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# *Learning Styles and Learning Strategies*

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The purpose of this paper is to offer some suggestions for classroom activities that incorporate field independence-dependence and left-right brain functioning, as students learn through various learning styles. Thus, the idea is to make both students and teachers of English aware of the fact of making use of a wide range of techniques to give equal opportunities to all students so that they can benefit from the material as much as possible. To assure objectivity and validity, the techniques suggested here were experimented and tested over a semester period with intermediate university students of English. Also, a brief description of the two learning styles mentioned above is included so as to provide readers with an insight of how theory and practice mix in the activities suggested.

## **FIELD INDEPENDENCE-DEPENDENCE.**

Research concerning this learning style has proved that field independent learners perceive the parts rather than the whole. Unlike these learners, field dependent students appreciate the whole structure, problem, scenery, rather than its constituent parts (Brown: 1987). In Psychology this phenomenon is called detailed and general apprehension respectively. Sometimes teachers concentrate mainly on the explanation of the various words that formulate a sentence. They do so in the hope of providing students with a detailed rendering of phonological, morphological and lexical features that each constituent part involves (detailed apprehension). Naturally, there is nothing wrong in doing so, as students do need a solid understanding and handling of phonemes, morphemes, inflections, etc. to give a good account of the words and/or expressions included in a sentence. Still some other

teachers, perhaps due to their weak foundation in Phonetics, Morphology and Syntax prefer to give their students a general description of the sentence under consideration (general apprehension). Thus, they may decide to put emphasis on the grammar tense underlying the sentence and probably on its translation.

Nevertheless, when learning a language, and in general when tackling material to be internalized both styles should be incorporated in class, as students need to get the general structure of a sentence, situation, etc. along with the meaning or function of the individual words that make up a particular sentence. For instance, when teaching the structure 'John has been working here for about four years', the students have to be taught that this is a perfect progressive construction that shows that John's action of working began at an unspecified time in the past, that his action continues into the present and that it will probably continue into the future. They also need to know the individual changes that some words experience to cope with such rules as subject-verb agreement, "he-has", in this case; the use of the preposition for, to indicate duration of an action. etc. In "Activity Ideas A" some activities are included to develop the field independence – dependence learning style.

## **LEFT AND RIGHT BRAIN FUNCTIONING**

Research on left and right brain operations has demonstrated that as the child's brain matures different functions are assigned either to the left or to the right hemisphere. "Intellectual, logical and analytical functions appear to be largely located in the left hemisphere while the right hemisphere controls functions related to emotional and social needs as well as motor skills" (Brown 1987:43.)

Research has also demonstrated that teachers, especially in certain subjects are prone to using activities that are controlled by the left hemisphere. Thus students are required to infer, analyze, test hypotheses and so forth. Of course, these techniques help a great many students to internalize information. Nonetheless, classes are also made up of right-brain dominant learners. These do not benefit as much as they should through the contrivances mentioned above; thus with these students it would be advisable to carry out strategies that



involve movement, symbolic representation, games, etc. Teachers in many cases recur to techniques that suit their teaching styles or that lend themselves exceptionally well to being used with the materials they have at hand. In this way they imagine that they save time in preparing their classes while giving their students the best chance to learn. Indeed, in the short run they save time and effort as everything seems to emerge naturally in class, at least from their viewpoint. However, in the long run this practice causes a series of drawbacks as some students will learn faster than others and others will not learn at all. This is because what seems to work for somebody in terms of learning does not necessarily have to work for somebody else. Consequently, teachers should be advised to use various techniques that incorporate both left and right brain functioning to put the whole class on the basis of equal opportunities for learning.

## METHODOLOGY

To test the use of the learning strategies suggested in this paper a quasi-experimental study was developed. Two groups of English students from the English and French program at the “Universidad de Nariño” were selected to participate in the study. Both groups were at the same level of English development: Intermediate. Each group was made up of 15 students. One group was taken as the experimental one and the other as the control group. Those students in the experimental group were trained by means of techniques proposed for the development of learning strategies (see Activity Ideas A and B) while the control group underwent training based on the use of traditional Audio Lingual activities such as lists of words to be memorized, transformation drill exercises (changing statements to questions), i.e.

A carpenter cuts wood

Does a carpenter cut wood?

A secretary files papers

Does a secretary file papers?, etc.

Correlative substitution drills (pronoun-antecedent agreement), i.e.

I called the secretary,            I called the secretary, but she wasn't in.

I called the driver,                I called the driver, but he wasn't in., etc.

## Activity Ideas A

The activities which follow and those included in the section “Activity Ideas B” are written as suggestions to be implemented by teachers. We have decided to present this information in this way for the sake of illustration and clarity. Nevertheless, it should be noted that they were actually conducted in the experiment here described.

### Techniques: Field Independence – dependence learning style First Technique

To carry out this activity the teacher needs some scrambled sentences. These are constructed with cards that are made of cardboard paper. Each card should be 6 cms wide and 10 cms long. On each card he/she writes a word. Then he/she shuffles them and secures each set with a rubber band before distributing them to the students. When arranged, each set should make a complete sentence. For this activity, he/she needs two scrambled sentences. These should be mixed in a single package. The students are split into groups and are asked to arrange both sentences in the proper order. One of the sentences should be in the singular and the other in the plural, i.e.

- The men have been working on the street for three hours.
- Helen has been playing the piano for an hour.

To arrange the sentences the students have to pay close attention to the individual turns of words. In this case for instance, they are to notice that if their sentence starts with “the men”, they have to choose “have”, not “has” to meet the requirements of the subject-verb agreement rule. Naturally, the teacher should play his/her active role as prompter that is, he/she needs to make suggestions so as to lead his/her students to notice the proper verb forms to be used. While doing this, the students are developing their field independence skills.

The students should also be encouraged to concentrate on the structure as a whole. To this end, the teacher prepares a series of “tense cards”. These can be prepared with cardboard paper and their size should be the same as that suggested for the scrambled sentences. On one side he/she writes the name of the tense, i.e. “present tense”, “past tense”, and on the other he/she writes the definition of the corresponding tense. The students are to choose the card that matches



the sentence they put in order with its respective “tense card”. The following are explanations of verb tenses that might be included on cards when using this activity in a real classroom situation.

**The present simple:** It is used to refer to an action that happens with a high degree of frequency, practically on a daily basis, to say, a habit. It is also used to express something that is true, that is to say universal truths, i.e. She is a student. Milk contains a lot of vitamins.

**The present continuous:** It is used to refer to an activity that is taking place at the moment of speaking. It is also used to express an action that is happening over longer periods of time, but that is not necessarily taking place at the moment of speaking; i.e. Helen’s taking Math this semester.

**Present perfect progressive:** It indicates an activity that began in the past and continues into the present.

By selecting the appropriate card the students are given the opportunity to concentrate on the structure as a whole, i.e. kind of tense, meaning of tense, etc. Through this practice they develop their field dependence skills

## **Second technique**

When teaching irregular verbs, students are generally given alphabetized lists to be memorized, i.e. be –was/were, cut-cut, do-did, eat-ate, fly-flew, etc. This procedure emphasizes the individual parts of the verbs, present and past in this case, as if they were isolated entities. Naturally, after long cramming and under the pressure of a test, for example, students learn these verbs, but soon after this, they forget these forms easily.

To avoid the aforementioned problem, the teacher may find it useful to fall back on strategies that foster field-dependence tendencies. To do so, he/she can proceed as follows: He/she may decide to write on the board a series of verbs that undergo similar changes for present and past simple, i.e. ring-rang, sing-sang, sink-sank, swim-swam, etc. In this way, students see individual verbs as if they belonged to a single big group and learn their forms through association and deduction. Through this procedure, they can organize other groups of verbs under the teacher’s guidance. The nice thing about this is that they learn to

form groups based on such cognitive processes as hypotheses testing, generalization, association, among others. Through these exercises they tackle irregular verbs with awareness and thus have more opportunities of remembering information for longer periods of time.

## Activity Ideas B

### Techniques: Left and Right Brain Functioning Learning style.

First activity: Students see a video, for example a film on professions and occupations. Then they are told to work individually or in pairs with the following handout.

Instructions: Match the following professions and/or occupations to the activities they involve. Each profession and/or occupation can be matched to two or more activities if possible.

#### **Professions/occupations**

Photographer

Carpenter

Teacher

Physician

Secretary

Prescribes medicines for sick people

#### **Things these people do**

Takes picture

Makes out exams

Operates on people

Develops films

Makes doors, desks, etc.

Corrects papers

Answers the phone

Polishes wood

Sees patients

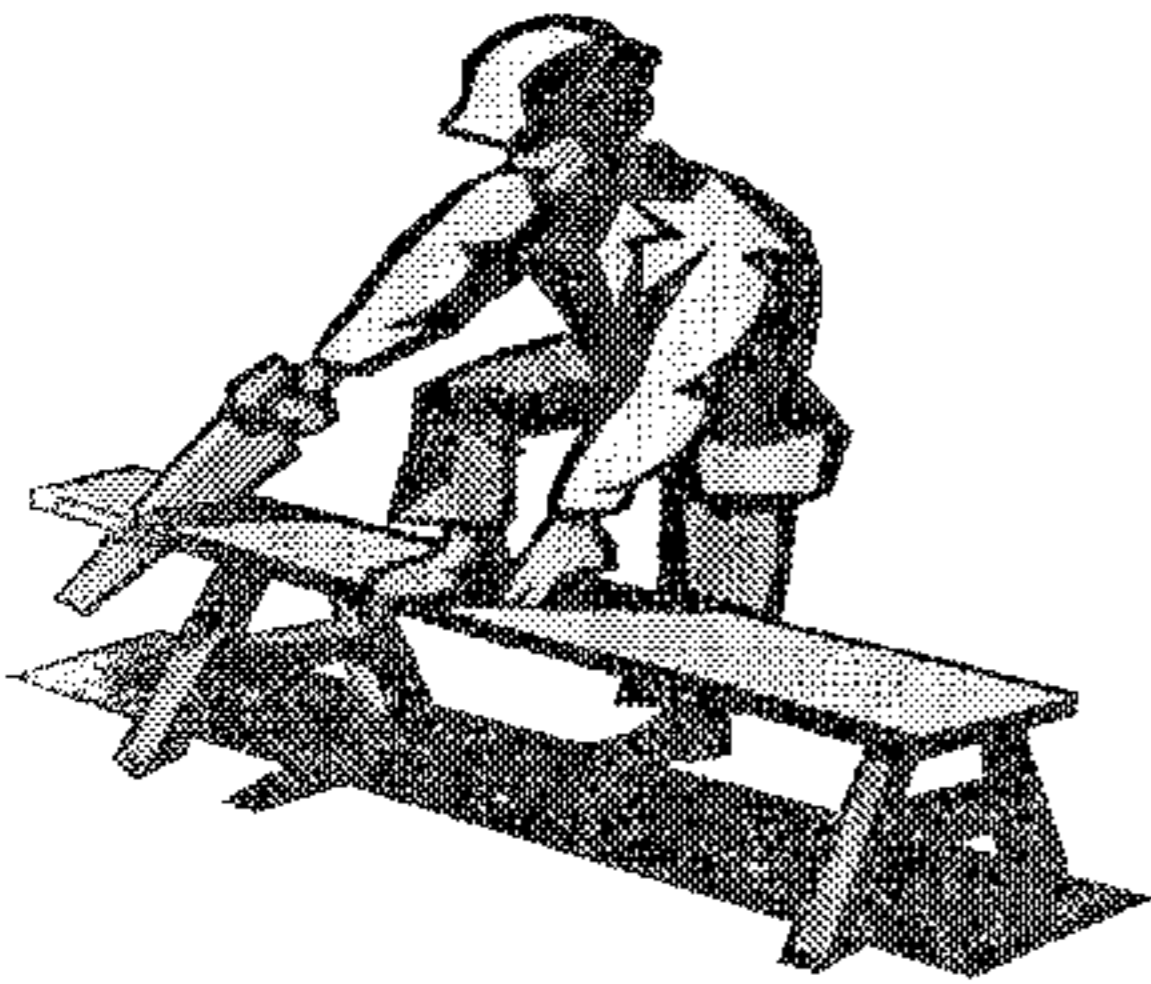
While doing the exercise presented in the previous handout, students have to make use of such processes as association, deduction, etc. In other words they strengthen their left-brain mechanisms.

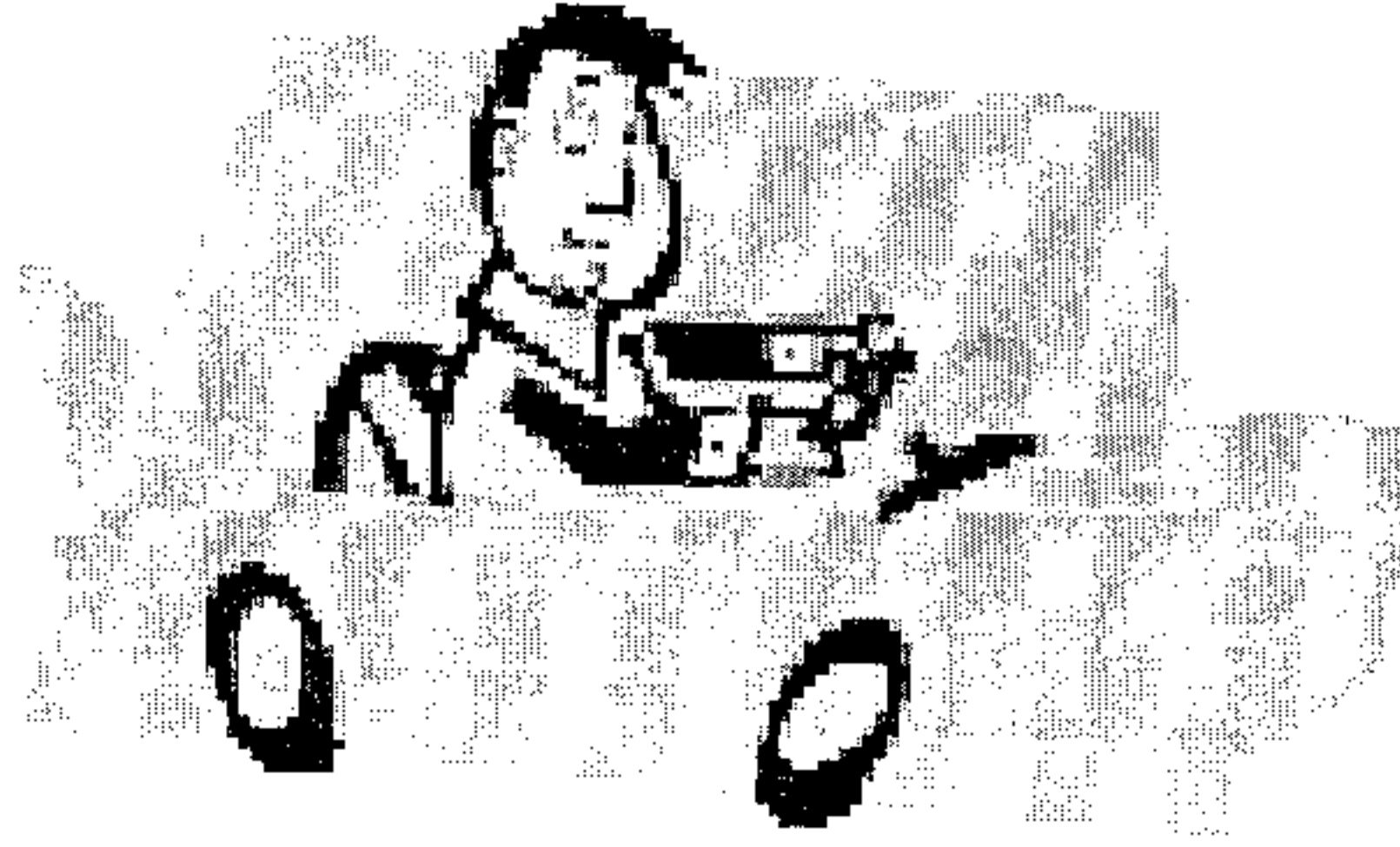
After watching the video and in order to help right-brain dominants internalize the material, the teacher may want to give his students a handout like this:



## Instructions

At the bottom of this pictures; you will find in scrambled order the names of various professions and occupations. Write the appropriate profession and/or occupation under the corresponding picture. Then you will find incomplete sentences that describe what these people do. Complete each sentence correctly.





Secretary-teacher-gardener-driver-bricklayer-carpenter-physician

Sentences:

A carpenter cuts wood and.....

A gardener waters plants and.....

A physician sees patients to.....

A secretary files papers and.....

A teacher prepares classes and.....

A driver has to make sure the car is in good condition to.....

A bricklayer lays bricks and .....

### **Additional techniques**

After seeing a video on professions and/or occupations in order to reinforce left-brain dominants, the teacher may find the following hand-out to be of some use in his/her class:

### **Instructions:**

1. On the left side you will find various words of professions and occupations. They have been separated into their corresponding syllables. These are given in scrambled order. Arrange them properly.

2. On the right side you are given in scrambled order a series of sentences that have been divided into chunks. Arrange them correctly. These correspond to the activities of the professions/occupations given.

3. When you have finished steps 1 and 2, write in a column the



words that stand for the professions and occupations. Then in front of each word supply the corresponding definition based on stage 2.

At the bottom of the page is an example as a lead-in for you.

graph -yer	Represents his clients before court /to grow plants/ helps students find the information they need/ and prescribes medicines
Gar-mist	water plants and flowers/ fertilizes ground/ and buildings /cuts and polishes wood
sit- -to- law -er	And takes messages for his boss/ and lends them books/to cure their health problems.
se-chi-ta-ry	And develops films/ or attend social events/ designs plans for houses
Che-er	Types letters, files papers/ takes care of children while their parents go to work.
ian -by- pho -ter	And sues people who have broken the law/ to make various pieces of furniture/ sees patients
Tect-den-er	Gives his students homework/ and formulae/ and removes weeds
li-brar- ba- teach	Takes pictures/ to get medicines, acids, preservatives, etc
ar-cre- phy -pen-ter	And exams and correct papers/ works with different substances
Car-si-cian	Teaches lessons on various issues to his students/ answers the Phone

Example:

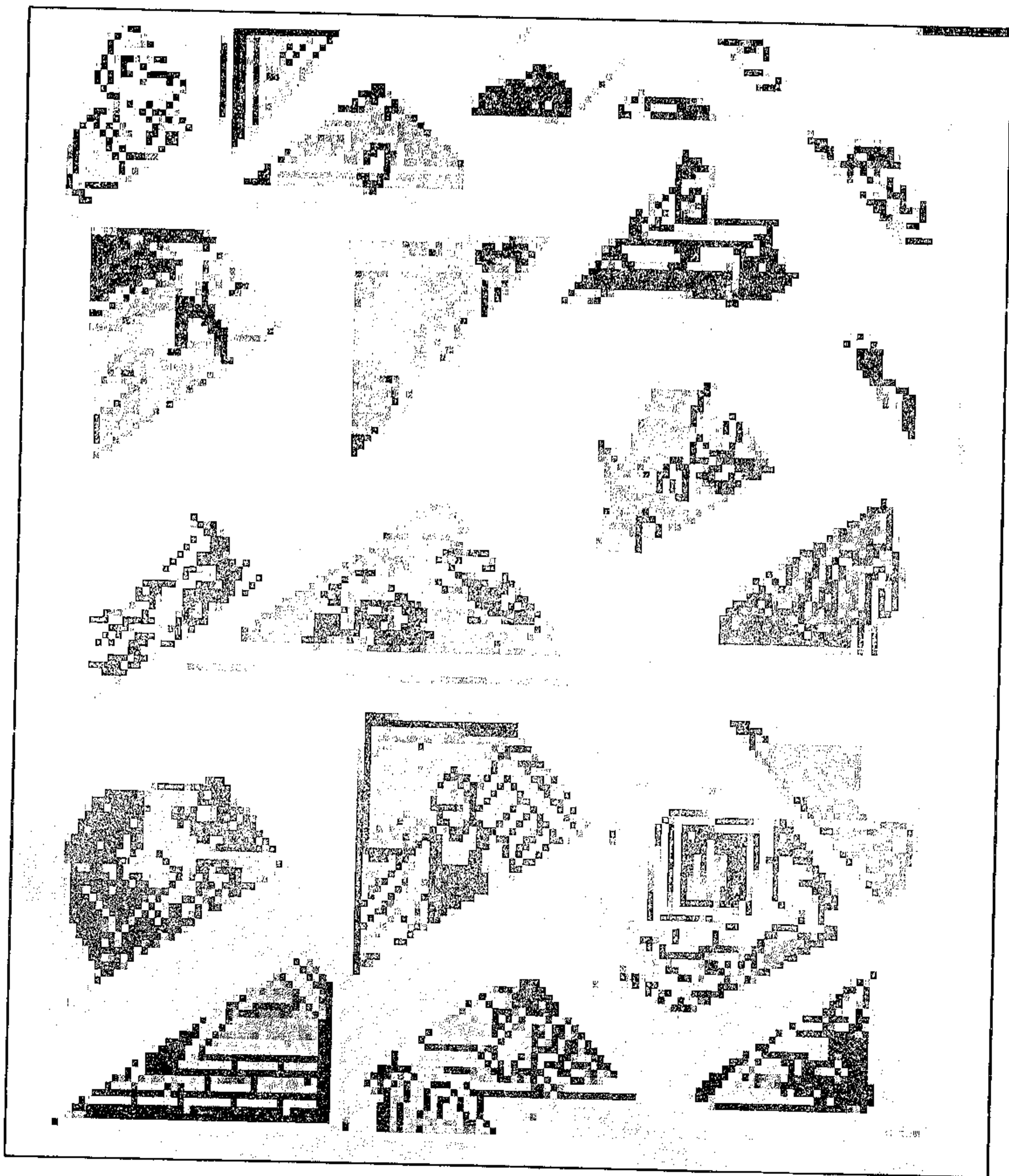
Photographer: Takes pictures and develops films.

## Second Technique

The following strategy can be applied to students to help right-brain dominants internalize the information. It is based on the hand out which follows:

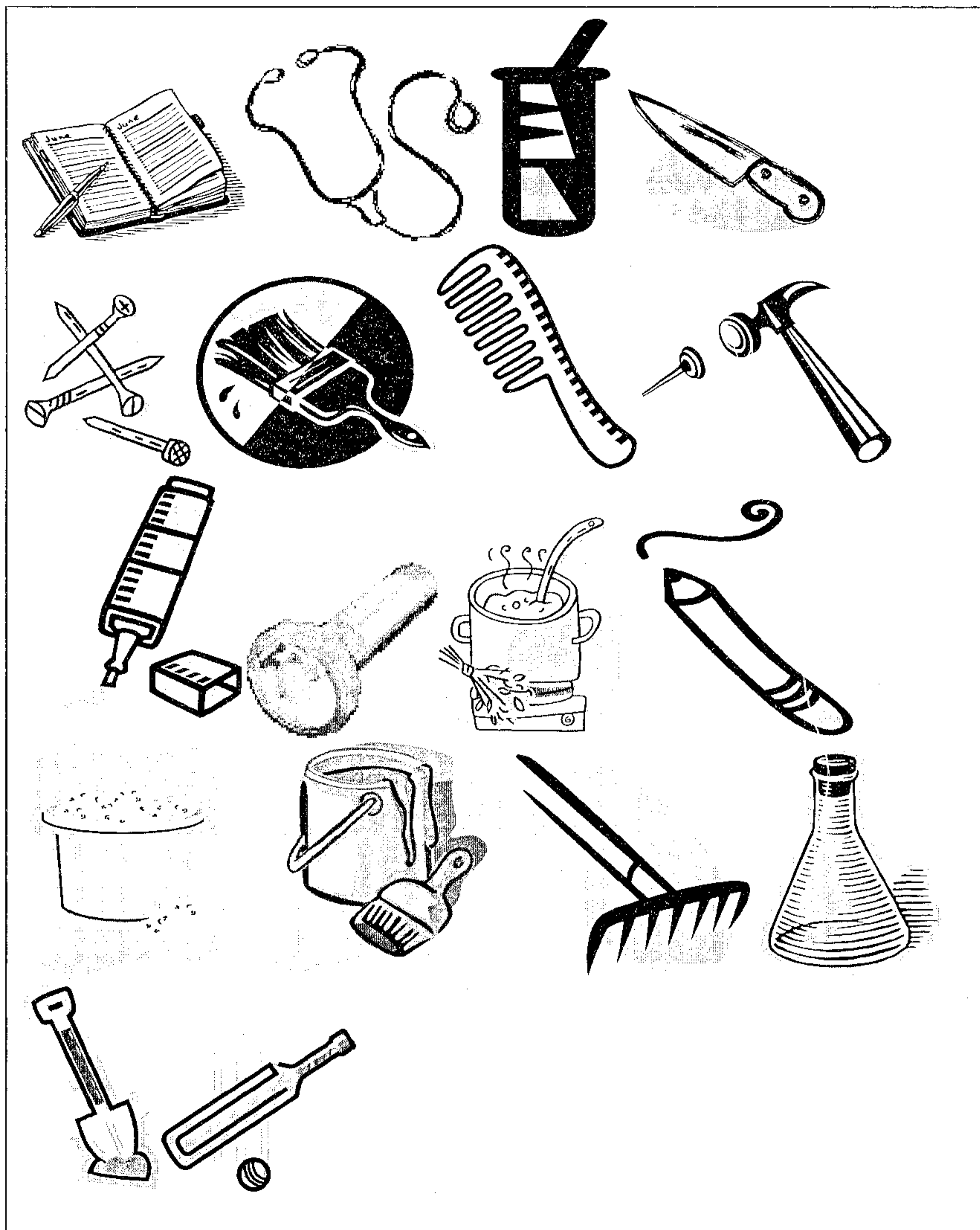
Instructions:

Below you will find a series of parts of pictures. Cut them and put the pieces together so that you obtain the corresponding figures. These stand for various professions and/or occupations.





Next is a series of drawings of items that are normally handled or used by people who practice the professions/occupations under consideration. Cut and put together those that have to do with a given profession/occupation. Proceed in a likewise manner with the rest of items.



When you are done with the two previous stages, make sentences with the vocabulary items dealt with. You do not have to refer to all the pictures. Just make use of those you think give coherence to your sentences. Next is an example for the sake of illustration:

A photographer uses a camera and film to do his job efficiently.

## RESULTS AND DISCUSSION:

The following are the results obtained in this study over a semester of experimentation.

### Field-dependence vs. Field-independence.

For the first activity based on the distinction field-dependence vs. field-independence the students in the experimental group (15 in all) were given 30 sentences to arrange. They did this activity in groups of five.

Groups	N° of wrong sentences	N° of right sentences
Group 1	4	26
Group 2	5	25
Group 3	7	23

These results show that the three groups arranged most of the sentences properly. Thus group 1 arranged 26 (out of 30) sentences correctly (86.7% effectiveness on this exercise.) Group 2 arranged 25 utterances correctly (83.3% effectiveness) and group 3 arranged 23 sentences correctly (76.6% effectiveness.) Once they had finished this activity each group was given four sets of “tense cards” to match with the 30 sentences they had arranged. The “tense cards” were discriminated like this: simple present- 7 cards; present progressive- 7 cards; present perfect – 8 cards and present perfect progressive 8 cards. The total number of “tense cards” to be matched per group was 30.



N° of cards per tense matched correctly				N° of cards per tense matched incorrectly		
simple pres.	G1-5	G2-7	G3-7	G1-2	G2-0	G3-0
pres. prog.	G1-6	G2-6	G3-7	G1-1	G2-1	G3-0
pres. perf.	G1-7	G2-6	G3-7	G1-1	G2-2	G3-1
pres. perf. prog	G1-7	G2-6	G3-6	G1-1	G2-2	G3-2

The previous results show that G1 (group 1) and G2 (group 2) matched 25 cards correctly ( 83.3% effectiveness on this activity) while G3 (group 3) matched 27 cards correctly (90% effectiveness.)

In the control group (15 individuals in all) students were given the same 30 sentences to arrange but they were not given any help with the tense explanation. This exercise was done individually.

No. of students	No. of wrong sentences	No. of right sentences.
2	8	22
4	12	18
3	15	15
4	18	12
2	22	8

This table indicates that 2 (out of 15) students of the control group arranged 22 sentences correctly but failed to arrange 8 sentences; 4 (out of 15) students arranged 18 sentences correctly but failed to organize 12 sentences, etc.

When the students were done with this activity they were given the “tense” cards to match with the sentences they had arranged. To do so they were split into groups of 5. The discrimination of the cards per tense was exactly the same as that observed for the experimental group.

N° of cards per tense matched correctly				N° of cards per tense matched incorrectly		
simple pres.	G1-4	G2-3	G3-3	G1-2	G2-3	G3-3
pres. prog.	G1-3	G2-4	G3-3	G1-3	G2-2	G3-3
pres. perf.	G1-4	G2-5	G3-4	G1-4	G2-3	G3-4
pres. perf. prog	G1-5	G2-3	G3-3	G1-3	G2-5	G3-5

These figures demonstrate that G1 (group 1) matched 16 cards correctly (53.3% effectiveness on this exercises) but failed to match 14 cards; G2 (group 2) matched 15 cards correctly (50% effectiveness) but failed to match 15 cards and G3 (group 3) matched 13 cards correctly (43.3% effectiveness) but failed to match 17 cards.

The results above show that the use of scrambled sentences along with the “tense cards” gave the students in the experimental group a better chance of organizing the sentences properly while assimilating the grammar tense involved in each case. In fact, through these contrivances students had first the opportunity to concentrate on the individual words while they were in the process of moving the cards back and forth to come up with the required pattern. Later with the “tense cards” they focused their attention on each sentence as a unit. This gave rise to a series of processes such as association, inferencing, deduction, generalization, among others, which constantly required them to go back to the words in isolation. In other words this exercise created an atmosphere in which field-independence and field dependence styles amalgamated smoothly but consistently.

On the other hand, we feel the lack of “tense cards” in the control group did not elicit the aforementioned processes and thus affected their performance on this activity. This consequence is shown in the corresponding results.

### **Left and right brain functioning**

These activities were mainly based on the use of video to help the development of right or left-brain functioning.

Students in the experimental group were shown a video on professions and then they were given a hand out similar to that



included in the “Activity Ideas B” to match with the noun that identified each profession with the activities it implied. To improve the use of the right brain functioning, students were exposed to pictures that represented professions as those included in the “Activity Ideas” mentioned above. To carry out this activity, the students were divided into 3 groups of 5 and were presented with 11 possible matches.

N° of right matches	N° of wrong matches
G1 – 11	0
G2 – 9	2
G3 – 10	1

The previous grid shows that G1 (group 1) did 11 matches correctly (100% effectiveness on this activity); G2 (group 2) did 9 right matches (82% effectiveness) and G3 (group 3) did 10 right matches (91% effectiveness).

In the control group, students were not given the possibility to count on the video practice nor on the picture – word matching. After listening to the explanation of the teacher and working with the activities mentioned in the methodology section they were given a series of 11 words to match with the activity each profession develops. This was done individually.

No of students.	No of right matches.	No. of wrong matches.
6	8	3
4	5	6
3	4	7
2	3	8

This table indicates that 6 (out of 15) students of the control group did 8 right matches (73% effectiveness); 4 (out of 15) students did 5 right matches (45% effectiveness), etc.

As it can be seen, students who had access to the use of activities that focused on the development of learning strategies such as

deduction, association and video watching were more successful than those students who had only the opportunity to count on their memory.

Finally, it is possible to argue that the techniques implemented in the experimental group generated a lot of group work and constant interaction as students asked each other for help concerning specific words and structures that they needed, to refer to a particular situation. This means that the teacher was no longer the main resource in the class. He devoted his time mainly to walking around the class to make sure that people were working on the exercises assigned. Another aspect that deserves consideration has to do with the psycholinguistic processes that emerged in this type of learning situation. In fact students were prompted to associate items, to make generalizations, etc. This is of real interest as through these mechanisms students start discovering their own learning strategies.

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