A Preliminary Investigation of Saudi Students' Strategies in EFL Reading

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Abstract: *This paper reports the results of an empirical study of Saudi Students' reading comprehension strategies revealed through the use of the 'think-aloud' technique. The findings indicate that the subjects of this study tend to employ low-level, bottom-up, language-based strategies. This overwhelming entanglement with text processing at the micro-level such as handling isolated unfamiliar words and phrases gets in the way of utilizing the cognitive higher-level top-down, knowledge-based strategies. The paper calls for well-prepared strategy training programs in the skill of automaticity of local low-level strategies which should be supplemented by extensive reading in the target language.*

1. Introduction

Reading involves a process of interaction between the reader and the text. This interaction includes both a low-level, bottom-up, language-based process and a higher-level, knowledge-based process. Bottom-up, language-based processing includes letter and word recognition, giving synonyms for words, re-reading certain words/phrases as an attempt at understanding, paraphrasing of words or phrases in the mother-tongue or the foreign language, etc. Top-down, knowledge-based processing, on the other hand, involves integrating inter-sentential information, recognition of text structure, making inferences, drawing upon previous knowledge in interpreting the text, etc. (Carrell, Devine and Eskey, 1988; Stanovich, 1980, Rumelhart, 1977; Block, 1992). Based on this assumption, skilled readers comprehend texts by actively constructing meaning, integrating information from the text with relevant information from their background knowledge. There are basically three types of reader's knowledge: (1) conceptual knowledge, which is the reader's knowledge of the content domain of the text, known as 'content schema', (2) the text-structure knowledge, which is the formal schema and (3) knowledge about text-processing strategies involving the top-down and bottom-up processes. These three types of knowledge constitute the foundation for successful construction of meaning (Carrell, 1987; Grabe, 1991).

One major area of L2 reading research has been in the strategy use of native versus non-native readers and of 'good readers' and 'poor readers' (Hosenfeld, 1977; Olshavsky, 1976-77; Garner, 1980; Olson et al, 1984; Block, 1985, 1992). However, the variance in the findings of research on L2 reading strategies has led Block to point to two groups of researchers in L2 reading strategy use. Proponents of the first group argue that reading ability in a second language is largely a function of proficiency in that language (Clarke, 1979; Cziko, 1980; Macnamara, 1970; Yorio, 1971). The other group , on the other hand, assert that higher-level strategies developed in a first language can be transferred to a second language and can operate alongside lower processing strategies. (Benedetto, 1984; Cummins, 1980; K. Goodman, 1973; Hudson, 1992; Alderson and Urquhart, 1984). A contributing factor to the variance in the findings on L2 reading research is the use of a variety of reading comprehension assessment procedures. On this matter Wolf (1993:322) points out that

> L2 reading research is quite disparate because the assessment procedures utilized may or may not be comparable across studies.

Wolf further concludes that

> incomparability of research findings can neither adequately support or disprove existing theories, nor facilitate the development of new ones.(ibid)

By the variety of comprehension assessment procedures, she means the post-reading questions, the use of multiple-choice questions, the cloze test, open-ended questions and recall protocols. These measures are at best controversial . However, there is a high degree of unanimity on the drawbacks of these measures as they all encourage the student-readers to engage in a superficial kind of text processing, particularly at the surface structural linguistic levels, while managing to score high on such test items. (for a review of these drawbacks, see Wolf, 1993).

Wolf (ibid:322-23) sums up the points of criticism raised by several scholars against these comprehension assessment procedures. For instance, according to Allen et al (as cited in Wolf, ibid), post-reading questions found in textbooks frequently contain the same words and phrases as those that appear in the reading passage. As a result students can respond correctly by matching words and phrases in the question to words and phrases in the passage and thus receive high comprehension

scores. Similarly, multiple choice questions only test isolated details or facts that can be answered correctly by understanding only a word or phrase (Atari, 2001). The cloze test, on the other hand, has had its share of criticism . For instance Anderson, Lado, and Markham (cited in Wolf 1993: 324-25) criticize it on the grounds that it is a test of grammar and vocabulary, rather than of reading comprehension because it measures linguistic skills which are considered lower-level rather than higher-level skills. Furthermore, the written recall protocols of L2 student readers have been criticized as most researchers ask the subjects to recall in the foreign language which may impinge on their recall endeavors.

With the exception of the recall technique, the afore-mentioned reading comprehension assessment procedures fall within the realm of product-oriented research. The studies conducted on the strategy use in L2 reading have reoriented research in a process-oriented direction, hence, the variance in the findings of research on L2 reading.

This paper combines aspects of both process- and product-oriented research. It seeks to explore the L2 reading strategies of a sample of Saudi undergraduate student-readers via the 'think-aloud' technique first, and then to examine their actual performance on two L2 reading tests with exercises on inference, general vs. specific ideas, paraphrasing of complex ideas, recognition of main ideas and the meaning of words in context.

2. Subjects

Eight Saudi students were selected for this study. They were participating in the last of a sequence of four L2 reading courses in a B. A. translator training program in a Saudi university. These L2 reading courses are part and parcel of the two-year language training undertaken by all students in the program prior to their translator training courses leading to the B. A. degree in translation studies. In other words, the eight subjects in this study had successfully completed three L2 reading courses prior to the one in which they were then enrolled. The four L2 reading courses are based on the textbook series known as: *Interactions Two: A Reading Skills Book* (3rd Edition) by Elaine Kirn and Pamela Hartman and *Mosaic Two: A Context-Based Reading Book* (3rd Edition) by Breda Wegmann and Miki Prijic Knezevic, both published by McGraw-Hill International Edition in 1996. This reading textbook series is process-oriented. The text material covers a whole spectrum of text types. Each unit is meant to

train the student readers in acquiring a variety of sub-skills of the overarching reading skill. The exercises include skimming, scanning, finding the main idea, the topic sentence, recognition of general and specific ideas, recognition of facts and opinions, classification of groups of words, inferencing, summarizing, matching words and their definitions, guessing the meaning of words in context, recognition of text structure, recognition of referential and connectivity categories, anticipation and prediction of text content and organization, etc.

3. Data Collection

The data collected through the use of the think-aloud technique are based on one passage (see **Appendix 1**). The eight subjects were grouped into four pairs and each member of each pair was asked to read the passage as if he was reading it in preparation for an exam. The two members of each pair were encouraged to interact with each other in order to get more natural spontaneous think-aloud protocols. They were allowed to use their mother tongue during their interactions. All their interactions during the reading sessions were tape-recorded. The tape-recorded material was then transferred into tape-scripts by the researcher. To ensure absolute accuracy in the transcription of the subjects' think-aloud protocols, the researcher asked each pair of the eight subjects to play the tape immediately after they were through with the reading and the interactions and write down very closely and accurately everything that was on their tape in their mother-tongue. It should be pointed out , however, that prior to the administration of this study, the same subjects were given sufficient training in the think-aloud technique.

In addition to the think-aloud experiment, this study examined the subjects' actual performance on two L2 reading comprehension tests. These were administered to the entire class to which the subjects belonged. The two tests were the mid-term L2 reading comprehension test, usually administered half-way through the semester, and the final exam (see **Appendix 3** & **Appendix 4**). The cognitive subskills of the reading process included in the two tests were: (i) recognition of the main point, (ii) guessing the meanings of words from context, (iii) inferencing, (iv) general vs. specific ideas, and (v) paraphrasing of complex ideas. The subjects' performance on the first two categories was measured by the scores they obtained on these two categories in the mid-term exam, and their performance on the other three was measured by the scores they obtained in the final. The selection of these categories in the two reading

exams is attributed to the fact that these are all higher-level, knowledge-based cognitive processes. The subjects' performance on these categories indicates whether the strategies employed during the think-aloud task are the same as the ones employed in typical classroom reading practices or not.

The passage used in the study (see **Appendix 1**) includes several unfamiliar words and some cultural references in addition to some referential problems. For example, the passage has certain difficult lexical items: e.g. *regenerative, stoops, Pamant Negru, modestly-sized farm*, etc. The selection of this particular passage was motivated by the fact that it invites the reader to engage in a series of bottom-up, language-based, and top-down, knowledge-based text processing. For instance, at the local language-based level, the reader must attend to specific phrases such as *"modestly-sized" farm*, and the phrase "the *so-called*"...and *"Pamant Negru"*. At another level, the reader has to bring to the text his background knowledge concerning the social, economic and political transformations that swept the Eastern European bloc countries in the aftermath of the "Soviet Union" collapse. Furthermore, the reader has to make some inferences concerning the transfer of train loads of soil from Romania to Germany to integrate this piece of information with the main thesis of the text. (i.e. Romania's soil is the best in the world)

4. Strategy Analysis Model

Block's model for strategy use (Block, 1986, 1992) has been made use of in this study . The model comprises both local and general strategies. The local strategies cover those of the low-level, language-based strategies while the general ones cover those of the top-down processes. Below (cf. 4.1 & 4.2) is a brief exposition of the components of this model together with authentic examples produced by the subjects of this study.

4.1. Strategy Type: General Strategies

* Anticipate content: The reader predicts what content will occur in successive portions of texts. For example, the reader says:
  "I guess the story will be about how you go about....or the story will be about....later..."
* Recognize text structure: The reader distinguishes between main points and supporting details or discusses the purpose of information. For example, the reader says:

"Let's see the topic sentence ...where is it? This is so called   Pamant Negru... this is the topic sentence".

- Integrate information: The reader connects new information with previously stated content. For example, the reader says:

  "Yeah! Yeah! Until we get to the phrase "he says", what follows is supporting sentences."

- Question information in the text: The reader questions the significance or veracity of content, such as saying:

  "Why is this   soil the best in the world?"

- Interpret the text: The reader makes an inference, draws a conclusion, or forms a hypothesis about the content. He says, for example:

  "I can see the shape of his hands and the soil is falling down through his fingers."

- Use of general knowledge and associations: The reader uses knowledge and experience, (a) to explain, extend, and clarify content; (b) to evaluate the veracity of content; and (c) to react to content. The reader may say:

  "This reminds me of our listening class. I think we had this before." ·

- Comment on behavior or process: the reader describes strategy use, indicates awareness of the components of the process, or expresses a sense of accomplishment or frustration, such as saying:

  "I honestly don't know!"   "Yeah, Yeah! This is it. This is the breadbasket of the kingdom, like Jazan, the southern region."

- Monitor comprehension: The reader assesses his or her degree of understanding of the text, such as asking:

  "Is there anything in your mind? First, let's find the topic sentence and then we decide."

- Correct behavior: The reader notices that an assumption, interpretation, or paraphrase is incorrect and changes that statement. This is a combination of the strategies of integration and monitoring, since the reader must both connect new information with old and evaluate understanding, such as saying:

  "O.K. no problem. It could be as you said."

- React to text: The reader reacts emotionally to information in the text. Such as saying something like:

  "I love this......"

4.2. Strategy Type: Local Strategies

Local strategies are used to deal with attempts to understand specific linguistic units.

- Paraphrase: The reader rephrases content using different words, but with the same sense. This strategy is used to aid understanding, to consolidate ideas, or to introduce a reaction. Paraphrases could be accurate or inaccurate.
- Reread: The reader rereads a portion of the text either aloud or silently. The use of this strategy usually indicates a lack of understanding; however, rereading may also have given the reader time to reflect on the content.
- Question meaning of a clause or a sentence: The reader does not understand the meaning of a portion of the text. Reader asks:
  "What's the meaning of modestly-sized farm?"
- Question meaning of a word: The reader does not understand a particular word, such as asking:
  "What does "fertile" mean?" ; "What is this word, stoops?"
- Solve vocabulary problem: The reader uses context, a synonym, or some other word-solving behavior to understand a particular word.

5. Analysis of the Data

Tapes of the dialogues of the think-aloud protocols were transcribed by the subjects themselves first. As pointed out above , the subjects were asked to transcribe everything that was taped during their interactions while reading. This task was performed to confirm the transcription of the dialogue think-aloud as the subjects themselves knew what they had said during their reading of the text. The researcher then listened to the tapes and transcribed them. The researcher's transcription, was aided by the subjects' tape-scripts. The researcher's transcription included the comments, enquiries, paraphrases, etc. made in the subjects' first language (i.e. Arabic) as well as in English. The Arabic was phonetically transcribed, translated formally and then a functional translational version was given. (See **Appendix 2** for a full tape-script of a sample dialogue).

6. Results

6.1 General Observations

Time on task: The appropriate time spent by the subjects on reading the first two paragraphs of the passage ranged from 35 to 55 minutes. This time was spent on reading the first two paragraphs of the passage (see **Appendix 1**), re-reading individual sentences or a set of sentences silently and/or aloud, thinking-aloud while reading and finally offering a full

transcription of their taped material in Arabic and English. The majority of these subjects read sentence by sentence, but there were several others who chose to read a whole chunk of the text. They tended to alternate between re-reading silently and aloud. This seemed like their strategy for understanding. At another level, the subjects' constant reference to the dictionary for looking up words tended to disrupt their interaction with the text. Thus, their tentative paraphrasing of certain unfamiliar words or phrases was sometimes left unchecked, and their understanding of the meanings of such linguistic units was never developed.

6.2 Strategy Use

6.2.1 General Strategies

Table (1) at the end of this paper shows the subjects' use of general strategies. As the table shows, the anticipation of content and the recognition of text structure strategies were very minimally used. The strategies which were employed by the majority were: the use of general knowledge and associations, monitoring of reading comprehension, and the interpretation of text.

These results indicate that the subjects approach the reading task without the necessary awareness of the purpose of the reading process. They are not in control of what they are doing; specifically, they are not using prior knowledge to predict or anticipate text content. The low frequency of using integrating ideas and asking about information in the text indicate that these subjects do not relate their previous knowledge to the information in the text. On the other hand, the frequent use of general knowledge and monitoring of comprehension indicate that they try to relate the information in the text to their own personal experience. This observation is a typical behavior of non-proficient L2 readers. Block (1986-1992) refers to this as the non-integrators' strategy.

6.2.2 Local Strategies

The following strategies were predominantly employed by the subjects of the study : questioning meaning of a word, questioning meaning of a clause or sentence, re-reading for understanding, and paraphrasing : cf. Table (1) . The use of such local strategies coupled with constant use of

the dictionary surpassed significantly the use of the top-down, knowledge-based strategies.

In brief, this study shows that these subjects were very much under the dominance of bottom-up, language-based strategies; their use of some higher-level, top-down, knowledge-based processing strategies was rather limited.

The above results indicate that the reading strategies of these L2 readers do not involve the type of cognitive/metacognitive sampling, predicting, guessing from text, utilizing background knowledge as is expounded by the psycholinguistically-oriented models of reading (Smith, 1973). The student readers' text processing of local bottom-up, language-based issues does not leave enough room for the metacognitive processes of anticipation of content, integration of specific/minor ideas with the main ideas, hypothesizing, sampling, etc. as the interactive process-oriented approaches to reading entail. On this matter, Koda (1992: 502) points out that

> lower-level processing operations stain the limited capacity of short-term memory, and inhibits text integration into a meaningful sequence. She further adds: when a reader is heavily involved in lower-level processing operations, fewer cognitive capacities are available for higher-level processing (e.g. integrating inter-sentential information, making inferences, drawing upon prior knowledge.

6.3. Strategy Use and Actual Performance

This section reports on the subjects' actual performance on five cognitive subskills of reading on the two tests and seeks to establish the correlationship between the subjects' performance and their strategy use revealed through the think-aloud protocols of reading. The five subskills of reading are: (1) recognition of main idea; (2); inference; (3) guessing the meaning of words from context; (4) recognition of general vs. specific; (5) paraphrasing of complex ideas. (see appendices 3 & 4 for the two tests).

The recognition of general and specific ideas, paraphrasing of complex ideas and inferencing have been included in the final L2 reading comprehension exam for all the students enrolled in the last of a sequence of L2 reading course referred to earlier . As pointed out above, the

subjects of the study, who participated in the think-aloud experiment, were among the students who took the final exam. Thus, the scores of the eight students for these three categories were recorded. The other two categories, namely, finding the main idea and guessing words from the context were included in the mid-term reading comprehension test for the same group of students included in this study.

Table (2) (see below) shows the subjects' performance on each of the five cognitive skills. The average scores on these categories indicate that the majority of these subjects scored low on two categories: (i) paraphrasing of complex ideas and (ii) finding the main idea of the passage. On the other hand, all subjects scored high on the)i) inference category, (ii) the general vs. specific ideas and (iii) guessing meanings of words in context.

The most interesting finding about the subjects' strategy use and their scores on the subskills on the two reading tests can be summed up as follows: the subjects' overwhelming involvement in low-level, language-based text processing made it difficult for them to handle complex grammatical constructions containing a hierarchy of complex ideas, hence, their relatively low score on paraphrasing complex ideas. In other words, their heavy entanglement in understanding meaning of isolated unfamiliar vocabulary items an/or some unfamiliar phrases gets in the way of higher-level, knowledge-based processing. As Table (1) shows the most frequently used strategies by the majority of these subjects were (i) questioning meaning of a word, clause or sentence and (ii) paraphrasing isolated words/phrases in the mother-tongue. Thus, the subjects found it difficult to paraphrase the following complex excerpt from their final reading comprehension exam:

" *Tough, sparse, lean, she embodied the rugged individualistic nature of the American pioneer. But instead of tilling the soil, her strides were made in the field of contemporary American Art.* " (see **Appendix 3**, final exam).

In essence then, the type of strategies that the subjects tend to employ does impinge on their actual performance on certain reading tasks. The subjects will be engaged in understanding the meaning of single words or phrases in similar excerpts to the neglect of the main point included. Yet, as pointed out above, the subjects' performance on the inference and the general vs. specific items in the final exam was good. Table (2) shows that

the majority (6 out of 8) answered the two questions correctly. One would find this surprising if she/he were to take these subjects' use of strategies into consideration here. Table (1) shows the two strategies of (i) integration (i.e. connecting information into previously stated ones), interpretation of the text, and   (ii) recognition of text structure (i.e. distinguishing main ideas, minor and support details, purpose of information, etc.) were not essentially employed. One possible explanation is that, as is the case with proficient readers, the subjects bottom-up processes are automatized (i.e. words are rapidly and accurately recognized), and thus the think-aloud protocols, which require verbalizing the strategies employed, do not reflect them. This explanation does not hold in our case as it is clear from the results that these subjects reading processes and interactions are not automatized. We have seen above how much they are bound to the bottom-up, language-based text processing which prevents them from developing a reasonable level of automaticity. The one explanation left, then, has to do with the type of exercise on "inference" and "general vs. specific" items of the test. Appendix (3) shows that these test items consisted of isolated sentences. It was thus easy for the subjects to distinguish a general idea from a specific one. The same goes for the inference sentences. This observation finds support in the works of several researchers who criticize the similar reading comprehension test items such as post-reading questions, multiple-choice, sentence comprehension exercises, etc. (Wolf, 1993). Obviously, these subjects have a problem of distinguishing "general" from "specific" ideas or "implied" from "explicit" information in units larger than the sentence; hence, their low scores on the "paraphrase question" as it consists of complex structures.

7. Conclusion

This study has shown that lower-level, bottom-up, language-based text processing acts as an impediment to the student-readers' comprehension of texts; hence, the sheer absence of an efficient utilization of top-down, knowledge-based processing strategies. This indicates that these subjects' low-level, language-based strategies have not yet become automatized to facilitate the   utilization of higher-level, knowledge-based strategies. Furthermore, the study has shown that even some process-oriented reading textbooks such as the *Interactions Series* used in the EFL reading courses do not actually always include exercises of cognitive categories beyond the sentence level, nor do they necessarily train students towards automaticity of the bottom-up, language-based strategies.

The conclusion that can be legitimately drawn from this study is that TEFL specialists should make serious efforts to carefully choose/devise reading texts that purport to develop automaticity skills in L2 readers. This can be achieved through an explicit comprehension "strategy training" in the automaticity of the bottom-up, language-based skill. However, strategy training must be supplemented by extensive reading in the foreign language. To this end, research in the area of training as well as the social contexts of L1 and L2 reading within the Arab context is needed.

Tables

Table (1) Use of Strategy Type

Strategy Type		Pair #1		Pair #2		Pair #3		Pair #4		Average Use	% Use
		Al-Heed	Al-Hajiri	Madkhali	Al-Faisali	Al-Zahem	Al-'Amer	Al-Bayali	Bahkali		
	General Strategies										
1	Anticipate Content	0	0	0	0	0	0	0	0	0	0.00%
2	Recognize Text Structure	2	1	1	0	1	1	0	0	0.75	2.07%
3	Integrate Information	3	2	0	2	1	3	1	1	1.625	4.48%
4	Question Information in the Text	1	0	0	0	2	2	0	0	0.625	1.72%
5	Interpret the Text	3	3	4	3	3	3	4	4	3.375	9.31%
6	Use General Knowledge and Association	2	1	7	2	5	4	4	2	3.375	9.31%
7	Comment on Behaviour or Process	7	6	5	4	1	0	2	2	3.375	9.31%
8	Monitor Comprehesion	7	3	6	2	4	3	4	2	3.875	10.69%
9	Correct Behaviour	3	1	1	1	2	1	1	1	1.375	3.79%
10	React to Text	0	0	0	0	0	0	0	0	0	0.00%
	Local Strategies										
11	Paraphrase	4	6	10	7	5	8	5	5	6.25	17.24%
12	Reread	2	7	5	7	4	2	6	5	4.75	13.10%
13	Question Meaning of a Clause or Sentence	1	1	0	1	3	2	2	1	1.375	3.79%
14	Question Meaning of a Word	2	2	3	2	4	4	5	3	3.125	8.62%
15	Solve Vocabulary Problem	2	2	0	2	4	4	2	3	2.375	6.55%

Table (2) Subjects' Performance on Reading Subskills

	QuestionType	Al-Heed	Al-Hajiri	Madkhali	Al-Faisali	Al-Zahem	Al'Amer	Al-Bayali	Bahkali	Average Performance	% Performance	
1	Inference Question (out of 12)*	12	9	9	9	12	12	12	9	10.5	21.00%	*
2	General vs. Specific (out of 8)*	8	8	4	8	8	8	8	2	6.75	13.50%	*
3	Parapharsing Complex Ideas (Integration & Interpretation) (out of 13)*	10	4	3	0	5	8	3	7	5	10.00%	*
4	Main Points (out of 2)**	2	2	1	2	0	0	0	0	0.875	2.92%	**
5	Words in Context (out of 5)**	5	2	3	2	5	4	3	4	3.5	11.67%	**

*Total Test Mark 50 (Final): Subjects' percentages for the first three categories were calculated as follows: Average / 50 x 100.

** Total Test Mark 30 (Mid-term): Subjects' percentages for the other two categories were calculated as follows: Average/30x100.

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Appendix (1):

Romania is fertile ground for US firms

Kate Connolly in Giorgiu

Petre MINCA stoops to pick up a handful of soil from his modestly-sized farm in the village of Daia, in southern Romania. He holds it as shoulder height and lets it run through his fingers.

"This is so-called pamant negru or 'black soil' and is considered to be some of the best in the world," he says. It is rich in organic matter, low in salinity, extremely regenerative – and under-exploited. It earned Romania the title of the "breadbasket of Europe" between the wars. Wheat, corn and sunflowers are the main crops.

The farmer remembers his father's accounts of how the Germans transported trainloads of it home to enrich their agricultural output during the second world war. But despite owning 13 hectares Mr Minca has – since the land was returned to him in 1990, after 50 years of collectivism – been unable to make it pay. He blames a lack of government subsides, bad management and cheap imports. All over Romania, the story is the same.

He and his family work their holding by hand, occasionally borrowing a horse-drawn plough from a neighbour in exchange for part of crop. His wife bakes bread in an oven in the backyard. From what little he sells locally, Mr Minca supports his wife, their four sons and his mother on an income of $70 a month.

But for the 51-year-old Mr Minca and the other farmers of Daia, in the country of Giorgiu close to the Bulgarian border, times are about to change. Under a deal with the Romanian government, American agribusiness is about to arrive.

A consortium of some of the biggest names in the sector- Monsanto, Cynamid, Du Pont and FMC will be moving in seed, fertilizers and chemicals, while modern equipment is shipped in by John Deere, Valmont and Lindsay.

The farmers are to get combine harvesters, tractors and other modern tools to replace the horse-drawn ploughs. In exchange they will be required to rent out most of their land to the consortium, keeping a small amount for personal use.

From the land they rent out the farmers believe they will receive the proceeds of one-third of the yield – after costs are deduced – while the consortium will keep tow-third.

For the farmers, a key inducement is that, regardless of the harvest they say they have been guaranteed, a minimum income level – the proceeds of 1 tonne per hectare. In Five years' time, if they choose to go it alone, the equipment will be theirs.

In fact, it appears that the best they may get is 15-25 per cent of the yield before costs are deducted. Even this level, however, is more than the farmers could reliably expect under their current system.

Appendix (2):

The coding of the strategies used is based on Block's coding system (Block, 1992). The letter codes are these:

A = anticipate content / T = recognize text structure / I = integrate information / H = interpret the text / C = comments on behavior or process / M = monitor comprehension / P = paraphrase / R = reread text / Q (c) = question meaning of a clause or sentence / Q (v) = question meaning of a word

Text Followed by Subjects' Responses	Code

1. TEXT: Romania is fertile ground for US firms

Abd (S1): (Reading aloud) Roma...(1 sec. Pause) Romania is fertile R
ground   for US firms
Salah (S2): (Reading silently the same sentence)
  eysh   ma' na "fertile" / What meaning fertile / What's the meaning of
fertile?   Q.(v)
Abd (S1): "fertile" khasba ... ?ard khasba   / Fertile ... land fertile /   P+
Fertile land
Salah (S2): ya'nīi ?ard khasba lish - sharikæ:til   ?amri:kiyy∂ /
Mean land fertile   for the companies the American / It means fertile land P+
for the American companies
Abd (S1): ?aywa / Yeah! /   C
  (Reading) eih... (1 sec. Pause) Keet Connoly in ... (2 sec. Pause) / R
Yu:r.....(3 sec. Pause) d3o:rd3yu
Salah (S2): Giorgio   R

2. TEXT: Peter Mica stoops to pick up a handful of soil from his modestly-sized farm in the village of Daia in Southern Romania

Abd (S1): Peter...(1 sec. Pause) Peter Minca stoops to pick...(3 sec. Pause) R
/ Up a handful of soil from his modestly sized farm in the village of
Daia,
Salah (S2): eysh ma'ɛn∂ "mdestily-sized farm"?   Q(C)
Abd (S1): Wallah Yakhūk   mæ ?adrī.../ By Allah brother you don't M
know / I honestly don't know, brother.
Salah (S2): m∂zra'a   ya'nī   saghīrat   ?al-hadjim...? aw.../ Farm P + H
means small   the size ...... or.../ It means a small farm .... or
....
Abd (S1): modestly-sized ....(2 sec. Pause) ya'ni from modest / Means R + H
Modestly... (3 sec pause) madrī.....   yimkin......./ don't know   may
/ I don't know......... may be.....   R+ M
Salah (S2): saghīrat-il hadjm? / Small the   size? / Small in size P + H
Abd (S1): saghīrat-il hadjm...? aw zay   matgūl.... / Small   the MP
size or   just like   you say...../ Small in size.........or just like
saying........
Salah (S2): basīta / Simple   P

Abd (S1): basīita.... yimkin tdjey hina basīta/ Simple   perhaps occur   PH
here simple/ Simple...may be it is used here as simple

3. TEXT: He holds it at his shoulder height...

Salah (S2): He holds it at shoulder highs... height and lets it run through   R
his Finger.....(pause)
Abd (S1): Yeah! Ya'nī (2 sec. Pause) yirfa'h∂ limustaw∂ kitf / Mean lift
it to level   shoulder his / Yeah! It means he lifts it up to the level of his   P+
shoulder...
Salah (S2): eh.......eh.../ Yeah...yeah...
Abd (S1): Ya'ni yinzil......yinzil kid∂   yākhidit-turba/ Mean   go
down   go down like this   take the soil/ wa   yirfa'ha   limustaw∂
kitfu/ and   lift it level   his shoulder/ This means that he bends to take the   P+H
soil and lift it up to the level of his shoulder
Salah (S2): eh.......eh.../Yeah... yeah...   C
Abd (S1): ˀdjal   ˀinshūfil.....(unclear word)...hæ∂i..../ Alright   see we   C + T
the this/ Alright, let's see the (unclear word) this.../(apparently he's
referring to the next paragraph

4. TEXT: "This is so-called *pamant negru* or 'black soil' and   is considered to be some of the best in the world"he says, it is rich in organic matter, low in salinitiy...

Salah (S2): (Reading) This is so-called pamta negru or black soil...and is   R
considered t obe the best in the world (2 sec. Pause), he says. illi   hū
Pi:tir Minka.../ Which he is Peter Minca / Which is Peter Minca   I+P+
Abd (S1): (Reading silently).....emm....tayib / Emm...O.K.   C
Salah (S2): eh...yeah!   C
Abd (S1): (goes on reading) it is ...(2 sec. Pause) it is rich in organic   R
matter. / "organic"...ˀil-li hiyy∂   'udwiyy∂...yeah / which is it   Q (v)
organic... / "organic"...this refers to organic
Salah (S2): ˀil....   ˀil'udwiy∂ 'udwiyaæt-it   turba / Which the   P+
organic organic matters of the soil / The organic ...the organic materials
of the soil...
*Abd (S1): 'udwiyætit turba/   Organic materials of the soil   M (P)
*Salah (S2): ˀil... ˀil...   hab-bætil / The...the...particle of the ... / The   PM
particles of the ..../ Salinity.......hashar∂.....?/ Insect......?
(The two subjects were overshadowing each other at this moment)*
Abd (S1)): la...mihi:......la maˀ a'taqid.....hashar∂ / No..not it..... no   CM
~~do't believe I   insect/ No, No, I don't think it is insect~~
Salah (S2): ˀil   baktīry∂.......hagit-ˀil.../ The bacterial...... belongs to   H + K
the/ The bacterial that belongs to...
Abd (S1): madæm bit-kal-lam 'anit-turba.../ As speak he   about soil/
Since he's talking about the soil / til-gæh∂   fil...   tayib.....gæ:l-l∂/   KM
find you it   in the....o.k.   said to you /   hūn "organic"... ya'ni
'udwiyy∂...

Appendix (3):

DIA's Best Feature
Top-Flight Runway Design

All the attention on the troubled baggage system has overshadowed the biggest passenger convenience at Denver International Airport-the nation's largest and most modern airfield.
THE BAGGAGE SYSTEM

Two baggage systems will serve DIA on opening day. The automated system will serve outbound and some inbound United baggage, the Rapistan system all others.

Unlike Stapleton International Airport and other airports with space constraints, DIA has plenty of room: 54 square miles. The new airport has five runways that radiate in all directions from the terminal. The airfield's design dramatically increases the landing and departure capacity over Stapleton's.

"Denver will no longer be the choke point in the national air traffic system," predicted Larry Parrent, air traffic manager for the Federal Aviation Administration at DIA.

Snowstorms, thunderstorms, fog and heavy crosswinds often slow Stapleton flights and trigger a ripple effect at other airports.

During bad weather, air traffic at Stapleton is funneled to one runway because its two north-south runways are too close together to permit simultaneous landings. And only one runway has the instrument-landing system required for low-visibility approaches.

At DIA, all the runways have instruments capacity and are spaced at least a mile apart. That allows more airlines to land at DIA in bad weather than can land at Stapleton in good weather.

"DIA is the only airport I the world that can land three aircraft on three runways simultaneously in bad weather." Parrent said.

Weather delays, however, will not be eliminated. The city has roughly the same snow-removal equipment at DIA as it has had at Stapleton, and takeoffs and landings during snowstorms will be dictated more by runway cleanup and plane deicing than by the capacity of the airfield.

"No matter how you set up an airport, severe snow conditions are going t affect operations," said FAA procedures specialist Larry Bell.

The airfield was built with the future in mind. The site, which Denver annexed from Adams County in a 1988 election, will allow up to 12 runways to be built.

FAA officials won't predict when air traffic will grow to a level that requires more runways. A sixth runway originally was planned to be built this year, but the city and the federal government delayed that project because of cost concerns.

****

- Read the following statements and then write C in front of the correct inference and I in front of the incorrect ones: (12points)

_____ The baggage system at DIA is the biggest passenger convenience.

_____ The baggage system at DIA has made the airport the largest and most modern in the nation.

_____ The baggage system at DIA has had some well-known problems.

_____ Stapleton International Airport has more space than DIA.

_____ Stapleton International Airport has less space than DIA

_____ Stapleton International Airport has as much landing and departure capacity as DIA.

_____ Before the construction of DIA, Denver had a good reputation for air traffic.

_____ Before the construction of DIA, Denver had a bad reputation for air traffic.

- **Read the following ideas and decide which of the two columns contains general ideas and which contains specific ideas. Match each general idea to the specific idea that illustrates it. (8 points)**

A. _____   B. _____

1. In the field of astronomy, it is easy to list cases in which discoveries were announced in ways calculated to ring credit and personal gain.

1. Some scientists decided they would "slam Pons and Fleishcmann against the wall" because they had called a press conference to announce "cold fusion."

2. Some astronomers of the past were modest and did not try to promote their own interests.

2. In AIDS research, some activists are demanding that new drugs be made available to patients before proof of their efficacy is published in journals.

3. If you don not follow scientific protocol when announcing your discovery, you will suffer ridicule and criticism from your colleagues.

3. when Galileo discovered the four large moons of Jupiter, he decided to name them after the rich and famous Medici brothers.

4. Waiting too long to announce discoveries can also bring criticism.

4. When William Herschel discovered the planet Uranus in 1781, he did no more to publicize it than mention it to a friend.

- **Paraphrase the following excerpts from the other article in the test, "To Paint Is to Live: Georgia O'Keeffe, 1887-1986". Do not worry if there are some words you do not understand. Just state the main idea briefly in simple, direct words. (13 points)**

"Tough, sparse, lean, she embodied the rugged individualistic nature of the American pioneer. But instead of tilling the soil, her strides were made in the field of contemporary American art."

Appendix (4):

Read the following passage and then answer the questions that follow it.

One day at rush hour in Athens, stinking buses and cars, full of pale and tired passengers, jammed the crowded streets. Drivers shouted at one another and honked their horns. Smog smarted the eyes and choked the senses. The famous ancient city that witnessed Plato and Pericles was in a sorry state of affairs, built without a plan, lacking even adequate sewerage facilities, hemmed in by mountains and the sea, its 135 square miles were in ruin: sulfur dioxide ate away at the marble of the Parthenon and other treasures on the Acropolis. As Greek Premier Constantine Karamanlis once said, the only solution for the environmental problems of Athens was to demolish half of the city and start all over again.

The population flow toward Athens was so great that entire hinterland villages stood vacant or nearly so. About 120,000 people from outlying provinces moved to Athens every year, with the result that 40% of Greece citizenry were packed into the capital city.

The migrants usually came for the few available jobs, which were usually no better that the ones they abandoned. At this rate of migration, Athens by the year 2000 will have a population of 6.5 million, more than half the nation.

Apart from overcrowding and poor public transport, the most serious environmental problems confronting Athenians were noise and pollution. A government study concluded that Athens was the noisiest city in the world. Smog was almost at killing levels: 180-300 mg of sulfur dioxide per cubic meter of air, or up to four times the level that the World Health Organization considered safe. Nearly half the pollution came from vehicles. Despite high prices for vehicles and fuel ($ 2.95 per gallon), nearly 100,000 automobiles were sold in Greece last year and 3,000 driver's licenses issued in Athens last month.

After decades of neglect, Athens at last got some attention. A few months ago, a committee of representatives from all major public service ministries met to discuss a plan to unclog the city, make it livable and clean up its environment. In compliance with this plan, a save-Athens ministry was established a couple of months ago. It proposed heavy taxes to discourage in-migration, a minimum of $5 billion in public spending for Athens alone, and other projects for the countryside to encourage residents to stay put.

Despite the fact that many government offices were moved to Athens' fringes, more Greeks kept moving into the city. With few parks and precious few oxygen-producing plants, Athens and its citizens were literally suffocating.

- The main idea of the last paragraph is ....
(2 points)

- Find expressions in the reading selection which have similar meanings to the words/phrases printed in italics in the following sentences: (5 points)
a. There was fire all over the building, and the smoke was so thick that it caused pain to our eyes and *impaired our respiration*.
b. In London there is a lot *of fog polluted with smoke* coming out of the high chimneys of factories.
c. In summer there is not *enough* water for irrigation.
d. Some people complain that they do not have *a system that moves the human waste from toilets out of the city*.
e. Sana'a is a big city *surrounded* by high rocky mountains.