ARMY POLYTECHNIC SCHOOL

DEPARTMENT OF LANGUAGES

APPLIED LINGUISTICS IN ENGLISH CAREER

RESEARCH PROJECT

# "INCIDENCE OF THE USE OF A NEW ENGLISH PROCEDURE MANUAL BEFORE, DURING AND AFTER SHOOTING DUTIES WITH THE AMX-13 TANK OF 105mm, IN THE TEACHING AND LEARNING PROCESS FOR THE MILITARY PERSONNEL ATTENDING THE SPECIALIZATION TRAINING COURSE AT ARMORED CAVALRY SCHOOL RIOBAMBA DURING THE FIRST TERM 2012".

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**APPROVAL SHEET**

We, Dr. Oswaldo Villa and Msc. Rocío Ortega, Director and Co-director are pleased to certify the Research Project under the title ¨ **"INCIDENCE OF THE USE OF A NEW ENGLISH PROCEDURE MANUAL BEFORE, DURING AND AFTER SHOOTING DUTIES WITH THE AMX-13 TANK OF 105mm, IN THE TEACHING AND LEARNING PROCESS FOR THE MILITARY PERSONNEL ATTENDING THE SPECIALIZATION TRAINING COURSE AT ARMORED CAVALRY SCHOOL RIOBAMBA DURING THE FIRST TERM 2012**", developed by Mr. Angel Raul Sevilla Cruz , and has been reviewed and analyzed , and consequently its presentation is authorized as a legal document in order to get the Bachelor`s degree.

Quito,12 Septiembre 2012

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## DEDICATION

I mainly dedicate my thesis to my dear wife Magali who has been my support all the time, to my sons Xavier and Daniel who have been my inspiration to move forward, to my parents and brothers who gave me their comprehension , affection and faith to carry out this project.

Ángel Raúl Sevilla Cruz.

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## BRIEF SUMMARY OF THE WORK.

Nowadays the English language is important, due that it has been considered the official language of the world; this language can open opportunities for the professional development, for this reason this project presents the implementation of a manual in English inside the Armored Cavalry School, where elite soldiers are trained.

This project consists in the creation of a new English procedure manual before, during and after shooting with the AMX-13 Tank of 105mm, this manual will allow teaching English military personnel attending the especialization training course in the Armored Cavalry School, who have a basic knowledge of English language, so they will be able to understand the instruction in a new language.

With the creation of this new manual in English, the school will have an excellent instructional aid for teachers or instructors, because they will be able to educate themselves in another language and to teach to the students.

In addition, this manual will enable the foreign military personnel who come to take courses in our country; they can get a manual in their own language here in Ecuador and they will be able to understand the lessons taught in this school.

Finally, this manual will help military personnel practice the English language with native speakers which will contribute to get higher education that will go hand in hand with new technologies.

Ángel Raúl Sevilla Cruz.

# INTRODUCTION

The Armored Cavalry School conducts different courses; each course has several procedures, which must be followed as is written. The mission of military tanks in combat is the shooting, but for this procedure it is necessary to carry out some activities before, during and after.

The AMX-13 Tanks are made in some countries, it is for this reason that this project presents the implementation of a manual in English about of the procedures before, during and after of the shooting. This manual will be a useful tool for teaching instructors, students and foreign military who visit our school.

This research is composed of four parts:

Part one presents the research problem that is detailed as: identification, formulation, variables, objectives and justification.

Part two explains the theoretical framework, concepts, description AMX-13 Tank, manual of procedures for shooting and hypothesis formulation.

Part three is the methodology design of the research.

Finally, part four is the proposal with the new English procedure manual before, during and after shooting that contains introduction, definitions, characteristics and steps to use the manual.

# PART ONE

## RESEARCH PROBLEM

"Incidence of the use of a new English procedure manual before, during and after shooting duties with the AMX-13 Tank of 105mm, in the Teaching and Learning process for the military personnel attending the specialization training course at Armored Cavalry School Riobamba during the first term 2012".

### 1.1 Problem identification

The Armored Cavalry School conducts courses of specialization about battle tank, so it is necessary that all instructors are trained in the best way to teach classes to the students attending courses.

It is also necessary that the manuals, books, teaching materials, etc, are consistent with the teaching, if the tanks are made in United States and France, the manuals and materials should be written in English.

Ecuadorian Army has established agreement with different countries as the United States Army which sends its soldiers to our school to know the material we have, for this reason it is necessary that the school has a manual in English, so the foreign military can understand the instruction better.

This study will determine if the new manual in English has incidence in the teaching a learning process in the Armored Cavalry School.

### 1.2 Problem formulation

The question to be answered in this project is the following:

Does the use of a manual in English have an incidence in the teaching and learning process of instructors and students?

### 1.3. Variables working out

Independent Variable: Use of new English procedure manual.

Dependent variable: Teaching- Learning Process.

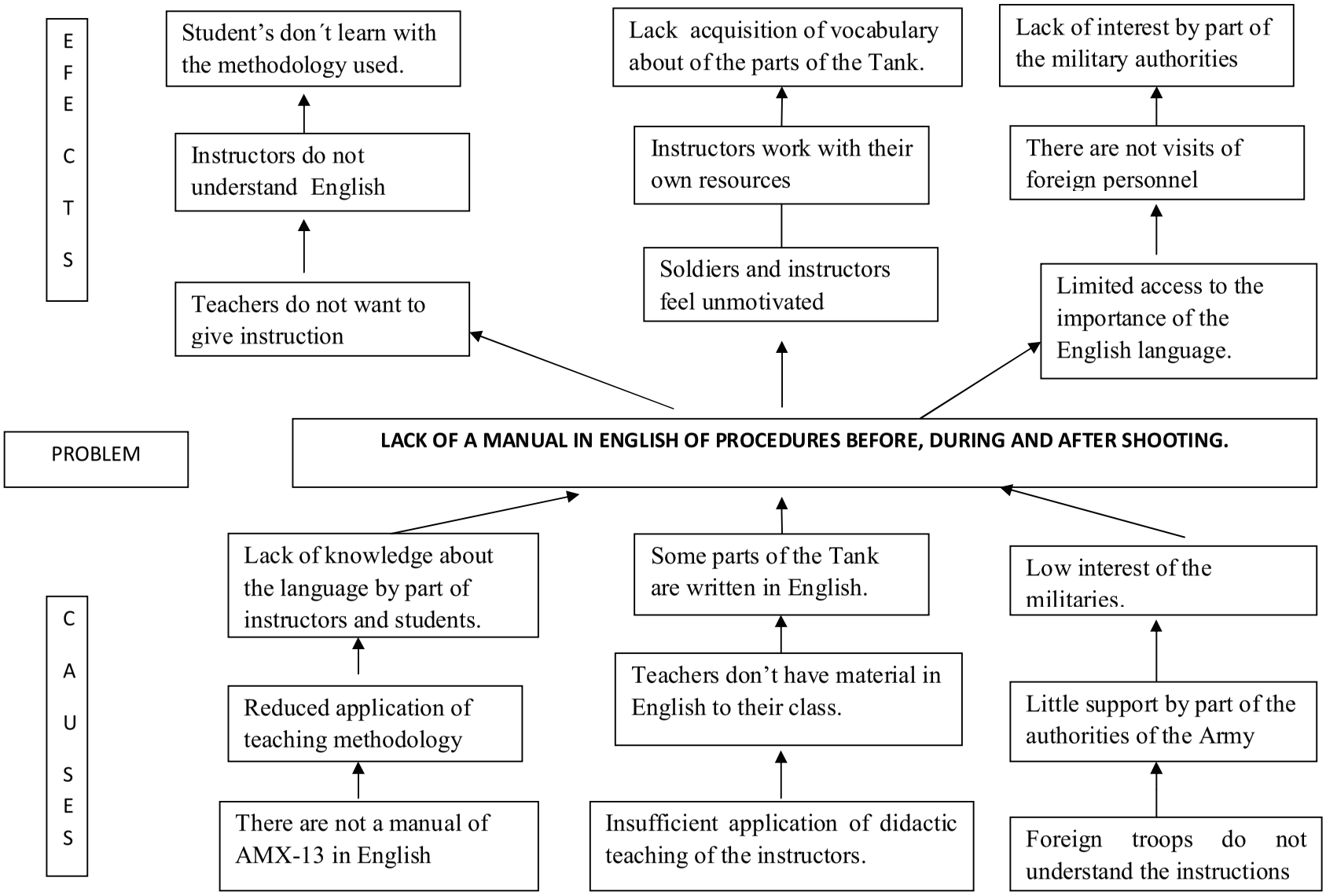
**Variable matrix.**

| VARIABLES | DEFINITION | DIMENSIONS | SUBDIMENSIONS |
|---|---|---|---|
| INDEPENDENT<br><br>Use of a new English procedure manual. | The use of a manual increases the efficiency of the employees; telling them what to do.<br><br>Assist the coordination of activities with quality; build a base for further analysis and improvement of work systems, procedures and methods.<br><br>The use of the manuals in the Armored Cavalry School is necessary for the development of a course. | -Use of manual shooting.<br><br>-General information of the AMX-13 Tank.<br><br>-Introduction to shooting with the AMX-13 tank. | -Steps for using the manual.<br><br>-Procedures.<br><br>-Definitions.<br><br>-Concepts.<br>-Characteristics of the tank.<br><br>-The crew.<br><br>-Procedures before, during and after shooting.<br><br>-Technical data of the tank. |

**Variable matrix.**

| VARIABLES | DEFINITION | DIMENSIONS | SUBDIMENSIONS |
|---|---|---|---|
| DEPENDENT<br><br>Teaching - learning process. | Teaching and learning are part of a single process that aims at training the student.<br>The essence of teaching is in the transmission of information through direct communication or supported in the use of aids, of greater or lesser degree of complexity. | Methodology | -Based on memorization.<br><br>-Based on visual images. |
| | | English skills | -Reading<br><br>-Writing<br><br>-Speaking<br><br>-Listening.<br><br>-Vocabulary. |
| | | Evaluation | -Diagnostic evaluation.<br><br>-Formative evaluation.<br><br>-Summative evaluation. |
| | | Resources | - Infocus.<br><br>- Video.<br><br>- Flash card.<br><br>- AMX-13 Tank. |

**PROBLEM TREE**



## 1.4 OBJECTIVES

### 1.4.1 General objectives

- To design a new English manual about the procedures before, during and after of the shooting with the AMX-13 Tank of 105mm for military personnel attending the specialization training course in the Armored Cavalry School located in Riobamba City.
- To improve the Teaching and Learning Process in the soldiers of the Armored Cavalry School by using a new English procedure manual in the courses of specialization.
- To encourage the soldiers of Armored Cavalry, to learn English language through the use of a manual in English.

### 1.4.2 Specific objectives

- To provide a tool to facilitate and encourage the training of new students in the Armored Cavalry School.
- To obtain a material with high academic standards for instruction about of the AMX-13 Tank.
- To have a manual for foreign military personnel, who come to know the material in the Armored Cavalry School.
- To expand the vocabulary of the English language in the military personnel of the Armored Cavalry School.
- To use the new English procedure manual about of the procedures before, during and after shooting with the AMX-13 Tank of 105mm.

## 1.5. JUSTIFICATION

In a globalized world in which everyday technology and telecommunications facilitate the relationships of all people, catching up and eliminating barriers, it is necessary to use English as a second language. It is for this reason it has been thought to strengthen the learning of that language in the Armored Cavalry School through the development of a new manual in English to improve the intellectual and academic level of military personnel.

As soldiers it is so necessary to develop our skills in all ambits, besides it is important to modernize the education just with new materials applying the technology in all aspects, in this case with the implementation of a manual in English we will make a didactic and funny classroom to encourage the students to learn and know the fascinating world of English through the acquisition of new vocabulary. The students could feel attracted by the innovation in the institution and when they finish their courses they could show their knowledge of the English language in the different units of the Army.

The implementation of a manual in English is necessary for military personnel coming from other countries to know our material, so they can understand in their own language, it would also be a good image for Armored Cavalry School for other foreign schools.

The principal idea is to give a simple and clear tool that teachers can use to motivate their students to increase English knowledge, this manual will be necessary for the instruction with the AMX-13 Tank.

## PART TWO

## THEORETICAL FRAMEWORK

Theoretical and conceptual focus

### 2. Use of the manual.

### 2.1 Manual of procedures

> According FRANKLIN Fincowsky Mexico, Fca - Unam (1997) "Administrative Manuals and Procedures: Guide to Development" Says:
>
> **“The manual of procedures is a compendium of documented actions that contain essentially the description of the activities carried out product of the functions of an administrative unit**; **these features translate into what we call processes and delivering results in a product or service specific. The manuals also include positions involving administrative units and systems also include objects and indicate their level of participation. They also often contain some examples of forms, authorizations or documents such as policies and regulations particular how they apply those limits or guidelines for action, machines or office equipment used and any other information that may assist the smooth running of activities within the institution**.” (Page 137).

According to this passage said by Franklin Fincowsk, we can say that a manual is useful within an Institution or company where they perform different activities so, it is necessary that the Armored Cavalry School has a procedures manual where there are all activities and actions to make the shooting with the AMX-13Tank. It is also important that the manual is written in English language because the material available to the Armored Cavalry School is manufactured in countries like France.

### 2.1.2 Characteristics of a procedure

> Fincowsky Franklin Unam (1997) "Administrative Manuals and Procedures: Guide to Development" Says:
>
> **“Those procedures are defined in sequential steps which are called task or activity. The sequence of tasks aligned to this policy and the structure of the organization. Its main feature is the level of detail that delivery of the actions carried out. "The transformation of inputs into outputs the call process and the manner in which its purpose can be explained by its actions**, **is** what **we call the procedure"** (page 142).

The procedure is the way to some relationships that are usually performed in the same way, with a common set of clearly defined steps, which allow an occupation, work, research, action or study can be applied to different areas.

I think that the manual should have clear characteristics as good redaction so the soldiers are in the capacity of to understand , besides with the implementation of this new manual in English about procedures before, during and after shooting, the staff of instructors and soldiers can identify any steps and procedures that will be written to make the shooting effectively.

### 2.1.3. Steps to use the procedures manual.

According ECABLIN instruction manual of the student year 2000 says that: Before using the manual it is recommended to follow these steps:

- To be accompanied by a teacher guide.

  It is important that the student is accompanied by an instructor guide, for any questions he has, the instructor can help and teach all the steps that are in the procedures manual and the different activities.

- To pay attention to the recommendations of the manual and suggestions.

  This point is important to avoid problems in handling the material.

- The operation of the manual should be following the written steps and the recommendations.

- The student should always consider and comply with all the activities that are written in the manual, to avoid problems in the practice. (Page 8).

### 2.1.4. General information - Description of the material AMX-13 Tank.

According the DOC-260.Manual / Description of the AMX-13 Tank of 105 mm. / Volume I-1981. Says:

**"The development of the AMX**-13 **light tank began after the Second World War. Production began in 1953 and ceased in 1987. Over 4000 were built AMX**-13 **light tanks of all variants for the French**

**Army and export customers. It was exported to 25 countries and a large number of them are still in operation today. The AMX-13 light tank had a number of unusual solutions for the tanks of the age. They were used to support the airborne troops.**

**The hull and turret of the AMX-13 light tank is armored steel plates welded 20 - 40 mm thick. A front mounted motor provides additional protection AMX-13 tank is an armored combat units is part of the Armored Cavalry with the mission to go into combat with the enemy to destroy armored units**, using **fire and maneuver in coordination with other weapons. It has two-part oscillating turret where the gun is fixed to the tower and the entire top of the turret elevation changes.**

**The tower is mounted on the rear of the vehicle and over the commander and gunner. The original 75 mm gun, supposedly inspired by the German KwK 42 L/70 (used among others by truck Panther), but shorter and firing different ammunition was fed with an automatic loading system. A disadvantage due to its small size it was, that once was spent rounds had to leave the vehicle and crew to reload from outside the vehicle."** (page.35).

The main distinction of its design is oscillating turret consists of two parts. The barrel is fixed to the upper half of the tower, which aims to change the angle of elevation, oscillates as a whole piece on the bottom half of the tower. The compact chassis has a shoot with five wheels, and two rollers, with torsion bar suspension. The motor is in the right front of the body, and the driver on your left. The tower is located at the rear of the body, and houses the commander and gunner. Before performing the various operations or activities the students must know the history of the material AMX-13, its strengths and weaknesses. This will allow the student can realize effectively shooting activities.

### 2.1.5 Main parts of the Tower FL-15:

According the DOC-261-260 Manual de Torre FL-15, tomo III. (1981).

**Tower FL-15. -** The FL-15 turret developed in 1983 was a further development of the FL-12. The turret of the AMX-13 has an unusual design oscillating. It consists of two parts. The lower part moves horizontally, while the top moves with the main cannon vertically, today the tower has a laser system used to make the shot". (Pag. 1-12).

The tower FL-15 is composed of three parts:

1.- Oscillating body.

2.- Rotating body.

3.- Basket Tower

**Definitions:**

1.-Oscillating body is formed by the 105mm cannon which moves up and down to find the objective or enemy.

2.-Rotating body is the middle of the tank and its function is to rotate 360 °, this allows a great vision of fire.

3.-Basket Tower is the final part of the tower and is on the inside of the tank, it serves as a main hub for the movement of the tower.

### 2.1.6. Introduction to shooting

Today there are modern high-tech weapons to fight like tanks, which have high-definition devices for observing the target more clearly. The tanks of war are designed to meet different missions and a function of these is to make the shot using different techniques and strategies to accomplish the mission effectively.

Training for the shot is done in different specialization courses in the Armored Cavalry School, the course duration is two months.

The AMX-13 tank is an armored vehicle that its objective is to shoot the principal cannon, but to perform this operation there are different procedures or activities that soldiers must know.

#### 2.1.6.1 Procedures Before the shooting

Before there are some that should not be routines to overlook, these Procedures are necessary to meet all current standards and make a shot effectively.

Steps for the preparation of the shooting :

1) To determine the location of the Objectives.
2) To determine the distance of the Objective.
3) To make a sketch of the area with Different points marked.
4) To build to that betray the Presence of the Enemy.
5) If the situation warrants make shots with the laser to accurately determine the distances of others target.

The steps to operate are:

a. To remove the covers mouth.
b. To remove the seat map.
c. To remove the lock.
d. To put general contact

First shot.

a. Switch off the lock release lever.
b. Lever is push back and the top.
c. Once the lock is open STI lever returns to initial position.
d. Placed Insurance shot in vertical position.

### 2.1.6.2. Procedures during the shooting

Procedures during the shooting are important to observe and verify different steps, allowing us to know that shooting is taking place without any novelty, when there are problems the guides or instructor stop the shooting.

Monitor and observe 7 important factors:
a. To observe the reverse battery and entry into the canyon.
b. To observe the brake and recovery (levels)
c. To control the overheating caused by the shot.
d. That the window to control of the expulsion of grenades is funcionating.
e. To observe the movement of the tank by the force of the shot.
f. Note that not obstructs the telescopes objects.
g. To be attentive to the supply of grenades.

### 2.1.6.3. Procedures After the shooting

This procedure is important as others because there are several operations that should be corrected after of the shooting, the material has that to be in perfect condition for future missions.

a. To put sure shooting.
b. To close the lever of the lock.
c. To disarm the hammer.
d. To do the maintenance of the canyon.
e. To put the seat map.
f. To put the Cover mouth.

### 2.1.6.4. Characteristics of the AMX-13 Tank.

According DOC – 234 Descripción y Partes principales del Tanque AMX-13 Tomo I/ 1976.

AMX-13 tank consists of two main parts: The tower and chassis. The chassis is the part where the tank gives mobility to move from one place to another, here is all the conduction system, and the tower is where is the cannon of 105mm.

### 2.1.6.5. Organization of the crew.

ECABLIN, manual de Conocimiento de Torre FL-15. Organization de la tripulación.

The crew of a tank has three servants in their majority are volunteers.

-Tank commander.

-Gunner

-Driver

> **The AMX-13 has the usual three compartments, but in different settings, the driver sits in the front left of the helmet and the helmet left his side and his side is the motor. The transmission also located in the front compartment, the other part constitutes the fighting compartment which is located on the tower, unusual concept.**

**This is a tilting unit FL-10 consists of two parts, the firm developed by Fives-Cial-Badcock, the upper section can oscillate back and forth on the bottom. Because the moving part carries the canyon, the elevation is obtained by moving both the tower and the gun. The reason this system is the automatic loading mechanism mounted behind the barrel and must be aligned on a continuous and accurate with the stock block to operate properly. The gun is powered by two revolver-type magazines, each of which houses six rounds of ammunition, giving a total of 12 shots for immediate use of a reserve of 37 rounds. Empty pods are automatically ejected through a hole in the top. As a secondary weapon, a 7.62 mm machine gun mounted coaxially with the main gun with 3,600 rounds.**
**In the tower, the chief sits on the left and right handle; the automatic loading system eliminates the need for a fourth man in the crew.**(page 122).

### 2.1.6.6. Roles and responsibilities of crew

**1) Tank Commander**

a) Observe the enemy.

b) To direct the shot.

c) Use the radio station to give orders to his crew and take part to the top step.

d) Select the ammunition according to the objective and feed the 105 mm cannon.

e) Shoot pots fumigants.

f) Shoot the gun C.D.R.

g) Direct the maintenance of the tank.

**2) Gunner**

a) Observe the enemy.

b) Aim and fire the cannon.

c) Food and coaxial machine gun fire.

d) Use the radio to receive orders and debriefing.

e) Maintain the tower.

**3) Driver**

a) Driving the tank.

b) Use the intercom to receive orders and debriefing.

c) Maintain the chassis.

### 2.1.6.7. Technical data of the AMX-13 Tank.

Width: 3.30 meters.

Height: 2.25 meters,

Canon: 105mm.

Weight: 13 tons.

Manufacture: France.

Machine guns: 2 MAG.

Shield: 45mm

### 2.1.7 Methodology.

### 2.1.7.1. Methods and techniques

In the instruction about AMX-13 material we will use different techniques and methodologies to teach classes with clarity and understanding. Today there are many methodologies used in schools and universities in the country, we will use the most up to date.

### 2.1.7.2.Didactic Method

> **"Didactic method is the logical and unit training procedures that tend to direct learning, including in it since the submission and processing of matter to the competent verification and correction of learning. But there, as every teacher knows two general teaching strategies. The teaching method is associated with the transfer of information from teacher to student, with the role of educator to teach facts and concepts in a structured and relatively fixed. The constructivist approach, however, shifts the emphasis from teaching to learning, ensuring that the student build concepts discover the facts and data to appropriate for himself."** (http.www.didacticmeth).

Methods of teaching in Armored Cavalry School should be didactic, because the materials studied are the tanks and we need to capture the attention of all students to practice when we are with the material AMX-13 doing shooting. To give classes the instructors will can use some resources or materials as: brochures, pictures, infocus, instruction aid, etc.

• It's easier and accessible to the more difficult.

• From the simplest to the most complicated.

• From the concrete to the abstract.

• In the near and immediate access to the most remote.

• From less knowledge to the more knowledge.

### 2.1.7.3. Methods based on memorization

> **"In light of the foregoing, it is necessary to reconsider the role that is usually attributed to the memory in learning. It has to distinguish rote memorization and repetitive, which has little or no interest for meaningful learning, comprehensive memorization, which is, conversely, a key ingredient in it. Memory is not only the memory of what has been learned, but the basis from which to start new learning. The richer the student's cognitive structure, the greater the chance that you can build new meanings, that is, the greater the capacity of meaningful learning. Do not forget, and it is very important that in certain circumstances, certain features or data store is essential. So it's not underestimating the role of memory, but in any case, the teaching strategy of indiscriminate memory as methodological approach".** (http/www.es.tecnicasdeestudio.com)

It is important that soldiers learn to memorize the activities that are written in the manual of procedures, so that at the time of any activities they have not problem. Memorization in instruction is necessary because students must learn to perform the activities and steps to make the shot effectively.

### 2.1.7.4. Methods based on visual images

> **"If we value the role of visual messages, we find that the image is universal and timeless qualities that foster instant communication. The same image can have different meanings if it is located in an album, a gallery, a poster for a demonstration, a textbook or the wall of our house, thus obtaining the status of a social document, establishing at the same time, as visual memory and the historical means of representation and communication.**
>
> **The images have an impact unconscious and conscious, so we must be certain that when designing, have implied an intention. Those who create them determine who their receivers and their reactions to their encouragement, so they have a purpose, most often we fail to recognize, so it is important to understand that its purpose may be to**

**inform, communicate, express or simple aesthetics, hence the importance of being able to determine their purpose."** (http://www.ehow.com/facts_types-audiovisual-material-used-g.htm).

For the instruction with the AMX-13 Tank, it is necessary to use images or photos to identify the different parts or structure of the armored vehicles. The procedures manual will also have different photos and images so that students can identify the different structures and parts of the AMX-13 Tank.

### 2.1.8 English Skills.

#### 2.1.8.1. Listening.

Lisa J.Downs, Listening Skills Training. in 1998. Says

**"That Listening skills are vital for you learners. Of the four skills, listening is by far the most frequently used. Listening and speaking are often taught together, but beginners, especially non-literate one, should be given more listening than speaking practice. it`s important to speak as close to natural speed as possible, although with beginners some slowing is usually necessary. Listening skills are essential for learning since they enable students to acquire insights and information, and to achieve success in communicating with others. Life within and outside school affords many listening opportunities, but some students fail to seize them because they let their minds wander or they may concentrate on what they want to say themselves rather than on what a speaker is saying."** (Page. 1-2).

This ability applies to my proposal, because students have to listen and identify the different voices of command by the instructor, so they can understand to instructors and they will can carry out the shooting without problem. It is also necessary for foreign military who visit our unity because the most do not speak Spanish.

#### 2.1.8.2. Speaking

According, JOANA Baker, Essential Speaking Skill, Continuum 2003, Says:

**"Students can practice presenting information, answering questions and holding group discussions. Frequent classroom presentations and discussions enable teachers to diagnose and remedy problems.**

> **Students can benefit from learning by setting themselves presentation goals and assessing their own progress. Observing proficient speakers can help students to set such goals. Practicing oral presentation in these ways can lessen students' anxieties while, at the same time, helping them to learn the subject matter of the lesson.**
>
> **It is useful for students to know that speech should differ informality, such as when speaking to a judge, a teacher, a parent or a playmate. They may also benefit from learning about the differences among various dialects."** (Page 5-18).

Instructors of the Armored Cavalry School need to learn to pronounce well the English manual to communicate with foreign students who come to the different courses.

### 2.1.8.3. Writing

> Elbow, P.1973.Writing without teachers. Oxford: Oxford University Press.
>
> **"The writing activities can facilitate speaking indirectly and can be used as warm-up activities or as individual study. If the aim is to improve oral expression, written as such activity should not be complex. If students already know the basics of writing such as grammar**, **vocabulary** and **punctuation**, **the activity becomes easier. The writing is closely linked to other skills. When reading a text, then answer questions about what was read is summarized**. **Writing is especially difficult for non-native speakers because those speakers are expected to create written products that demonstrate mastery of the above elements into a new language. Furthermore**, writing **has been taught for years as a product and not a process. therefore**, teachers **emphasize grammar and punctuation rather than decisions about the content and organization of ideas."(**Pag.35-37).

Instructors and students should learn to write with accuracy all the words written in the manual of procedures, so they can perform all activities and actions to make the shot without incident, besides they will be evaluated in the classroom.

### 2.1.8.4. Reading

> According CARVER, Ronald P. (1990). Reading rate: a review of research and theory. Boston: Academic Press.
>
> **"Reading is a complex cognitive process of decoding symbols in order to construct or derive meaning (reading comprehension). It is a means of language acquisition, of communication, and of sharing information and ideas. Like all language, it is a complex interaction between the text and the reader which is shaped by the reader's prior knowledge, experiences, attitude, and language community which is culturally and socially situated. The reading process requires continuous practice, development, and refinement.**
>
> **Readers use a variety of reading strategies to assist with decoding (to translate symbols into sounds or visual representations of speech) and comprehension. Readers may use morpheme, semantics, syntax and context clues to identify the meaning of unknown words. Readers integrate the words they have read into their existing framework of knowledge or schema (schemata theory)."**(Page 36).

The development of reading is necessary for the soldiers because some parts of the AMX-13 tank are written in English, as well they should study the manual because they will be evaluated orally and writing.

### 2.1.8.5. Vocabulary Acquisition

> Elfreida H. Hierbert and Michael L. Kamil., Teaching and Learning Vocabulary, Lawrence Erlbaum Associated 2005.say that:
>
> **"Vocabulary acquisition is part of developing reading skills and those of daily communication. Teachers can help their students increase vocabulary by identifying essential vocabulary that will be found in a reading passage, used in a presentation or lecture or encountered in an exam. Students should then use this vocabulary in conversation with each other, write constructed responses using the vocabulary and be alerted to its usage when it appears in speech. When students feel comfortable with a word or a set of common words, they will then begin to use them, and the words will become part of their vocabulary."** (Pages. 137-150).

With the implementation of the manual in English, instructors and soldiers can acquire a vocabulary that allows them to expand their knowledge; also will be necessary because some parts of the AMX-13 Tank are written in English language.

### 2.1.9. The evaluation

> HUERTA, Fernando, Enfoques y Principios Metodológicos de la Evaluación, Editorial Trilla, México, 1994.says that:
>
> **"Evaluation is a continuous process of gathering and interpreting information to assess the decisions made in designing a learning system.**
>
> **This definition has three important implications: first, the assessment is an ongoing process, not something done at the end of a course only. It is a process that begins before instruction begins and continues until the end of it. Second, the evaluation process is not subject to random but is directed towards a specific goal and aims to find answers on how to improve instruction.**
>
> **Third, the evaluation requires the use of measuring instruments to gather accurate and appropriate information that will enable you to know how the investigation progresses, how it will end and how to improve for next time."**(Page112.)

The evaluation is necessary in my proposal; this will serve to verify the knowledge of the students and to see if the instruction manual of procedures before, during and after of shooting with the AMX 13 Tank is effective.

#### 2.1.9.1 Classification of the evaluation.

Huerta and Fernando Carreño authors. talk about the types of evaluation, they say that cconsidering the typical model of modern classification, assessment of functional features and adopts formal, is divided into diagnostic, formative and summative.

#### 2.1.9.2. Diagnostic evaluation.

The diagnostic evaluation illustrates about initial conditions and possibilities for learning or performance of one or more tasks.

**Function:** To identify the reality of the students who participate in the educational, comparing it with reality sought in the objectives and requirements or conditions demand that their achievement.

### 2.1.9.3. Formative evaluation.

We talk about formative assessment, when you want to find out if the objectives of education are being achieved or not and what needs to be done to improve the performance of learners.

**Function:**

1. To dose and properly regulate the pace of learning.
2. To learn with information feedback detached from the tests.
3. To empathize the importance of content more valuable.
4. To conduct learning of the ways that demonstrates procedures more effectively.
5. To inform each student about their particular level of achievement.
6. To determine the nature and details of subsequent steps.

### 2.1.9.4. Summative evaluation

Summative evaluation is to designate the means by which we measure and judge learning in order to certify it, assigning grades, determine promotions, etc.

**Function:** To take appropriate decisions to assign a rating to each student totalizing reflect the proportion of goals achieved in the course, semester or teaching unit.

### 2.1.10. Resources for teaching the English language

> **"To teach English need different teaching materials and resources, so the student can understand with clarity and without problem.Within recent years, the importance of audio-visual devices in teaching the language has come to the fore. In fact, the very latest materials are primarily concerned with speech. This development is a direct outgrowth of the urgency of a thorough knowledge of foreign languages on the part of our technicians and representatives abroad due to the assumption of cultural.**
>
> **Another striking fact is the recent rapid development of mechanical devices, both visual and audio, for the learning of languages. The market is full of a vast array of phonograph records, playback machines, projectors, filmstrips, tape recorders, micro-phones, repeating machines, motion pictures, and laboratory equipment."** (www.ehow.resourcesteach).

According to this source it is important to use materials in class, because this will help in teaching and learning of instructors and students. For the instruction of the various procedures to make the shot, the instructor can use the following materials: Videos, audio, Infocus, Internet, Flash cards and Photos.

## 2.2. STRUCTURE

### 2.2.1 Armored Cavalry School. (ECABLIN).

> According the Comando Conjunto de las Fuerzas Armadas. Reglamento y Manual de Unidades de Caballería.1998.
>
> **"The Armored Cavalry School is an Institute where soldiers are trained, and prepared to operate efficiently material available to our shielded Army. In the Armored Cavalry School there are different specialized courses for drivers, gunners, tank commanders, mechanics, etc and The School has been characterized by graduating the soldiers with high academic qualifications"** (page 3).

Armored Cavalry School has AMX-13 material and the main Objective of the AMX-13 tank of 105mm, is the shot, which will terminate or destroy enemy objectives, for this reason it has been thought in the preparation of this manual on the procedures before, during and after shooting.

**2.2.2. Mission.** - To specialize military personnel in technical and tactical aspects of armored weapons to achieve efficiency and combat effectiveness by helping to fulfill the mission of the Army Institutional.

**2.2.3 Vision.** – To be the best school in the Army, cultivating unity and the integral development of our education in the community.

**2.2.4 Values. -** The school promotes the following values:

- Loyalty.
- Discipline.
- Honor.
- Courage.
- True.

### 2.2.5 Installations.

The school has an administrative office building, where are the Direction, planning, Academic departments, evaluation and personnel department.

The school has ten classrooms for instruction, an auditorium for conferences, a shooting simulator and different places to carry out the instruction about of the AMX-13 Tank with the military personnel.

### 2.2.6 Manual procedures for the shooting with the AMX-13 Tank.

> According the General Order 1980, Of the Education and Doctrine Command of the Army. Order that **"any course that takes place in the Army units**, **have a manual or instruction regulations according to their specialty or course".**

For this disposition all courses taking place in the Armored Cavalry School, should have its own manual. It is very important that the manuals or instructional aids are updated, and approved by the Academic Department.

To implement a manual of English about procedures before, during and after shooting with AMX-13 Tank, the academic department will have an excellent material for different courses to come to school.

### 2.2.6.1. Steps for using the procedures manual.

> According the ECABLIN Manual, normas y reglamento de disposiciones del estudiante.2002. Says: Before using the manual it is recommended to follow these steps:

- To be accompanied by a teacher guide.
- To pay attention to the recommendations of the manual.
- The operation of the manual should be follow the written steps and the recommendations.

### 2.2.6.2 How to apply security techniques according to the manual

Before operating any activity with the AMX-13 material is very important that we follow all the safety techniques that are written in the manual of procedures.

It is important that each student read all the safety techniques that are written in the manual of procedures before performing the operations. In this way the soldiers will not have problem with the material.

### 2.2.6.3 Description of the AMX-13 Tank.

> DOC – 234 Descripción y Partes principales del Tanque AMX-13 Tomo I/ 1976.
>
> **"The AMX-13 Tank is a vehicle armored of 105mm caliber; French manufacturing model is 58 and currently in staffing in the Ecuadorian Army. The School has AMX-13 tanks, is a French light tank produced from 1953 to 1985. Was used by French Army and was exported to over twenty-five other nations. Named after its initial weight of 13 tonnes, and featuring a tough and reliable chassis, it was fitted with an oscillating turret built by GIAT Industries (now Nexter).Was also used on the Austrian SK-105 Kürassier ,Including prototypes and export versions there are over a hundred variants including self-propelled gun, anti-aircraft systems, APCs, and ATGM versions. Total production of the AMX-13 family is approximately 7,700 units, around 3,400 of which were exported.".**(Page 15).

The tank was designed at the Atelier de Construction d'Issy-les-Moulineaux in 1946 to meet a requirement for an air-portable vehicle to support paratroopers, the first prototype ran from 1948. The compact chassis had torsion bar suspension with five road-wheels and two return rollers; the engine runs the length of the tank on the right side with the driver on the left. It features an uncommon two-part oscillating turret where the gun is fixed to the turret and the entire upper turret changes elevation. The turret is set to the rear of the vehicle and holds the commander and gunner.

The original 75 mm gun, allegedly modelled on the German 7.5 cm KwK 42 L/70 gun (used, among others, in the Panther tank) but firing very different ammunition from a shorter barrel, was fed with an automatic loading system located in the turret's bustle. The twelve rounds available in the loaders meant that the crew could engage

targets quickly, however once those rounds were expended the vehicle had to retreat to cover and the crew reload them from outside the vehicle.

#### 2.2.6.4. Crew

The AMX-13 tank carries 3 crew members:

-The Tank Commander.

-The gunner.

-The driver.

### 2.2.7. Teaching - learning process

The teaching and learning within the Armored Cavalry School is based on the statutes and regulations issued by the Education and Doctrine Command of the Army. It is therefore necessary that the entire teaching staff and students before starting the course. The process of teaching and learning in the Armored Cavalry School agrees to new methodologies, techniques and processes, which today use different educational institutions of the country.

> According Teaching and Learning in the Language Classroom, Tricia Hedge (2000)Oxford and books for Language Teachers December 2001 — Volume 5.says.
>
> **"Teaching and learning in the language classroom is aimed primarily at language teachers with some experience, and though it could be very useful for teachers to explore on their own, its main use is likely to be as a core textbook on in-service training courses. Throughout, it encourages teachers to reflect on issues in language teaching and learning on the basis of their own experience. Each chapter begins with an "introductory task" which focuses thought on the area to be considered and which in most cases invites teachers to identify aspects of their current ideas and practice on the issue. Similarly, the penultimate section of each chapter is a considerable list of "discussion topics and projects", many of which are based on examples of teaching materials. These activities are likely to be most profitable when carried out in groups, and the most obvious way in which to exploit them is on a formal training course."** (Page. 126).

Teaching.– is an active process in which one person shares information with others to provide them with the information to make behavioral changes.

Learning.- is the process of assimilating information with a resultant change in behavior.

Teaching-learning process.- is a planned interaction that promotes behavioral change that is not a result of maturation or coincidence.

Armored Cavalry School the instruction about procedures before, during and after shooting with the AMX-13 tank, the teaching and learning will be interactive; this meaning that there will be the participation of the teacher and student, besides there will use educational material so that students can understand with clearly the instruction.

#### 2.2.7.1 Principles of Adult Learning

The soldiers who come to the courses are adults between 19 to 45 years, so it is a little harder teaching especially with people who are older, so look for different strategies to make the classes more understandable for all.

Colin Steed,Web-based Training.Grower Publish Limited 2000,. Refers to various key points about adult learning:

1. As people mature, they tend to become more self-directed and independent in their learning.

2. An adult's previous experiences may serve as an excellent resource for learning.

3. Adults are more oriented to learning when specific learning needs are created from real life situations and the material learned is immediately useful.

4. Resistance to learning may occur if the adult does not see the relevance in the material.

5. Intrinsic motivation produces more permanent learning.

6. Adults prefer learning activities to be problem centered and relevant to life.

7. Adults learn throughout their lifetime.

8. Positive reinforcement is effective.

9. Material to be learned should be presented in an organized manner.

10. Active participation by the learner improves retention of knowledge.

11. Learning is enhanced by repetition of material.

12. Adults learn at different rates because of individual differences.

13. Trust, support, and a climate of mutual respect are important to the adult learner. (Page. 42).

### 2.2.8. Use of new techniques of shooting with AMX-13 Tank.

ECABLIN. Manual de instrucción de Técnica y teoría de tiro.

> **"The combat shooting techniques include in its structure the whole shooting techniques used in both the military and police as well as alone. This set of techniques are the body of instruction of the army in the world, usually the most popular in terms of prestige and effectiveness of the units, which include in their manuals and regulations, these techniques have shown their effectiveness in the operating field the various units of Combat and Special Operations. Combat firing is similar, in their exercise, to practice shooting and tactical shooting. This similarity is found in most of the shooting exercise simulation is performed in a combat situation, but the differences are in the objective of the techniques used and the fundamental fact that working with the weapons in the condition original that is shipped, no modifications allowed any performance increase, nor additional sighting devices, working with the weapons conceived as a service weapon in the military."** (Pag. 1-10).

The techniques used are not related to the shooting only, but under an operating tactical assault unit, and this is the biggest difference that exists with respect to other majors , the fact that all instruction is based solely shooting in the combat simulation condition. In the Armored Cavalry School the techniques will be used according the manual shooting technique and theory.

#### 2.2.8.1. Shooting technique and theory

This is the knowledge of shooting and expertise using the AMX-13 tank with the tank commander in coordination with the gunner with aggressiveness and initiative that are essential factors in armored combat.

#### 2.2.8.2. Trajectory

It is the line followed by the projectile center of gravity, the origin of the trajectory is the muzzle.

#### 2.2.8.3. Arrow

It is the highest point of the trajectory taken from the horizontal plane.

#### 2.2.8.4. Level angle

It is the angle between the axis of the bore of the cannon and the horizontal plane.

#### 2.2.8.5. Combat rising

It is when the trajectory will have an arrow that not exceeds the height of objectives that have to fight with the tank. In the case of fire against armored vehicles, the value of the arrow is 2 meters.

#### 2.2.8.6. Distance shooting practice.

It is the distance at which there is a chance to beat an objective of 2 meters of wide by 2 meters long.

### 2.2.9. How identify procedures of shooting?

> According the ECABLIN. Manual de Instrucción de Artilleros de combate. Designación de objetivos.
>
> **"When we are in combat, the first thing to do is establish or designate possible enemy objectives**; **this will help us be prepared at any time when we come into contact. Here are the steps to designate objectives:"** (Pag. 18-32).

**a. - Search and Identification of objectives.**

It is the activity that determines the kind of objectives that will be destroyed; the crew will do the following.

1) To assess the specific situation regarding the enemy and their weapons.
2) To choose the ammunition and firing procedure.
3) To decide whether to open fire depending on the vulnerability of the objective to beat.

**b.-Appreciation of distances.**

To calculate the distance between the vehicle and the objective to beat, we use laser-system of the telescope to obtain the distance with precision.

**c.- Objectives designation.**

It is to indicate the direction and location in which the objective is, to designate the objective, there are 3 methods:

1) To put the tower in the direction.- It is the action that the tank commander or gunner put the tower toward the objective or pointing to the objective.

2) Angular separation.- It is performed using a reference point, indicating the distance in meters which is the objective using angles.

3) Procedure of the clock.- It is when it is imagined that one quadrant is done in the sense of the clock, which indicates the direction of front 12 hours.

### 2.2.9.1 Search and occupation of a firing position

The tank firing position is one that takes to open fire to stop, take note that the open tank is tank stopped beating and you can take the following positions:

Positions for combat:

**a) Observation position.**

It is also known as defilade tower, it is one in which the tank is completely covered by the observation of the enemy; this position is only for observation.

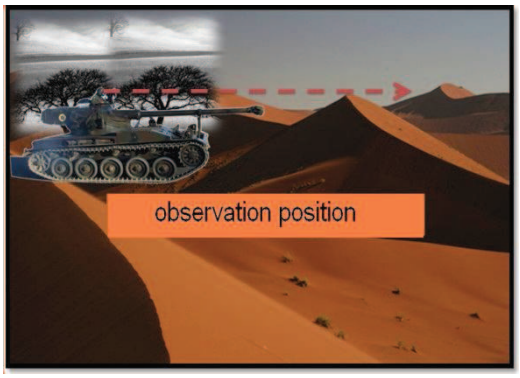



Figure 1.Observation position

**b) Shooting position**

It is also known as hull defilade, is one in which the helmet of the tank is protected allowing to make the shot against enemy objective.

Figure 2.shooting position

**c) Change position.**

It is an alternate position, which should be at a distance sufficient to continue making the shooting when the initial shooting position is hampered by enemy fire.

Figure 3. Change Position.

### 2.2.10. Procedures for shooting

According the ECABLIN, Manual de técnica y teoría de tiro.

**"This manual has the different main parts to make the shooting with AMX-13Tank, you must meet all the steps in the manual, before the shooting there are several things that the soldiers or students should know".** (Pag. 35).

#### 2.2.10.1. Optical elements.

The observation of the ground from inside the tower is done through periscopes which are:

a. Periscope **L-794B**

This type of periscopes the Tank Head has a number of seven, are mounted in the alveoli and attached by a bracket.

b.- Periscope **L-794D**

They are in the front compartment of gunner and are two, as the others periscopes have the same mounting system.

#### 2.2.10.2. Elements for the conduct of shooting.

They are:

a. periscope telescope M-212.

This telescope is located at the post of Head Tank and can see the field with two increases. It also has a grid to make the shot and appreciate the deviations.

b.- Periscope telescope M-213

It is the main telescope and serves shot the gunner, is mounted on the tower by means of a special holder which has a dovetail on the tower. Allows an increase of 8 times and has a field of view of 180 degrees.

### 2.2.10.3. Night shooting team

> According the Manual de técnica y teoría de tiro con el Tanque AMX-13 Edición 1991.
>
> **"Night shooting team for the tank AMX-13-105mm: Allows Unobtrusive observation of people and objects in the dark, through infrared rays emitted by a projector. These rays can be observed through the telescope of night shooting."** (Pag. 57-60).

Night shooting equipment is used to make the shot at night; this lens allows us to observe at a distance of 300 meters and is very effective to observe enemy objectives.

Constituent parts:

1) Telescope OB-21-A

2) Projector PH-2-A

Telescope OB-21-A .- This telescope is used only with the infrared projector in the dark and has a range of 800 to 1000 meters.

Night shooting projector PH-2A. - The projector is mounted on the roof of the tower and placed by a dovetail tower has also secured with screws to the sides.

Technical characteristics of the PH 2A.

| | |
|---|---|
| Intensity led | 20 to 30 volts |
| Aluminum mirror | 99.99% aluminum |

| | |
|---|---|
| Operation of the lamp | 24 volts |
| Lamp life | 8 to 10 hours |
| Scope of the infrared light | 800 to 1000 meters. |

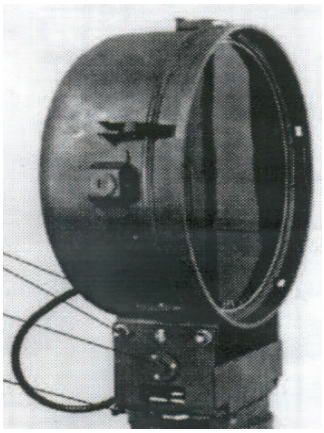


Figure 4. Projector PH-2A

### 2.2.11. Procedures before shooting.

ECABLIN, Manual de técnica y teoría de tiro. 2002.

Before the shooting there are some procedures that should not be to overlook, these procedures are necessary to meet all current standards and make a shot effectively. (Pag. 57-80).

Steps for the preparation of the shooting.

1) To determine the location of the objectives.
2) To determine the distance of the objective.
3) To make a sketch of the sector with different points marked.
4) To build to that betray the presence of the enemy.
5) If the situation warrants make shots with the laser to accurately determine the distances to each preset points.

These operations are performed the following steps:

a. To remove the covers mouth.
b. To remove the seat map.

c. To remove the lock.

d. To put Contact general.

#### 2.2.11.1. First shot.

a. Switch off the lock release lever.

b. Lever is pushed back and the top.

c. Once the lock is open lever returns to its initial position.

d. Insurance placed shot in vertical position.

### 2.2.12. Procedures during shooting.

During the shooting is very important to observe and verify different steps, allowing us to know that shooting is taking place without any novelty, when there is a problem the shooting is canceled in order to control the problem.

During shooting is monitored and observed 7 important factors:

a. To observe the reverse battery and entry into the canyon.

b. To observe the brake and recovery (levels).

c. To control the overheating caused by the shot.

d. To control that the window of expulsion of the grenades.

e. To observe the movement of the tank by the force of the shot.

f. Note that objects no obstruct the telescopes.

g. To be attentive to the supply of grenades.

### 2.2.13. Procedures after shooting.

This procedure as well as others is very important because after the shooting there are several developments that should be corrected, also the material used must be in perfect condition for future missions.

a.- To put sure shooting.

b. To close the lever of the lock.

c. To disarm the hammer.

d. To do the maintenance of the canyon.

e. To put the seat map.

f. To put the covered mouth.

## 2.3 HYPOTHESIS SYSTEM

### 2.3.1 Working hypothesis

The use of the new English procedures manual, before, during and after shooting with the AMX13 Tank, will influence in the teaching /learning process for the military personnel attending the specialization training course at Armored Cavalry School Riobamba during the first term 2012".

### 2.3.2 Null hypothesis

The use of the new English procedures manual, before, during and after shooting with the AMX13 Tank, will not influence in the teaching /learning process for the military personnel attending the specialization training course at Armored Cavalry School Riobamba during the first term 2012".

## PART THREE

# 3. METHODOLOGICAL DESIGN

### 3.1. Research type and design

This research is applied, descriptive and of field. The technique for collecting data will be the survey. The study is qualitative and transversal, because the aim has to do with knowledge and results will be analyzed by using descriptive statistic.

### 3.2. Population and sample.

Population.- The study is designed to all the instructors and students attending at Armored Cavalry School in the different courses of specialization.

Sample.- Due to the fact that the population is small, the research will be with all the teachers, in total 40 instructors.

### 3.3. Fielding

The research will be applied with 40 instructors of the Armored Cavalry School that is located in Riobamba city, Chimborazo Province, during the first term 2012. This study is to the instructors because they are the teachers of the AMX-13 Tank.

### 3.4. Instruments for data collection

The instruments that will be used in this research are survey and interview, especially questionnaires which will be applied to the instructors.

### 3.5. Processing and analysis.

I will use descriptive statistics with statistics graphics that will show the information and percentages in an easily and clearly way.

### 3.6. Testing the Hypothesis

### 3.7. Analysis of results

I applied my survey to forty instructors of the "Armored Cavalry School" during the First Term 2012 School Year.

Below there are some questions that were carried out.

1. - Have you ever used any manual in English in the Armored Cavalry School?

2. - How often do you think the school needs a manual in English to carry out the courses of specialization or shooting the AMX-13 Tank?

3. - Do you consider the relationship of English with the weapons in the Army, expand their professional knowledge?

4. - In your opinion, the resources that you use to follow the learning process about the material AMX-13 are good?

5. - Have you used a manual in English about of procedures before, during and after shooting with the AMX-13 tank, in the courses of specialization of the Cavalry Armored School?

6. - Do you think that a manual in English will influence in the teaching / learning process?

7. - Do you believe that teaching/learning process that you follow in class about the procedures of shooting with the amx-13tank is good?

8.-Do you think that the implementation of a manual in English language will help in the teaching - learning process?

9.-Do you think that the use of a new English procedure manual could be a very good motivation to learn another language?

10.-Do you consider that an English manual about of the material AMX-13 could be an excellent tool to help in the learning of the soldiers?

### 3.7.1 Graphical exposition of result:

1. - Have you ever used any manual in English in the Armored Cavalry School?

| INDICATORS | INSTRUCTORS | PERCENTAGE |
|---|---|---|
| ALWAYS | 0 | 0% |
| SOMETIMES | 0 | 0% |
| NEVER | 40 | 100% |
| TOTAL | 40 | 100% |

**Analysis and interpretation. -** According to the results the 100% say that they never have used a manual in the Armored Cavalry School about the AMX-13Tank, it means that is urgent to design a manual in English to strengthen the learning process at the Armored Cavalry School.

2. - How often do you think the school needs a manual in English to carry out the courses of specialization or shooting the AMX-13 Tank?

| INDICATORS | INSTRUCTORS | PERCENTAGE |
|---|---|---|
| ALWAYS | 30 | 75% |
| SOMETIMES | 5 | 12% |
| NEVER | 5 | 13% |
| TOTAL | 40 | 100% |

**Analysis and interpretation.** – The 75% of the instructors recognize that Cavalry Armored School needs a manual in English to teach the class of shooting, other 13% of instructors think that sometimes could be necessary and finally just 13% determine that never could be necessary, so we can say that it is important that the Armored Cavalry School really needs to use a bilingual manual in the teaching and learning process.

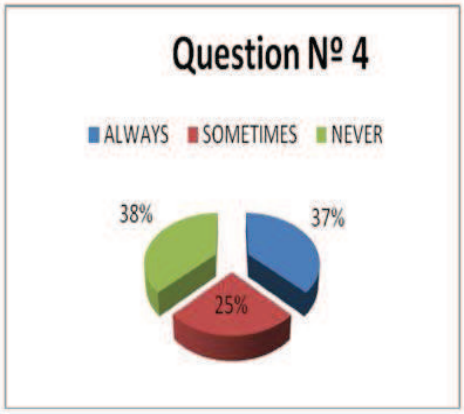
3.- Do you consider the relationship of English with the weapons in the Army, expand their professional knowledge?

| INDICATORS | INSTRUCTORS | PERCENTAGE |
|---|---|---|
| ALWAYS | 35 | 87% |
| SOMETIMES | 2 | 5% |
| NEVER | 3 | 8% |
| TOTAL | 40 | 100% |

**Analysis and interpretation .** – The 87% of the instructors recognize that the relationship of English language could expand their professional knowledge; the 5% of instructors think that sometimes could be good to expand the knowledge and finally the 8% think that never could be good, so we can say that the most agree with the implementation of the English language in the instruction of the weapons.

4. - In your opinion, the resources that you use to follow the learning process about the material AMX-13 are good?

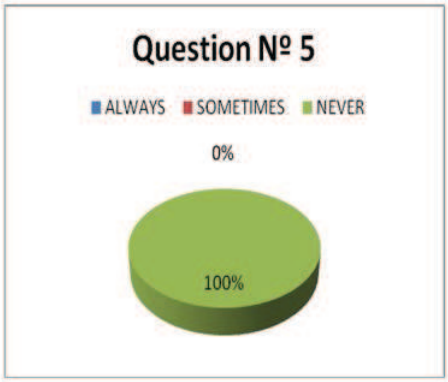
| INDICATORS | INSTRUCTORS | PERCENTAGE |
|---|---|---|
| ALWAYS | 15 | 37% |
| SOMETIMES | 10 | 25% |
| NEVER | 15 | 38% |
| TOTAL | 40 | 100% |




**Analysis and interpretation .** – The 37% of the instructors think that the resources are good, 25% of instructors say that the sources sometimes are good and the 38% think that never could be good. According to the result we can deduce that in the Armored Cavalry School the material is not good to the instruction with the AMX-13 Tank in the learning process.

5.- Have you used a manual in English about of procedures before, during and after shooting with the AMX-13 tank, in the courses of specialization of the Cavalry Armored School?

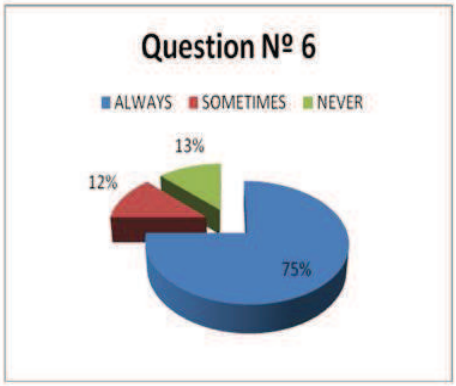
| INDICATORS | INSTRUCTORS | PERCENTAGE |
|---|---|---|
| ALWAYS | 0 | 0% |
| SOMETIMES | 0 | 0% |
| NEVER | 40 | 100% |
| TOTAL | 40 | 100% |




**Analysis and interpretation.** – The 100% of the instructors recognize that they have never used a manual about of procedures before, during and after shooting with the AMX-13 Tank, it means that it could be good the implementation of a manual in English about of this procedures.

6. - Do you think that a manual in English will influence in the teaching / learning process?

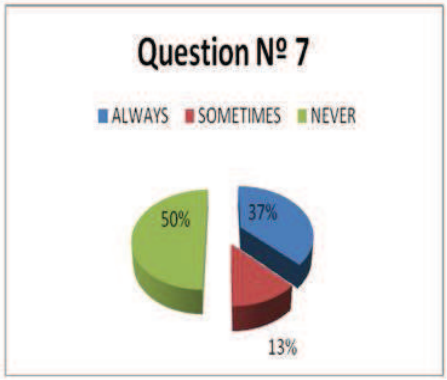
| INDICATORS | INSTRUCTORS | PERCENTAGE |
|---|---|---|
| ALWAYS | 30 | 75% |
| SOMETIMES | 5 | 12% |
| NEVER | 5 | 13% |
| TOTAL | 40 | 100% |




**Analysis and interpretation.** – According to the results the 75% of the instructors think that the implementation of a manual in English will influence in teaching/learning process, 13% think that sometimes could influence and finally the 13% say that never could influence the implementation of this manual. According to the result we can deduce that the most say that new English manual will influence in the teaching-learning process.

7. - Do you believe that teaching/learning process that you follow in class about the procedures of shooting with the AMX-13tank is good?

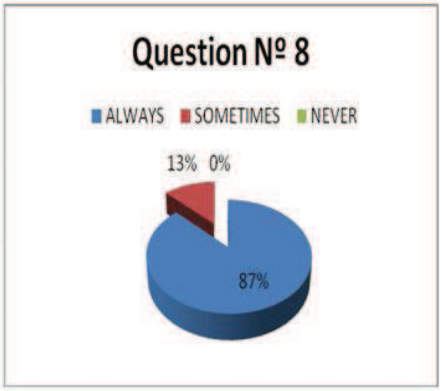
| INDICATORS | INSTRUCTORS | PERCENTAGE |
|---|---|---|
| ALWAYS | 15 | 37% |
| SOMETIMES | 5 | 13% |
| NEVER | 20 | 50% |
| TOTAL | 40 | 100% |




**Analysis and interpretation..** – According to the results the 37% of the instructors believe that teaching/learning process is always good, 13% think that sometimes could be good and finally the 50% say that never is good, it means that there must be some changes in the teaching/learning process.

8. - Do you think that the implementation of a manual in English language will help in the teaching - learning process?

| INDICATORS | INSTRUCTORS | PERCENTAGE |
|---|---|---|
| ALWAYS | 35 | 87% |
| SOMETIMES | 5 | 13% |
| NEVER | 0 | 0% |
| TOTAL | 40 | 100% |




**Analysis and interpretation .** – According to the results the 87% of the instructors believe that the implementation of this manual is good because this will help in the teaching/learning process, other 13% of instructors think that could sometimes be good. It means that the most instructors agree with the implementation of this manual in English.

9.- Do you think that the use of a new English procedure manual could be a good motivation to learn another language?

| INDICATORS | INSTRUCTORS | PERCENTAGE |
|---|---|---|
| ALWAYS | 30 | 75% |
| SOMETIMES | 5 | 12% |
| NEVER | 5 | 13% |
| TOTAL | 40 | 100% |

**Analysis and interpretation.** –The 75% of the instructors believe that the use of a new English procedure manual could be a very good motivation to learn another language , 12% think that sometimes could be good and finally 13% think that the implementation of this manual never will be good to learn other language. According to the result the most agree that a manual in English will be good to motivate the students.

10.- Do you consider that an English manual about the material AMX-13 could be an excellent tool to help in the learning of the soldiers?

| INDICATORS | INSTRUCTORS | PERCENT |
|---|---|---|
| ALWAYS | 35 | 87% |
| SOMETIMES | 3 | 8% |
| NEVER | 2 | 5% |
| TOTAL | 40 | 100% |

**Analysis and interpretation.** –The 87% of the instructors consider that an English manual about the material AMX-13 could be an excellent tool to help in the learning of the soldiers, 8% of instructors consider that is a good tool and 5% think that it is not a good tool. So it means that the most coincide that a manual in English will be an excellent tool in the learning of the soldiers.

Statistical model

## Chi-Square Test

Chi-square is a statistical test commonly used to compare observed data with data we would expect to obtain according to a specific hypothesis. For example, if, according to Mendel's laws, you expected 10 of 20 offspring from a cross to be male and the actual observed number was 8 males, then you might want to know about the "goodness to fit" between the observed and expected. Were the deviations (differences between observed and expected) the result of chance, or were they due to other factors. How much deviation can occur before you, the investigator, must conclude that something other than chance is at work, causing the observed to differ from the expected. The chi-square test is always testing what scientists call the null hypothesis, which states that there is no significant difference between the expected and observed result.

Formula Chi-square.

$$X^2 = \sum \left[ \frac{(O-E)^2}{E} \right]$$

**Working hypothesis**

The use of the new English procedures manual, before, during and after shooting with the AMX13 Tank, will influence in the teaching /learning process for the military personnel attending the specialization training course at Armored Cavalry School Riobamba during the first term 2012".

**Null hypothesis**

The use of the new English procedures manual, before, during and after shooting with the AMX13 Tank, will not influence in the teaching /learning process for the military personnel attending the specialization training course at Armored Cavalry School Riobamba during the first term 2012".

# Chi-square distribution table

| | P | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DF | 0.995 | 0.975 | 0.20 | 0.10 | **0.05** | 0.025 | 0.02 | 0.01 | 0.005 | 0.002 | 0.001 |
| 1 | 0.0000393 | 0.000982 | 1.642 | 2.706 | 3.841 | 5.024 | 5.412 | 6.635 | 7.879 | 9.550 | 10.828 |
| 2 | 0.0100 | 0.0506 | 3.219 | 4.605 | 5.991 | 7.378 | 7.824 | 9.210 | 10.597 | 12.429 | 13.816 |
| 3 | 0.0717 | 0.216 | 4.642 | 6.251 | 7.815 | 9.348 | 9.837 | 11.345 | 12.838 | 14.796 | 16.266 |
| 4 | 0.207 | 0.484 | 5.989 | 7.779 | 9.488 | 11.143 | 11.668 | 13.277 | 14.860 | 16.924 | 18.467 |
| 5 | 0.412 | 0.831 | 7.289 | 9.236 | 11.070 | 12.833 | 13.388 | 15.086 | 16.750 | 18.907 | 20.515 |
| 6 | 0.676 | 1.237 | 8.558 | 10.645 | 12.592 | 14.449 | 15.033 | 16.812 | 18.548 | 20.791 | 22.458 |
| 7 | 0.989 | 1.690 | 9.803 | 12.017 | 14.067 | 16.013 | 16.622 | 18.475 | 20.278 | 22.601 | 24.322 |
| 8 | 1.344 | 2.180 | 11.030 | 13.362 | 15.507 | 17.535 | 18.168 | 20.090 | 21.955 | 24.352 | 26.124 |
| **9** | 1.735 | 2.700 | 12.242 | 14.684 | **16.919** | 19.023 | 19.679 | 21.666 | 23.589 | 26.056 | 27.877 |
| 10 | 2.156 | 3.247 | 13.442 | 15.987 | 18.307 | 20.483 | 21.161 | 23.209 | 25.188 | 27.722 | 29.588 |
| 11 | 2.603 | 3.816 | 14.631 | 17.275 | 19.675 | 21.920 | 22.618 | 24.725 | 26.757 | 29.354 | 31.264 |
| 12 | 3.074 | 4.404 | 15.812 | 18.549 | 21.026 | 23.337 | 24.054 | 26.217 | 28.300 | 30.957 | 32.909 |
| 13 | 3.565 | 5.009 | 16.985 | 19.812 | 22.362 | 24.736 | 25.472 | 27.688 | 29.819 | 32.535 | 34.528 |
| 14 | 4.075 | 5.629 | 18.151 | 21.064 | 23.685 | 26.119 | 26.873 | 29.141 | 31.319 | 34.091 | 36.123 |
| 15 | 4.601 | 6.262 | 19.311 | 22.307 | 24.996 | 27.488 | 28.259 | 30.578 | 32.801 | 35.628 | 37.697 |
| 16 | 5.142 | 6.908 | 20.465 | 23.542 | 26.296 | 28.845 | 29.633 | 32.000 | 34.267 | 37.146 | 39.252 |
| 17 | 5.697 | 7.564 | 21.615 | 24.769 | 27.587 | 30.191 | 30.995 | 33.409 | 35.718 | 38.648 | 40.790 |
| 18 | 6.265 | 8.231 | 22.760 | 25.989 | 28.869 | 31.526 | 32.346 | 34.805 | 37.156 | 40.136 | 42.312 |
| 19 | 6.844 | 8.907 | 23.900 | 27.204 | 30.144 | 32.852 | 33.687 | 36.191 | 38.582 | 41.610 | 43.820 |
| 20 | 7.434 | 9.591 | 25.038 | 28.412 | 31.410 | 34.170 | 35.020 | 37.566 | 39.997 | 43.072 | 45.315 |
| 21 | 8.034 | 10.283 | 26.171 | 29.615 | 32.671 | 35.479 | 36.343 | 38.932 | 41.401 | 44.522 | 46.797 |
| 22 | 8.643 | 10.982 | 27.301 | 30.813 | 33.924 | 36.781 | 37.659 | 40.289 | 42.796 | 45.962 | 48.268 |

Degree of freedom = N-1

10-1= **9**

Significance Level = **0.05.**

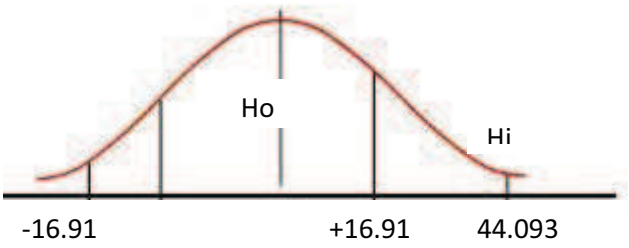
Reliability = **95%**

Critical value: R= **16, 91**

Analysis of results using Chi- square rejecting the null hypothesis and accepting the alternative hypothesis.

| Questions | (O) | (E) | (O-E) | $(O-E)^2$ | $(O-E)^2/E$ |
|---|---|---|---|---|---|
| 1 | 100 | 77.7 | 22.3 | 497.29 | 6.4001287 |
| 2 | 75 | 77.7 | -2.7 | 7.29 | 0.0938223 |
| 3 | 88 | 77.7 | 10.3 | 106.09 | 1.3653796 |
| 4 | 38 | 77.7 | -39.7 | 1576.09 | 20.284298 |
| 5 | 100 | 77.7 | 22.3 | 497.29 | 6.4001287 |
| 6 | 75 | 77.7 | -2.7 | 7.29 | 0.0938223 |
| 7 | 50 | 77.7 | -22.7 | 515.29 | 6.6317889 |
| 8 | 88 | 77.7 | 10.3 | 106.09 | 1.3653796 |
| 9 | 75 | 77.7 | -2.7 | 7.29 | 0.0938223 |
| 10 | 88 | 77.7 | 10.3 | 106.09 | 1.3653796 |
| | **777** | | | | **44.09395** |

**Gauss bell**




**Decision statistics:** according to the statistical results obtained the null hypothesis is rejected, and the working hypothesis is accepted because Chis-square is greater than critical value.

### 3.7.2. CONCLUSIONS

- According the statistics results the implementation of this manual in the Armored Cavalry School really will influence the teaching learning process, because the working hypothesis is accepted and the null hypothesis is rejected.

- During the application of this project, authorities, instructors and students agree with the implementation of an English manual to be update with the new trends of the military educational system.

- According with the instructors surveyed the 87% of the sample coincide that the implementation of an English manual about of procedures of shooting will be an excellent didactic material, so the implementation of this manual will serve for the training of new soldiers that attending to the specialization courses; at the same time it will be a didactic material for foreign military personnel who always visits this School.

### 3.7.3. RECOMENDATIONS

- It is recommendable that the Armored Cavalry School include in its instructional materials this new manual in English, so the soldiers can be trained in the different activities of shooting in English..

- It is important the support of the academic authorities of the Army, in the implementation of new materials, because this will help strengthen military education.

- It is necessary that this manual will be recognized and authorized by the Comando de Education y Doctrina del Ejército to be used at the training center.

# PART FOUR

# PROPOSAL

## 4.1 INFORMATIVE DATA:

THEME: " Implementation of a new English procedure manual before,during and after shooting duties with the AMX-13 Tank of 105mm, in the teaching and learning process for the military personnel "

## 4.2 INTRODUCTION

The Armored Cavalry School has developed various training courses and specialty, one of the courses is to Gunner, this is what the student must learn to make the shot with the 105mm canyon.

The material Armored Cavalry School has is French besides it is composed of different parts to their study, which are written in English. So it is very necessary the implementation of a manual in English of the procedures before, during and after the shooting, so the instructor and the student can understand the instructions clearly.

We know that deficiencies in vocabulary can make even a simple task very difficult for our students. For implementing this manual in English, the instructor can teach and learn all the words written in English and give their classes without problem.

The purpose of this proposal is to foment a new didactic material that allow to provide a new knowledge about other language, for the military personnel attending the especialization training course at Armored Cavalry School.

## 4.3 JUSTIFICATION

The implementation of this new English procedures manual before, during and after shooting will be useful for all military personnel attending the Armored Cavalry School and for all foreign military personnel who come to know our material.

This new manual also will allow military personnel to acquire a good knowledge of vocabulary which is important in the teaching / learning.

With this manual the school will have a high academic level because their instructors will conduct classes or teach in a new language.

## 4.4 OBJECTIVES

### 4.4.1 GENERAL

- To determine the incidence of the use of a new English procedure manual before,during and after shooting duties with the AMX-13 tank of 105mm, in the teaching and learning process for the military personnel attending the especialization training course at Armored Cavalry School Riobamba during the first term 2012.

### 4.4.2 SPECIFIC

- To identify the level of learning of instructors and students with the use of this manual.
- To expand the knowledge with respect to new vocabulary in English in the instructors and students.
- To provide teachers tools that permit them to be more effective in their teaching

## 4.5 FUNDAMENTATION

The Importance of Learning English

English is the fourth most widely spoken native language in the world, and in terms of sheer number of speakers, it is the most spoken official language in the world. It is the primary language used in international affairs. The English language has official status even in nations where it is not the primary spoken language. English is indisputably the primary language of global trade and commerce. In many countries, most tourism authorities and other officials in contact with the public speak English to interact and engage with foreigners.

Tanks has Armored Cavalry School are made in France, for this reason we should have a manual in English, allowing us to learn more easily. In conducting this research we can see that the need for a manual in English is essential to learn about the material has now the ECABLIN for that reason I believe this manual will be very helpful for instructors and students, which will have a good base in the process teaching / learning.

Ecuadorian Army has established agreement with different countries as the United States Army which sends its soldiers to our school to know the material we have, for this reason it is necessary that the school has a manual in English, so the foreign military will be able to understand the instruction better.

## 4.6 METHODOLOGY OF OPERATIVE PATTERN

The methodology applies to the formulation of the operative pattern which is based in the Logic Framework, thus:

## 4.7.INVOLUCRATE ANALYSIS.

| Groups | Interest | Problems perceived | Resources and Mandates |
|---|---|---|---|
| Students | The use of new manual to develop the knowledge of English vocabulary. | They don't adapt to the changes, it is difficult to learn a new language. | Support from the militaries authorities in programs for a good education. |
| Instructors | To learn the new manual in English language. | Lack of training of the instructors. | Contribute to the training of instructors. |
| | Good academic | Lack of | The education in |

| | | | |
|---|---|---|---|
| Community | education of the militaries. | communication in the community. | the ECABLIN is excellent. |

### 4.7.1. LOGICAL FRAMEWORK MATRIX.

| NARRATIVE SUMMARY OF OBJECTIVES | INDICATORS | MEDIUMS OF VERIFICATION | SUPPOSED |
|---|---|---|---|
| **END**<br><br>1.Training instructors and students in the knowledge English language .<br><br>2. Implement a new curriculum in the instructional program of the Armored Cavalry School. | The instructors and students increase the academic level after applying this proposal.<br><br>Instructors and students feel very good with the new instructional program. | Results of the statistics. | Staff of instructors and students agrees with the implementation of the manual in English. |
| **Purpose**<br><br>The use of a new manual in English will improve the academic level in the ECABLIN. | The number of instructors and students who improved their performance | Results of the post-test. | Conditions are necessary to improve the academic processes:<br><br>- Help military |

| | | | |
|---|---|---|---|
| | increases. | | authorities<br>-Participation conscience and responsibility of instructors and students. |
| **Components**<br>To expand the diffusion of new didactic material in English.<br>**Improved** economic resources of the institution | The number of trained soldiers in the Army increases.<br>Remarkable increase in productivity of tutors and students in the quarter | Results of the statistics.<br>Statistics data by the instructors and students. | Instructors and students have adequate knowledge to improve their performance. |

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3.5.3. Change position

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Part One

## 1. Introduction

The purpose of this manual is to establish rules for the proper development of the activities during the course process, guiding students in this school in the development of different academic and administrative activities, enabling us to achieve together, the proposed objectives.

Students should read through this guide, confident that the information contained in it will be useful for the development of their activities and thus make more pleasant to stay in the Armored Cavalry School.

The Armored Cavalry School is an Academic Institute which trains armored cavalry Soldiers, who are prepared to operate efficiently shielded material available to our Army.

The Objectives of the main AMX-13 tank of 105mm is the shot, which will destroy different objectives enemy partially , for this reason it has been thought in the preparation of this manual procedures before, during and after of fire.

In addition the Ecuadorian Army does exchanges of soldiers with other countries for this reason it is important that foreign personnel visiting the Armored Cavalry School can get a manual in their language about knowledge of our material.

Welcome to the ECABLIN

## 1.2. THE ARMORED CAVALRY SCHOOL. (ECABLIN).

### 1.3. History

"Every institution has its history, every weapon their identity, but together they all remain consistent and effective action, work and loyalty." The confirmation of the actions is reflected in his great works, the figure and importance in their activities and their evolution in the history; let us give an overview on the developments since the beginning of formation, evolution and life of the GCB-31 unit "MACHALA" now called ECABLIN. [1]

In our country the Armored Forces weapon has its origin in the year 1942, with the presence of M-3AI American material, giving greater strength to our military, political and military decision after the events of 1941.

In 1971, the government, headed by Dr. Jose Maria Velasco Ibarra, together with the military high command, aware of the importance that the shield is in the sacred mission to preserve the territorial integrity and modernization and increased military park of our neighbors particularly in Peru, making a significant contract for military equipment including tanks, armored French family AMX-13, and carts family recognition AML-60 and 90 thus providing an important step in the modernization of the army.

On August 2004 ECABLIN was under the administration of Colleges and Schools Command and Military Education Department of the Forces, which today is called Education and Doctrine Command of the Army." Today ECABLIN trains the soldiers of the Armored Cavalry in the different training courses and specializations.

**1.4 Mission. -** To improve military personnel specializing in technical and tactical aspects of armored weapons, to achieve efficiency and effectiveness of combat and assist them in fulfilling the institutional mission, incorporating this ongoing process of technological advances, scientific and humanistic.

**1.5 Vision. –** To be the best high school in the Army, and the integral unity Cultivating Development of our education in the community.

[1] *Manual de reseña Histórica del la Escuela de Caballería Blindada*.

**1.6 Values. -** The school promotes the following values:

- Loyalty.
- Discipline.
- Honor.
- Courage.

**HOMEWORK UNIT 1**

**Student's name:…….**

Answer these questions on your own.

1.- What is the mission of the Cavalry Armored School?

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2.- What is the Vision of the Cavalry Armored School?

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3.- List the values of the Cavalry Armored School

a)……....

b)……

c)……

d)……....

4.- In your opinion which is the most important value from Cavalry Armored School? and Why?

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5.- which is the main propose of this manual of procedures ?

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Part Two

**2. Steps for using the Procedures manual**.

Objective: To observe the steps and the activities of the manual of shooting before accomplishment the operations.

Recommended steps before using the manual:

- To be accompanied by a teacher- guide.
- To pay attention to the recommendations of the manual.
- The operation of the manual should be followed as is written, applying the steps and recommendations.

**2.1 How to apply Security Techniques According To the manual?**

Techniques must be applied with:

-Responsibility
-Work
-Commitment

**2.2. Description of the AMX-13 Tank.**

The AMX-13 armored vehicle is a tank and its caliber is 105mm, French manufacturing model is 58 and currently in staffing in the Ecuadorian Army.

The development of the AMX-13 light tank began after the Second World War. Production began in 1953 and ceased in 1987. Over 4000 were built AMX-13 light tanks of all variants for the French Army and export customers. It was exported to 25 countries and a large number of them are still in operation today.The AMX-13 light tank had a number of unusual solutions for the tanks of the age, were used to support the airborne troops and airborne.

The hull and turret of the AMX-13 light tank is armored steel plates welded 20 - 40 mm thick. A front mounted motor provides additional protectionAMX-13 tank is an armored combat units is part of the Armored Cavalry with the mission to go into combat with the enemy to destroy armored units, using fire and maneuver in

coordination with other weapons. It has two-part oscillating turret where the gun is fixed to the tower and the entire top of the turret elevation changes.

The tower is mounted on the rear of the vehicle and over the commander and gunner. The original 75 mm gun, supposedly inspired by the German KwK 42 L/70 (used among others by truck Panther), but shorter and firing different ammunition was fed with an automatic loading system of two magazines of six rounds. A disadvantage due to its small size it was, that once was spent rounds had to leave the vehicle and crew to reload from outside the vehicle.

Figure 1. AMX-13 Tank

a) The AMX-13 tank has a Tower FL-15, which is mounted on the chassis and contains:

1.-The 105mm cannon.

2.-Two machine guns.

3.-The optical apparatus of observation and marksmanship.

b) The movements of the tower in direction and elevation controls were performed by hydraulic and mechanically by flying target.

c) The burden of the canyon is done through a system called "Drums and attacked."

d) The sealing between the rotating and oscillating body is guaranteed by a special board canvas "bellows" mounted by screws.

**2.3 Technical data**

**2.4. The Tower. FL-15**

The tower is the main part of the AMX-13 tank, because through it the kick and their movements are:

1 .- 360 degree shift in direction.

2 .- Shift in elevation:

a. - Front Semicircle -5 $^{0}$ 30 'to +12 $^{0\ 30'}$

b. - Back Semicircle -5 $^{0}$ 30 $^{'to}$ +6 $^{0}$ 30'

**2.5. Weapons AMX-13 Tank**

1) 105mm cannon.

2) MAG machine gun, coaxial.

3) Radial defense MAG machine gun.

4) Launch tubes fumigants.

**2.6. Ammunition:**

AMX-13 Tank has 32 grenades[2] and its types are:

- OFL Arrow.
- Perforating.
- Explosives.
- Smoke or incendiary.
- Instruction.

[2] *ECABLIN. Manual de instrucción para Artilleros del Tanque AMX-13. Tipos de granadas.*

The distribution of the grenades inside of the tank is as follows:

a. 5 grenades left side of the post of head of tank (chassis).
b. 4 grenades at the right of the gunner's position (chassis).
c. 4 grenades between the batteries of the vehicle (chassis).
b. 4 grenades in front of the post of the head in a vertical tank. (Tower).
c. 3 grenades in front of the group electro pump horizontally (tower).
d. 12 in the barrels.

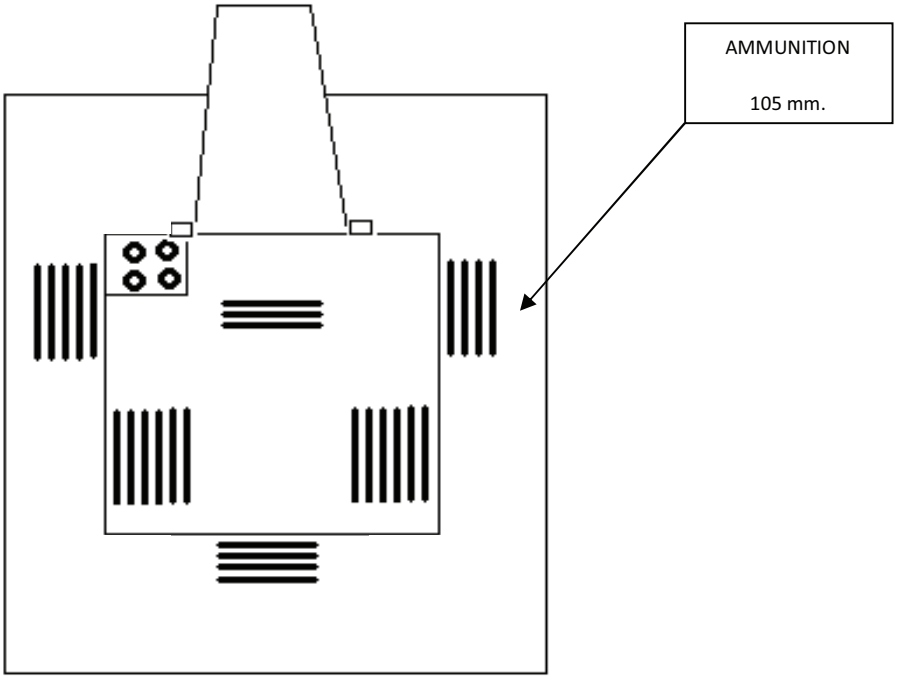


Figure 2. Position of the grenades inside of the AMX-13 Tank.

Figure 3 soldiers putting the ammunition in AMX-13 Tank.

The AMX-13 Tank has 32 grenades and has different initial speed. (Vo)

- OFL Arrow, further destruction of armored Vo . 1475m / s.
- Perforating, for vehicles armored for Vo. 800 m / s.
- Explosives, bunkers, troops on foot Vo administrative vehicles. 700 m / s.
- Smoke or incendiary. Fuel tanks and facilities Vo. 695 m / s
- Of instruction. 800 m / s
- 5200 rounds of ammunition 7.62 mm.
- 12 jars smokeless
- 12 hand grenades

Figure 4. Granades.

Figure 5. Soldiers choosing the ammunition for shooting

## 2.7. Exterior description of the tower FL-15

The tower fl-15 is formed externally by different parts that are very important for the knowledge of the crew. It is important to know all characteristics tank because they are very necessary for the development of the mission.

## 2.8 Parts of the Tower FL-15.

The tower consists of three main parts:

Figure 6 Oscillating Body.

Figure 7 Rotating body.

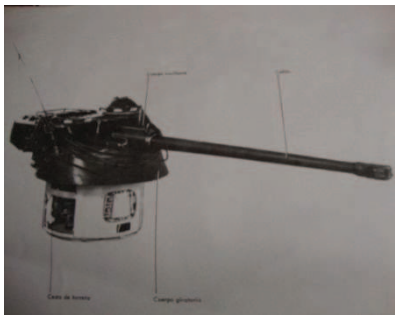

Figure 8 Tower basket.

### 2.8.1 Oscillating Body

This body is oscillating or gives rise to the canyon. It also has the following elements:

1 .- A hole for the coaxial machine gun.

2 .- A hole for the gunner's telescope.

3 .- Hatch gunner.

4 .- Two accommodations for the periscopes.

5 .- Observation dome tank commander.

6 .- Protector aeration fan.

7 .- Two rings to remove the tower.

8 .- Two doors for loading drums.

9 .- Support the drum of water.

10 .- Accommodation infrared projector mounting.

11 .- A handrail and straps for carrying sap tool.

12.- Ejection of the shells.

13 .- Two handrails.

### 2.8.2 Rotating Body

This body is the tour in direction 360 degrees and is composed of the following parts:

1 .- Support for antenna bases.

2 .- Media launches smokeless pipe.

3.- Handrails for the service crew.

4.- Fins for cleaning

### 2.8.3. Tower basket.

The tower basket is located on the inside of tank warfare, and consists of the floor where the boss of tank and the gunner is, and contains accommodation for 7.62 mm ammunition for the machines gun.

a. Accommodation vertical 4 grenades

b. The seat of the Head of tank combat.

c. The observation deck.

d. A leg protector.

e. Support frame of the radio station.

f. Control panel with a folding stand.

g. Foot switches and the machine gun barrel

h. A machine gun coaxial.

i. Support for two boxes of 7.62 mm ammunition.

j. The ammeter.

k. The rotary joint.

l. Support for six boxes of 7.62 mm ammunition.

m. Accommodation of 8 pots fumigants.

n. Four covers giving access to the escape door.

**2.9. Crew**

The AMX-13 tank carrying 3 crew members:

The head of the tank.- is responsible for the entire crew and all the military activities with amx-tank, your responsibility is to keep it operable in time of peace as in war.

The gunner.- is responsible to make of shoot of the canon, when the tank commander ordered.

The driver..- its function is only vehicle driving and maintaining in good condition

Figure 9. Crew

**HOMEWORK UNIT 2**

**Student's name:…….**

Complete these statements on your own:

1.- Which are steps for using the procedures manual?

a)……

b)……..

c)……..

2.- The tower FL-15 has three main parts. Which are they?

a)……

b)……..

c)……..

3.- List the weapons of the AMX-13 Tank.

1.- ----------

2.- ----------

3.- ----------

4.- List the Ammunition of the AMX-13 Tank.

a)……..

b)…….

c) Explosive

d)……

e)……

6.- Which is the structure of the AMX-13 Tank?

---

---

---

7.- Explain the movements in the direction and elevation.

Direction……

Elevation……

8.- Write the targets that destroys OFL. Arrow ammunition.

a.----------
b.----------
c.----------
d.----------

9.- Write the targets that destroys explosive ammunition

a.----------
b.----------
c-.----------

10.- Write the targets that destroys the incendiary munitions

a.----------
b.----------
c----------
d----------

Part Three

## 3.Use of New Techniques of shooting

To make the shot, there are many techniques, which are applied according to the objective or target to beat, the gunner must know all techniques because he will shoot the cannon.

### 3.1 Definitions

Before shooting the gunner need to Know some techniques and their definitions, so that he can make a shot efficiently.

### 3.2. Shooting technique and theory

This is the Knowledge of shooting and expertise using the AMX-13 tank commander in With The tank gunner With The co-ordination with aggressiveness and initiative are essential Factors That in armored combat.

#### 3.2.1. Trajectory

Followed by the line is the center of gravity projectile, the origin of the trajectory is the muzzle.

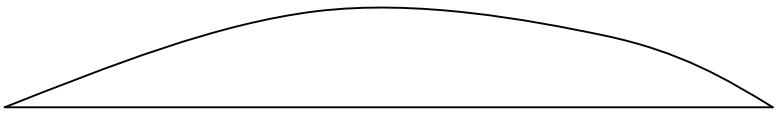

Figure 10. Trajectory.

#### 3.2.2 Arrow

Is the highest point of the trajectory taken from the horizontal plane.

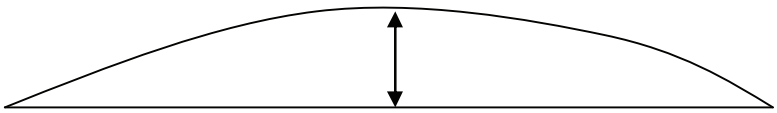

Figure 11. Arrow.

### 3.2.3 Level angle

Is the angle between the axis of the bore of the cannon and the horizontal plane.

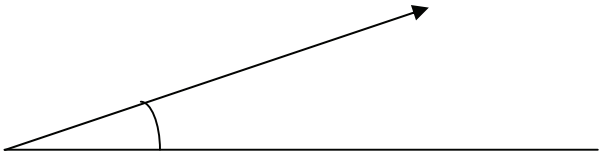

Figure 12. Level Angle.

### 3.2.4. Combat rising

When the trajectory is an arrow that will not have the height of objective exceeds that have to fight with the tank. In the case of fire against armored vehicles, the value of the arrow is 2 meters. [3]

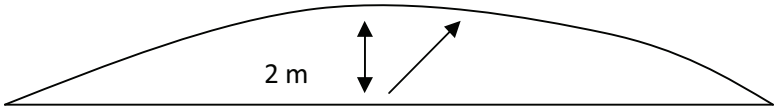


Figure.13 Combat rising

### 3.2.5. Distance shooting practice

Is the distance at which there is a chance to beat an objective of 2 meters by 2 meters wide of long.

### 3.3. How to identify routines of shooting?

a. - Search and Identification of Objectives.

It is the activity that determines the kind of objectives that will be destroyed; the crew will do the following steps.

1) To assess the specific situation regarding the enemy and their weapons.
2) Choose the ammunition and firing procedure.

[3] *ECABLIN.Manual de instrucción para el Tiro con el Tanque AMX-13.*

3) Decide whether to open fire on the vulnerability of depending objective to the beat.

b .- Appreciation of distances

To calculate the Distance between the vehicle and the Objective to beat, we use laser-system of the telescope to obtain the distance with precision.

### 3.4. Objectives designation

It is the direction to show which location the objective is, to designate the objective, there are 3 methods:

1) To put the tower in the direction. - It is the action that the commander or gunner tank put the tower toward the objective or pointing to the objective.

2) Angular separation.- Is performed using a reference point, the distance in meters Indicating which is the objective using angles.

3) Procedure of the clock.-Imagine that is when is one quadrant is done in the sense of the clock, which indicates the direction of front 12 hours.

### 3.5. Position for combat.

#### 3.5.1. Position of observation.

Also known as defilade tower, which is one in the tank is completely covered by the observation of the enemy; this position is only for observation. [4]

Figure 14. Observation position.

[4] *ECABLIN.Manual de Tiro con el AMX-13. Posiciones de tiro y técnicas de combate.*

### 3.5.2. Shooting position.

Also known as hull defilade, in which one is the helmet of the tank, is protected, seeing in all times the enemy.

Figure 15. Shooting position.

### 3.5.3. Change position.

It is an alternate position, which should be sufficient to at an instance continue making the shooting when the initial shooting position is hampered by enemy fire.

Figure 16. Change position.

**HOMEWORK UNIT 3**

**Student's name:……**

Answer these questions

1.- What is the shooting technique and theory of the AMX.13 Tank?

---
---
---

2.- What it is trajectory?

---
---
---

3.- what it is Arrow?

---
---
---

4.- What is the distance shooting practice?

---
---
---

5.- What is the change position?

---
---
---

6.- Which are routines to identify the shooting?

a)…….

b)……

c)……

7.- List the methods to designate the objectives.

a)……..

b)…….

c)…….

8.- Which are the combat positions?

1.-……

2.-……

3.-……

Part Four

## 4. Procedures for shooting

There are different procedures to make the shot, and all the crew must know to perfection, these procedures are: before, during and after.

Figure.17.Military preparing for the shooting.

### 4.1. Knowledge and use of the shooting Periscopes

The tank has different periscopes that are very essential to see the enemy directly and through the reticulum laser can get a good precision, which allow to make a good shot.

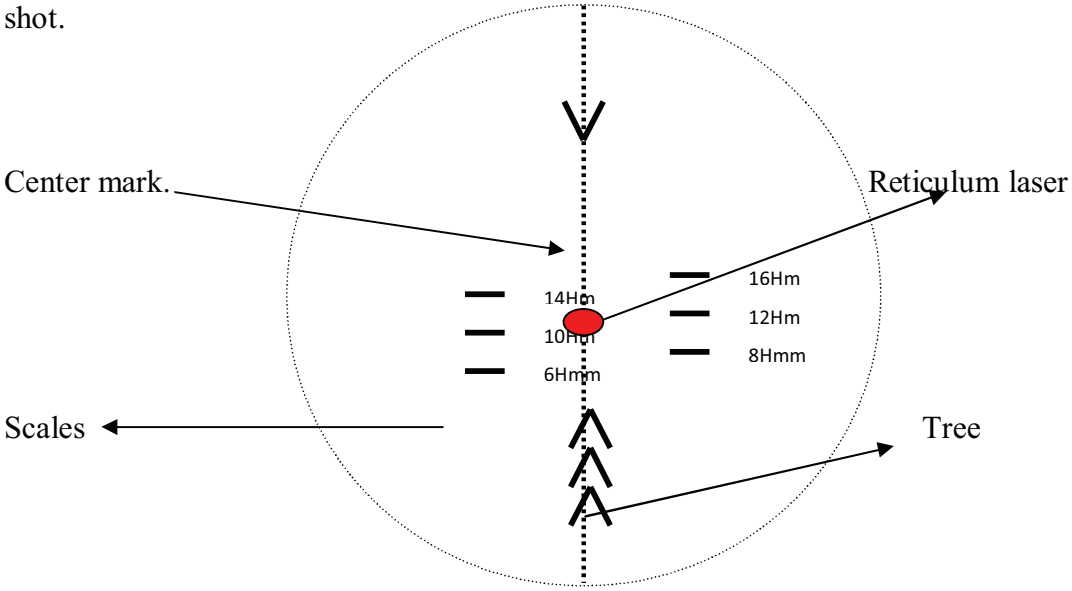


Figure.Nº 18 Reticulum laser

**4.2 Optical elements. -** The observation of the ground from inside the tower is done Periscopes through which are:

a. PERISCOPE L-794B

This type of Periscopes the tank has a number of seven, are mounted in the alveoli and attached by a bracket.

b. - PERISCOPE L-794D

They are in the front compartment of gunner and are two, as the Periscopes others have the same mounting system. [5]

Figure 19. Periscope

Elements for the Conduct of shooting

They are:

a) M-212 telescope.

This telescope is located at the post of head tank and can see the field with two increases. It also has a grid to make the shot and appreciate the deviations.

b) M -213 telescope

It is the main telescope and serves shot the gunner, is mounted on the tower by means of a special holder to dovetail which you on the tower. Allows an increase of 8 times and have a field of view of 180 degrees.

[5] ECABLIN. Manual de Tiro. Conocimiento de los periscopios de Observación.

Figure 20. M-212

Figure 21. M-213

### 4.3. Projector parts PH-2A.

Night shooting team for the tank AMX-13-105mm:

Allows unobtrusive observation of people and objects in the dark, through infrared rays emitter by a projector. These rays can be observed through the telescope of night shooting.
The projector is mounted on the roof of the tower and place by a tower you dovetail also secure with screws to the sides.

Technical Characteristics of the PH 2A

| | |
|---|---|
| LED Intensity | 20 to 30 volts |
| Aluminum mirror | 99.99% aluminum |
| Operation of the lamp | 24 volts |
| Lamp life | 8 to 10 hours |
| Scope of the infrared light | 800 to 1000 meters. |

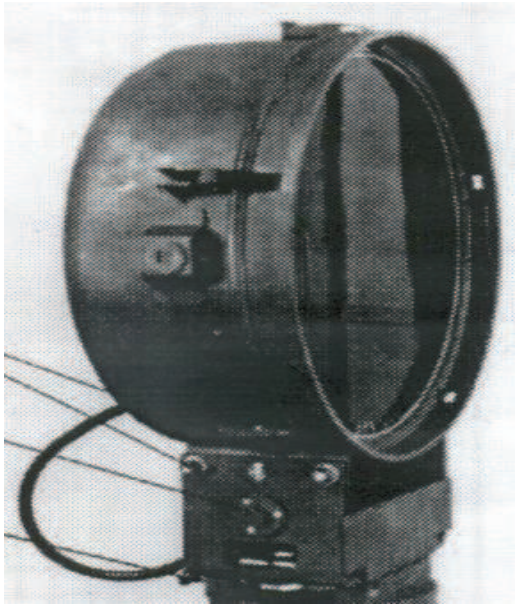

Figure.22.Projector PH.2A

**5. Procedures before the shooting**

There are some which should not be routines to overlook, these procedures are necessary to meet all current standards and make a shot effectively.

Steps for the preparation of the shooting

1) To determine the location of the Objectives.
2) To determine the distance of the Objective.
3) To make a sketch of the area with Different points marked.
4) To build to that betray the Presence of the Enemy.
5) If the situation warrants make shots with the laser to accurately determine the distances to each preset points.

These eleven operations performed the following steps are:
a. To remove the covers mouth.
b. To remove the seat map.
c. To remove the lock.
d. To put general contact

The load can be manually or automatically and performs the main tank commander. There are steps for the first shooting:

a. Switch off the lock release lever.

b. Lever is push back and the top.

c. Once the lock is open STI lever returns to initial position.

d. Placed Insurance shot in vertical position.

**6. Procedures during the shooting**

Procedures during the shooting is very important to observe and verify different steps, Allowing us to know that shooting is taking place without any novelty, there is a problem when the shooting is in order to control canceled the problem.

Monitor and observe 7 important factors:

a. To observe the reverse battery and Entry into the canyon.

b. To observe the brake and recovery (levels)

c. To control the overheating caused by the shot.

d. That the window to control of the expulsion of grenades is funcionating.

e. To observe the movement of the tank by the force of the shot.

f. Note that not obstructs the telescopes objects.

g. To be attentive to the supply of grenades.

**7. Procedures After the shooting.**

This procedure is important as others because there are several activities that should be corrected, besides the material also should be in perfect condition for future missions.

a. To ensure shooting.

b. To close the lever of the lock.

c. To dismount the hammer

d. To clean of the canyon

e. To set the seat map.

f. To put on the cover mouth.

**8. Maintenance.-**

After making the shot with the tank of war, we must never forget the complete maintenance of armored vehicle and its components.

Maintenance to be taken by the crew.

Tools used for the maintenance

a) Bristle swab.
b) Beater.
c) Detergent.
d) Lubricant.
e) Grease.
f) Flannel

Figure.23. Personnel cleaning the Tank.

**HOMEWORK UNIT 4**

**Student's name:…….**

Describe on your own.

1.- Procedures for shooting.

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---

2.- Projector PH-2A.

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---

3.- Procedure before of the shooting.

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---
---

4.-Procedures during of the shooting.

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---

5.- Procedures after of the shooting.

---
---
---

6.- which are steps for the preparation of the shooting?

a)……

b)…….

c)…….

d)…….

7.- List the operations before of the shooting?

a)…….

b)……

c)……

d)……..

8**.-** During the shooting , monitor and observe 7 important factors ¿Which are?

1.-……..

2-……

3.-The windows of expulsion.

4.-……..

5.-……

6.-The levels of oil of the cannon.

7.-……

9.- List tools used for the maintenance of the AMX-13 Tank.

a)…….

b) Oil or detergent.

c)……

d)…….

e )Flannel

f)……

10.- Match the types of Vo initial of each grenade.

| Grenades | Vo m/s |
|---|---|
| a) OFL. Arrow | 800 |
| b) Explosive | 695 |
| c) Incendiary | 700 |
| d) Instruction | 800 |

**“ARMARED CAVALRY SCHOOL”**

LESSON PLAN Nº 1

1. Subject: Procedures, before, during and after of the shooting with the AMX-13 Tank.

2. Didactic unit: One.

3 Objectives:

- To know the description and structure of the AMX-13 Tank.
- To develop speaking, writing and reading skills.

4. Theme: Description of the AMX-13 Tank.

5. Methodology: Cognitive Method.

6. Course: Specialization.

7. Time: 40´

8.-Date: March 24th 2012.

9.-Teacher: Angel Sevilla.

| CONTENTS | ACTIVITIES | RESOURCES | ASSESSMENT |
|---|---|---|---|
| Cognitive<br><br>- Description of the AMX-13 Tank.<br><br>-New vocabulary.<br><br>-Procedures to develop good writing, Reading and get a good pronunciation of the vocabulary.<br><br>Attitudes (work in group) | Students describe the AMX-13 Tank..<br><br>Students will learn new vocabulary using posters. | ➢ Lesson plan.<br>➢ blackboard .<br>➢ Manual..<br>➢ Posters. | An oral test will be applied to identify the level of learning.<br><br>To send a task about of the description of the AMX-13 Tank. |

**“ARMARED CAVALRY SCHOOL”**

LESSON PLAN Nº2

1. Subject: Procedures, before, during and after of the shooting with the AMX-13 Tank.
2. Didactic unit: Two.
3. Objectives:
   - To know the types of grenades and ammunition of the AMX-13 Tank.
   - To develop speaking, writing and reading skills.
4. Theme: Ammunition of the AMX-13 Tank.
5. Methodology: cognitive method.
6. Course: Specialization.
7. Time: 45 ´
8. Date: March 25th 2012
9. Teacher: Angel Sevilla.

| CONTENTS | ACTIVITIES | RESOURCES | ASSESSMENT |
|---|---|---|---|
| Cognitive<br><br>-Description of the ammunition of tha AMX-13 Tank.<br><br>- Types of grenades<br><br>- Distribution of the grenades inside of the Tank.<br><br>Attitudes<br><br>(group work) | Describe the different types of ammunition.<br><br>Review new vocabulary that allows us to apply to our subject.<br><br>Students describe the distribution of the grenades inside of the Tank. | ➢ Manual.<br>➢ Pictures.<br>➢ Blackboard.<br>➢ AMX-13 Tank. | An oral test will be applied to identify the level of learning.<br><br>Task to describe the types of ammunition. |

**“ARMARED CAVALRY SCHOOL”**

LESSON PLAN Nº 3

1. Subject: Procedures, before, during and after of the shooting with the AMX-13 Tank.
2. Didactic unit: Three.
3. Objectives:
   - To know the new techniques of shooting.
   - To develop the steps and skills for the shooting.
4. Theme: Techniques of shooting with the AMX-13 Tank.
5. Methodology: cognitive method.
6. Course: Specialization.
7. Time: 45 ´
8. Date: April 12 $^{Th}$ 2012
9. Teacher: Angel Sevilla.

| CONTENTS | ACTIVITIES | RESOURCES | ASSESSMENT |
|---|---|---|---|
| Cognitive<br><br>-Techniques of shooting with the AMX-13 Tank.<br><br>-Definitions of shooting.<br><br>-Positions for combat.<br>Procedures: To Develop good writing, Reading and get a good pronunciation of the vocabulary. | To describe and know the techniques of shooting.<br><br>Describe the positions of shooting.<br><br>Each student will conduct a position of combat. New vocabulary will be taught with signs. | ➢ Lesson plan.<br>➢ blackboard .<br>➢ Manual.<br>➢ AMX-13 Tank. | An oral test will be applied to identify the level of learning.<br><br>Task about of the techniques of shooting. |

**"ARMARED CAVALRY SCHOOL"**

LESSON PLAN Nº4

1. Subject: Procedures, before, during and after of the shooting with the AMX-13 Tank.
2. Didactic unit: Four.
3. Objectives:
   - To know the Procedures for shooting.
   - To develop speaking, writing and reading skills.
4. Theme: Procedures of shooting.
5. Methodology: cognitive method.
6. Course: Specialization.
7. Time: 45 ´
8. Date: March 30th 2012
9. Teacher: Angel Sevilla.

| CONTENTS | ACTIVITIES | RESOURCES | ASSESSMENT |
|---|---|---|---|
| Cognitive<br><br>-Procedures after, during and after of shooting.<br><br>-Periscopes of shooting.<br><br>-Optical elements<br><br>Procedures: To Develop good writing, Reading and get a good pronunciation of the vocabulary. | To describe the procedures of shooting.<br><br>To recognize the procedures after, during and after of shooting.<br><br>Each student will identify the optical elements. | ➢ Lesson plan.<br>➢ Blackboard.<br>➢ Manual.<br>➢ AMX-13 Tank. | An oral test will be applied to identify the level of learning. Task about of the procedures of shooting.<br><br>To practice with the AMX-13 Tank. |

## 5. - HOW TO USE THE MANUAL.

The new English procedure manual before, during and after of the shooting is composed of 4 units that are:

Unit one: History of the Armored Cavalry.

Unit two: Steps for using the procedures manual.

Unit: three: Use of new Techniques of shooting.

Unit four: Procedures for shooting.

At the end of each unit you can find homework with different assessments about the unit, instructors are free to do this in class with the students or send as an extra class activity that could be collect it for the next day and that could be an extra score.

Each unit should be covered in five academic hours, which means that to cover the whole manual we need 20 class hours, divides in 4 hours to cover the unit and 1 hour for a practice evaluation.

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## 7. GLOSSARY

**11 BCB**: Brigada de Caballería Blindada. 11 Galápagos.

**Vehicle AMX-13.-** Is a car to the combat or to the war.

**Tower FL-15. -** It is located over the chassis of the vehicle AMX-13.

**ECABLIN.-** Escuela de Caballería Blindada.

**Platoon.-** A platoon is led by a lieutenant and consist of two to four squads or sections.

**Framework.-** A set of ideas, principles, agreements, or rules that provides the basis or outline for something intended to be more fully developed at a later stage.

**Brigade.-** A brigade headquarters command the tactical operation of two to five organic or attached combat battalions.

**Reading.-** The cognitive process of understanding a written linguistic message.

**Sample.-** A sample refers to a value or set of values at a point in time and/or space. The defining point of a sample is that it is a chosen value out of a continuous signal. The sample can be continuous-valued or discrete-valued.

**Strength.-** The property of being physically or mentally strong.

**Learning.-** Acquired knowledge: knowledge or skill gained through education.

**Teaching.-** Something that is taught, e.g. a point of doctrine.

**Mechanical tool**. - Are tools that serve to give the maintenance to AMX-13 Tank.