take notes in class for some important *reasons*, among which:

- note taking is an active process that will help one to concentrate during the class session and will aid one to retain what is being learned;
- the lecture may contain information that cannot be found elsewhere, so this may be the only chance to learn about this information;
- it is the professor who emphasizes the elements of importance in the content, and it will be the same professor the one who will evaluate the performance in learning by means of exams, stressing the same points;
- well-organized notes will help one to discover the important ideas; this way, the structure and purpose of the lecture will become more clear through the note-taking process;
- as nobody can (or should, for that matter) get down everything the professor states, and therefore the material must be rephrased/condensed; this is a process that promotes understanding.

There have been debates on whether university notes should be taken as short hand or not. Although short hand really is useful for secretarial work, it is, we agree with [2], almost worthless for academic work. The short hand notes must be transcribed, a process which does *not* really involve critical thinking, it is a mere mechanical operation, quite time and energy-consuming. The time in doing this could be used in a by far more rewarding manner taking notes in the original (certainly, with some personalized ways of abbreviating a.s.o.) and then spending time in direct study of the notes.

We should understand that the *manner* in which notes are taken, from the ‘mechanical’ point of view – by hand, on a computer – or in what *form* – with abbreviations, spaced and structured in a way or another – is a matter of *personal* preference and *individual* learning style, as [11] points out. There are huge individual variations, as well as some originating in the subject matter and in the style of the course. It is advisable, then, that each student should develop that particular system which would work for him or her.

Therefore, there are two important aspects to consider: (i) that a consistent method is used in note-taking; (ii) that the class notes should provide support to the students to learn better.

In this line, Kreis [10] underlines the students should be able to differentiate their interpretation from that of their professors. It is therefore advisable that, if the students are confronted with an essay question which demands an interpretation, they should realize that they must be knowledgeable of many interpretations, not just their own, or their professor’s, ones. Of course, in many universities there are still professors who simply demand that students ‘parrot back’ the information they have given, but there are also cases when the professors require the students’ own opinions on the matter taught, and this can be done more easily on the basis of good notes, which have been taken letting room for personal opinions and which have been reviewed before the examination.

The same author [10] advises the note-takers to:

- write legibly – as a must;
- organize the notes into brief sections and avoid notes that look like paragraphs;
- use certain notational devices in a consistent manner to highlight really important things;
- ask for the professor’s support in case something is not clear;
- record the date and title of the lecture/practical course/seminar for further reference and have notes organized chronologically.

Students should be made aware of the following interesting aspect: although listening is an essential learning tool, human beings are poor listeners, in accordance with [2]. Research shows that individuals can only recall 50% of what they hear and that 20-30% is incorrect. In the author’s opinion in order to develop a qualitative type of listening habits and retain more information from class, one should review regularly, recite (repeat key concepts from class) and reflect on the content (by connecting class ideas to other notes and readings).

We can derive one important interim conclusion at this point, viz. that, while many students view note-taking as an activity conducted simply in attending lectures, solid note-taking skills require *preparation* and *reflection*, as well. Class notes can serve as an important means for reviewing for exams and distilling key concepts.

According to the same source [2], some other reasons for taking notes are:

- making yourself take notes forces you to listen carefully and test your understanding of the material;
- when you are reviewing, notes provide a ‘gauge’ to what is important in the text;
- personal notes are usually easier to remember than the text;
- the writing down of important points helps you to remember them even before you have studied the material formally.

The secret to developing these skills is *practice*. At student level, they should be determined to check their results constantly and try to improve them.

Although the note-taking system is ultimately a matter of individual option, there are in the literature [2] quite a number of suggestions that are valid for *any* student. Thus, the notes should be *brief*; *words* should be used for phrases, and phrases for sentences. *Abbreviations* and *symbols* are useful if *consistently* used. Most notes should be taken using the student's *own* words, but the following should be noted down exactly: formulas, definitions, specific facts. A *numbering* system and *indentation* for relevant items is useful, as well as *dating* and *numbering the pages*. *Space* of the notes should be organized in such a way as to allow for further additions/changes/corrections/summaries.

From a more *qualitative* viewpoint, the notes should be taken while the student is attentive to the 'meat', or substance, or *significant information* in the course. Notes should be *accurate*, which signifies that the meaning of the lecture should not be affected/distorted. Notes should be kept in one place and in *order*. If possible, only *one type of paper* should be used (8 1/2 by 11) and notes should be taken *only on the front* - thus one can see the pattern of a lecture by spreading out the pages, as pointed out in [7].

Many sources in the literature describe and recommend the use of the Cornell note-taking system, a widely-used one, devised in the 1950s by Walter Pauk, an education professor at Cornell University. We present below the page format in accordance with the advice on note-taking provided in [2], that is self-explanatory.

-----2 1/2"-----	-----6"-----
Reduce ideas and facts to concise jottings and summaries as cues for as Reciting, Reviewing, and Reflecting.	Record the lecture as fully and meaningfully as possible.
The format provides the perfect opportunity for following through with the 5 R's of note-taking. Here they are:	
1. Record. During the lecture, record in the main column as many meaningful facts and ideas as you can. Write legibly.	
2. Reduce. As soon after as possible, summarize these ideas and facts concisely in the Recall Column. Summarizing clarifies meanings and relationships, reinforces continuity, and strengthens memory. Also, it is a way of preparing for examinations gradually and well ahead of time.	
3. Recite. Now cover the column, using only your jottings in the Recall Column as cues or "flags" to help you recall, say over facts and ideas of the lecture as fully as you can, not mechanically, but in your own words and with as much appreciation of the meaning as you can. Then, uncovering your notes, verify what you have said. This procedure helps to transfer the facts and ideas of your long term memory.	
4. Reflect. Reflective students distill their opinions from their notes. They make such opinions the starting point for their own musings upon the subjects they are studying. Such musings aid them in making sense out of their courses and	

academic experiences by finding relationships among them. Reflective students continually label and index their experiences and ideas, put them into structures, outlines, summaries, and frames of reference. They rearrange and file them. Best of all, they have an eye for the vital-for the essential. Unless ideas are placed in categories, unless they are taken up from time to time for re-examination, they will become inert and soon forgotten.

5. **Review.** If you will spend 10 minutes every week or so in a quick review of these notes, you will retain most of what you have learned, and you will be able to use your knowledge currently to greater and greater effectiveness.

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Figure No. 1 The Cornell note-taking system

An interesting perspective is that of note-taking seen as a *process*, therefore comprising several *stages* – we can find useful recommendations for each stage in the literature [4]. Thus, *before* class the materials should be reviewed and questions prepared; *during* class – time should be well used, by having an already established note-taking method; finally, *after* class, notes should be reviewed/completed, underlined and sorted out. Using the Cornell system, one can write questions in the left-hand area, a summary at the bottom of the page a.s.o.

In the same line we could add, from [8], that the student should have completed assigned readings, as the teacher may make reference to them during the lecture; the students should keep their *attention* permanently focused on the lecture and try to write *quickly*, by applying their own note-taking system consistently, as already discussed. If possible, notes should be *re-written immediately after* the course in order to make them more complete. We should emphasize that, particularly in the case of foreign language courses, this is also one method of simply *beginning to learn* the material.

In [9] some more useful hints are provided, from a *psycho-pedagogical* perspective. They may seem minor, but, if corroborated, they are all conducive to developing/improving good note-taking strategies. Thus, if the students sit at the front or the center of the room, there are fewer distractions that may impede understanding and concentration on the information delivered. Similarly, using a binder rather than a note book allow re-arranging and a better organization/management of the notes.

3. The teacher's perspective

The actors in the classroom/lecture hall where the course is taking place and the notes are taken are not just the students, but also their professors. Therefore, we should take into consideration the ways and means that teachers have at their disposal in order to help their students to learn better by taking better notes.

As mentioned in [5], most professors give good hints to taking notes – by writing on board/putting important content on slides etc. Often important points can be noted in: emphasis (tone of the professor's voice, pattern of intonation, non-verbal communication), repetition, time spent on some points and number of examples provided, word signals (e.g. 'In conclusion ...'), summaries at the end of the class or reviews before beginning a new part.

Here is a minimal *checklist* for teachers, from the point of view of their manner of structuring and delivering of the lecture, to be found in [12]:

- outline your lecture;
- use transition phrases;
- use thought patterns/frameworks;

- tell students what to record;
- challenge students to think;
- train students to take better notes;
- make time for note-taking activities.

The literature provides many other tips for the teachers to use in creating and delivering their courses. Thus, in [3] one can find references to a variety of ways in which the *learners' needs* can be met: the way of incorporating visual and auditory aids can help the students follow the lectures more effectively; at the end of class, a complete lecture outline should be visible. Students should be helped to distinguish between major and minor ideas, identify and label examples or analogies; anecdotes should be labeled clearly, as students often record the funny story, but miss the main idea. Occasionally, the notes the students are taking should be reviewed - the difference between what the teacher has said and what the students have written down can be dramatic. Students should be helped to develop their own *glossary* for the (technical) vocabulary of the course. New terms and definitions must be put on the board or slides.

Something that should not be disregarded is to *borrow the students' notes periodically* and learn if the class has understood you or not, and why some students may be bored/confused, as shown in [6]. The best way is to select students' notes *at random* (it may turn to be a chastening but useful experience). This can be useful if previous student evaluations have indicated: (i) your lectures are not as well organized as they might be; (ii) students find it difficult to identify what is most important; or (iii) your lectures are so tightly packed and delivered so rapidly that it is difficult for students to take good notes.

4. Some proposals

In what follows, a range of note-taking skills awareness raising tasks is presented, as piloted in the author's educational context. It is certainly, a matter of option of the foreign language course teacher which of them should be given priority/time in the quite tight time framework of the course.

One task which should be placed at the beginning of the course consists of the following steps. The teacher presents some listening input of the lecture type and another one of a different type, for instance grammar explanations and examples. The students are asked to take notes. Then they work in groups in order to compare their notes and draw conclusions of the similarities and differences, drafting and presenting a mini report to the class. A possible follow up is a piece of homework – an essay on the good points they have discovered they possess in terms of note-taking, as well as on ways to improve, borrowing from their colleagues' note-taking skills.

A task also for the beginning of the course is that of presenting some listening input and get the students take notes based on it, and then show them two extremely different ways of note-taking examples: one of notes that have not actually passed through the brain of the student and some taken by the so-called very conscientious student – complete notes on everything in that listening text, asking them to compare and discuss the two and then draw some conclusions. They should be led to remark that neither strategy above is a 'smart' one: the first as no thinking or reflection has taken place, and the second – simply because there has not been selectivity in the process.

A self-analysis task – whose source is [1] – is to provide the students the information given below and have them discuss whether they apply or not those things while they taking notes:

- eliminate small connecting words such as: is, are, was, were, a, an, the, would, this, of;
- eliminate pronouns such as: they, these, his, that, them;
- drop the last several letters of a word; for example, substitute "appropriate" with "approp." ; drop some of the internal vowels of a word. for example, substitute "large" with "lrg. ";
- do *not* to eliminate these three words: and, in, on;

- substitute numerals with symbols;
- use symbols to abbreviate, such as:
 - +, & for and, plus
 - = for equals
 - for minus
 - # for number
 - x for times
 - > for greater than, more, larger
 - < for less than, smaller, fewer than
 - w/ for with
 - w/o for without
 - w/in for within
 - > for leads to, produces, results in
 - <---- for comes from
 - / for per

Somewhere at a later stage of the course, another task could be implemented, as follows: students are asked to bring to class various notes they have taken from various courses. Group discussions are organized on a checklist of given points, which should cover: name of subject, format of notes, relationship between notes and teaching style of the professor, identified similarities and differences at individual students level and among peers in the group, suggestions for note-taking skills improvement that may arise from the group discussion a.s.o.

One task for the middle of the course, in any case for a time when at least several weeks have passed, as the task is based on analyzing the facts gathered by that moment, is meant to raise the awareness of both students and teacher of note-taking connected issues, based on devising a student questionnaire - some items of which are based on [6]. Students are informed that the questionnaire items reflect some of the ways their teachers can be described; they have to circle the degree to which they feel each item is descriptive of them. Among the main questions are the following:

- *gives reference for more interesting and involved points;*
- *emphasizes conceptual understanding;*
- *explains clearly;*
- *is well prepared;*
- *gives lectures that are easy to outline;*
- *summarizes major points;*
- *identifies what he/she considers important;*
- *knows if the class is understanding him/her or not;*
- *is accessible to students outside of class;*
- *has an interesting style of presentation;*
- *varies the speed and tone of his/her voice;*
- *gives interesting and stimulating assignments;*
- *gives examinations permitting students to show understanding;*
- *keeps students informed of their progress.*

The same pattern can be applied as a *teacher* questionnaire, in order to extend the research to the teachers of those students and check their approach to note-taking.

One task which is valid mostly for remedial situations is the following: students are asked to take notes and then compare their notes by asking themselves and as a group questions, such as: *Did I use any form at all? Are my notes clear or confusing? Did I capture main points and all sub-points? Did I streamline using abbreviations and shortcuts?* They can be asked to generate more self-evaluation questions, as well. And again, the follow up can be an essay on what good points they already have/what they should improve/what they have learned from this activity in class and by reflecting on it.

To conclude, a Cornell method based task, with the students sitting back to back and being dictated an input text while they are taking notes of they hear. Comparisons of their notes are made, with conclusions drawn underlining the individual differences that naturally exist between note-taking styles and systems. In groups, students are then asked to generate checklists of best methods of taking notes and to support their options with appropriate arguments. Then the teacher presents the Cornell method – comprising the three sections of the page: (i) the right-hand side of the page – for the bulk of the notes; (ii) the left-hand side for key words; and (iii) the space at the bottom – for the summary the students may want to make.

Certainly the tasks proposed here are just an illustration of the kind of activities teachers should expose their students to. For a language teacher this is less difficult, as by the nature itself of the discipline – a foreign language, in our case English – such tasks are at the same time good opportunities for the students to practise/develop their listening, speaking and writing skills.

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