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Learners' perceptions on note taking processes

1. Introductory remarks on note taking processes

This study looks at the bilingual context in which a language user renders the information presented to him or her in an aural form (a lecture) into a written text (note taking). The context is educational, as note-taking is step one in preparing to take an exam (also written) based on the lectures attended. In such a context note-taking can be regarded as an important learning strategy and as such it should become a part of taught study skills. It may also constitute evidence of how a learner/language user processes language data. A learning strategy is an active process and involves all possible sources – both linguistic and non-linguistic (multisensory) – that a learner has access to. The variety of strategies employed by different individuals points to the obvious differences in their cognitive and perceptual styles, among them the ways they will process language data and the way they will record the data to facilitate the best possible retrieval. What is also evident is that effectiveness of note taking will result from effectiveness of the listening processes involved so as a consequence, both research and training in developing language users' ability to take notes and need to focus on the development of listening skills as the foundation for effective storage and retrieval of information in note form. (Gabryś-Barker 2007)

Irrespective of the purpose that note-taking serves (admitting that it is often multipurposes), it is an active strategy and evidence of language processing in all language contexts – L1, L2, Ln. Different types of input will determine ways of note-taking, as a written input (a text to be summarized *versus* a lecture one listens to) will involve different modalities and to a certain extent different techniques will need to be applied in the process of note-taking. The difference in modality will then stem from a different type of input and will determine the ways of processing involved.

The way an individual encodes information is directly related to the way he/she retrieves this information from memory. Numerous studies (e.g. Armruster & Anderson 1982, Kiewra 1985 and Crooks & Katayama 2002) show that

(...) when students construct their own study notes to accompany a corresponding text, they often perform better than students who study from instructor provided notes (...) The activity of recording notes appears to improve the encoding function by requiring learners to process information more deeply than they would with instructor-provided notes (Katayama & Crooks 2003: 295).

Not only the very activity of taking notes but also the form they take will influence its effectiveness as a learning strategy. As studies illustrate, it is the spatial organization or the visual characteristics of notes than contribute significantly to their effectiveness (Kardash 1988, Grant & Davey 1991). In other words, we may safely assume that note-taking illustrates different cognitive styles of processing data on the level of content and form, exemplified by different ways of encoding. Table 1 classifies the variables affecting processes involved in note taking into external (uncontrollable) and internal ones, highlighting the areas which may be controlled by the subjects (listeners) and thus developed through training and practice.

Empirical research on note-taking processes comprises among others the following areas of investigation: Chaudron, Loschky & Cook (1994): the effects of note-taking on lecture recall, Rost (1994): the use of on-line summaries in developing strategies for listening and how to implement them in learner training, Mason (1994): the role of the interaction lecturer-student (interactive types of lectures, self-study to develop comprehension of lectures), King (1994): incorporating visual elements in delivery and note-taking, Hansen (1994): measuring the quality of note-taking and guidance

In the case of this study, however, the major interest lies in the perceptions FL users at the advanced level hold about note taking as a process of recording information and the factors which determine its effectiveness. Thus the major focus of this article is to comment on these perceptions in relation to the content of the notes: selection of information, completion of thoughts, the form: the language in which notes are taken – L1 or L2 or some other language, the use of abbreviations, the structure of a text and layout of a page. This data collected consists also of reflective comments made by the subjects on awareness of criteria involved in note-taking (student-constructed questions), strategies of note-taking, one's self-evaluation of the ability to make effective notes.

The subjects involved in this preliminary study were two groups of students of English, the control and treatment group, both in their final year studying to receive B.A.s as qualified teachers of English. They were about to take an exam in TEFL, consequently they were quite motivated instrumentally to learn and especially given that the exam preparation involved mainly their lecture notes taken over a two-semester course. They were also quite motivated to attend the lectures as the majority of them already taught English, mostly in the form of one-to-one tuition or on EFL courses. The lectures allowed them to expand their knowledge and also to ask questions relevant for their own teaching problems. They also believed that this methodology course was useful for them as instruction on how to learn foreign languages.

2.2. Stages of the project and procedures of implementation

The whole project consisted of three research stages and the analysis of the data received in the questionnaires discussed in this article as well as the analysis of the corpus of notes compiled during the lectures in TEFL (discussed in Gabryś-Barker 2008). The study was carried out in a three-stage sequence:

- first the diagnostic stage implemented in the control group was designed to determine the subjects' awareness of note-taking processes, the subjects were asked to construct a questionnaire on note-taking themselves; this stage was followed by a semester of lectures, during which the questionnaire on personal note-taking strategies was administered to the group

- next, two treatment sessions for the second group (the treatment group) aiming at raising awareness of note-taking were conducted in the form of brain storming and discussion
- it was followed by a semester of lectures during which the same questionnaire (as in the control group) was administered to determine the subjects' perceptions on note-taking after a brief two-session treatment introduced at the beginning of the semester.

As mentioned earlier, in this article I will discuss only the stages of the research relating to learners' perceptions on note-taking processes and the comparison between the control and treatment groups. (A discussion of the corpus notes collected in the course of the project is presented in Gabryś-Barker 2008).

2.3. Data presentation and analysis

2.3.1. The diagnostic stage in the control group

The subjects in the control group were put in the situation of researchers who were to find out as much as they could about the note taking from an imagined group of students (not unlike themselves). The task was performed in a clearly-defined period of time (20 minutes) to elicit the hypothetical informants' views on the most important aspects of the note-taking process.

The questions included in individual questionnaires constructed by different subjects overlapped and related to selection of information : main information *versus* details, selection of language forms: complete sentences *versus* only key phrases, language choice for making notes: L1 or FL, techniques of note-taking: the use of colours and page organization (the use of margins for example), the legibility of handwriting, the benefits of note-taking, the degree of editing the texts in the follow-up process of learning from them.

Looking at the proportions of questions which relate to either content or form, it seems that the students focused much more on the form of note-taking than on content-selection criteria. Also the question of comprehension itself was not raised although the hypothetical lecture was to be delivered in a FL, which could have possibly resulted in communication breakdowns, especially at the level of lexis – as new concepts were introduced and register-specific terminology used. Additionally, what was

clearly missing from the “hypothetical questionnaire” were questions of an evaluative nature: what makes good notes and how good one is at taking notes. What was not considered significant was awareness of the need to develop listening skills (those of processing aural input) to become an effective and efficient note-taker.

2.3.2. Survey (learner questionnaires in both groups)

Questionnaire 1: data and comments

Table 2 presents the responses received in the first questionnaire administered during a semester of TEFL lectures for both groups of learners.

Table 2. Questionnaire 1 responses (qualitative data in frequency order of responses, unedited language in quotations)

Question focus	Control group responses	Experimental group responses
a. Criteria of content selection	<i>Highlighted by the teacher, Importance for my exams Level of interest and attractiveness As much as I can do, no criteria Depends on the speed New things Definitions, facts and key words</i>	<i>Comprehensible info Main points, facts, dates, names, concepts Repeated by the teacher or indicated by his/her voice as important, Blackboard notes Dictated Chronology of presentation</i>
b. Techniques of note-taking	<i>Structuring the text into paragraphs Bullet and hyphenated points A lot of abbreviations (my own) Using tables and figures</i>	<i>Graphics (arrows, pictures, diagrams, tables) Colouring and highlighting, special font (capitals for headings) Mind-maps, brackets Spaces between the main points Abbreviations</i>
c. Language(s) used	<i>Language used by the teacher The whole sentences Simplified language Chaotic, no grammar, poor structure of sentences Illegible! Some amount of code switching into Polish</i>	<i>Simple language, no full sentences, Ungrammatical language (no articles) Mixing Polish and English only occasionally (Polish terms) Colloquial language, not sophisticated (simple vocabulary) Simple to understand and note in time available</i>

d. Structure of the notes	<i>No special structure In points, using capital letters As they come, scattered Leave space on the margins to add information</i>	<i>Spacing the text Points, dashes, stars In paragraphs / columns Mind-mapping and capitals for headings Hierarchical (capitals, numbers, letters)</i>
e. Factors facilitating note-taking	<i>Visual elements – key words on the blackboard Speed of delivery Repetitions Body language Not too much information</i>	<i>Manner of delivery (speed, clarity of pronunciation and lecturer's language) Logic and cohesion of the content Blackboard use and other visuals Hand-out External factors (silence)</i>
f. Factors impeding note-taking	<i>Group interference (noise) Pace and length of the lecture No interest and teachers' voice and negative attitude No hand-outs</i>	<i>Language of the speaker (lecturer): pronunciation and sophisticated vocabulary Too much dense information or too vague Digressions in the talk Noise in the room</i>
g. Need for assistance	Teacher assistance need (50%/50%): a. content questions: 68% (<i>unclear information, not complete notes</i>) b. form (language): 32% (<i>new words</i>) Peer assistance (80%): content questions Other (80%): language sources (<i>dictionaries</i>)	Teacher assistance (50%/50%): <i>new words, names, to put information on the blackboard, to rest from listening</i> Peer assistance (85%): a. content (<i>unheard, not understood</i>) b. form (<i>spelling of words</i>) Other (15%): <i>dictionaries (for spelling)</i>

The control group responses demonstrate that the respondents are quite passive and almost totally dependent on the lecturer both in terms of form (quoting the whole chunks of language used by the lecturer herself) and content. The students hardly ever seem to create their own encoding systems which would allow for more efficient use of time and thus, memory capacity. As the result, the note-taking itself is not very effective. This cannot be ascribed to attitudinal variables as the students are quite motivated by the upcoming exam and also their own interest in the issues of teaching and learning English. We can therefore surmise that it demonstrates a certain degree of unawareness of effective note-taking strategies and language processing principles.

The experimental group's responses on the other hand see the significance of the degree of understanding and verbal emphasis given by the lecturer as the main criteria of information selection in the process of note taking. They highlight the structure of the lecture: its chronology and the use of discourse markers as facilitative factors. Also, using a simplified language and not full sentences as memory-saving-devices seem to play a prominent role in the comments. The subjects emphasize the role of visual support in a form of hand-outs and appropriate use of blackboard by the lecturer. On the other hand, the impeding effect of density of information on encoding and being side-tracked by digressions made by the lecturer are claimed to block appropriate use of time in note taking.

Questionnaire 2: data and comments

In response to the question on the need for editing one's own notes, the answers also differed in both groups, which may be ascribed to the quality of notes produced in both cases (Table 3). The awareness developed as a result of the treatment given to the subjects in the second group brought about more comprehensive and effective notes. Thus, it is the control group that sees editing as necessary (the highest ratio for *sometimes* answers is 37%), whereas the treatment group is more satisfied with the form of their notes (*seldom* answers: 45, *never*: 35%).

Table 3. Editing one's own notes

Frequency:	Often	Sometimes	Seldom	Never
Control group	19%	37%	24%	20%
Experimental group	8%	12%	45%	35%

The characteristics of good notes as specified by both groups are homogenous in the main areas, which relate to: legibility of notes (nice and neat handwriting), clear layout: structure in points and sub-points, clarity of content (cohesion of the text and completeness of thoughts), highlighting key words (phrases) using colours or different font (e.g. capitals), language correctness (spelling and grammar), usefulness and ease of use for exam learning purposes.

Also in the individual evaluation of note-taking ability, there are some visible differences between both groups. The main one lies in the perception of note-taking as an easy process for the control group and a difficult one for the treatment group. This supports the view that note taking is a develop-

mental process and awareness is crucial here. Differences are also observable in other areas of self-evaluation. The control group sees itself as good or very good at note-taking except for: illegibility of handwriting (the majority of the informants), occasionally missing sources that were quoted during the lecture, no precision in recording information, no use of colours or special highlighting techniques. The treatment group in contrast considers taking notes to be difficult, although they evaluate quite highly their ability in it, except for: lack of grammatical correctness of the notes produced, incompleteness of content of data recorded.

3. Final remarks on the subjects' perceptions and training effects

Investigating how lectures are processed is important as it looks at still one of the most prominent methods for delivery of knowledge in all academic settings, and thus, a significant part of learning culture. As such it should lead to conclusions about the significance of this form of training for both speakers (lecturers) and listeners (students). This study looks at students' awareness and the influence of explicit training in listening as a prerequisite for effective note-taking. It emphasizes important factors involved in the above processes and how they can be translated into facilitative strategies and techniques to produce effective notes. As such, they can demonstrate the language processing involved in the act of note taking. The main observation, comparing the results of the diagnostic study and treatment study is that comments made in the questionnaires give evidence of a developed awareness in the treatment group and evidence of the application of selected listening and note-taking strategies discussed in the treatment sessions.

As mentioned earlier, note-taking is greatly influenced by the degree of one's effectiveness as a listener. In consequence, the training should involve both listening and note taking activities as these two are directly related. Table 1 classifies factors affecting listening abilities into external (relating to the mode and manner of delivery and environment) and internal (listener-dependent; cognitive, affective and physical). Each of these can be incorporated into the training. I would like to emphasize the significance of positive affectivity development in instruction in listening which results in building the confidence of a listener, and hence reduces anxiety which influences negatively attention capacity. It seems that in proper-

ly designed training in note taking, the focus on listening plays a prominent role. Such a training should also entail implementation of a selection of appropriately designed listening tasks (for examples, see Powers 1986 quoted in Flowerdew 1994: 247).

One of the major variables in effective listening is the manner of delivery of oral input and as such it should be made part of the training of lecturers, especially in the context of the fast growing internationalization of academia. It has already become a significant dimension in assisting our FL listeners but it is no less important for L1 listeners to comprehend and process language in the form of notes. But this constitutes another area of discussion and another possible research focus which embraces both the linguistic and rhetorical performances of academics as lecturers.

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