

## **Media Guide implemented in the virtual classroom as a support tool for teaching and learning weaving**

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### **1. Summary.**

With the rise and the easy access to internet in the past decade have opened new opportunities to the educational process. The Internet embodies a communicative utopia in which all information is available to anyone at any time and any place. This has been argued over time and now more strongly in education. The fundamental concept implicit in the past experiences of online education is that of "virtual classroom" with the development of this work is a guide incorporates multimedia virtual classroom in the course of weaving as technological support for teaching-learning that goes beyond what the traditional classroom attendance represents.

The possibility that each individual mold their own way of learning from access to global content, developing their critical thinking, communication and reflective untethered physical or temporal (space and time), make use of the multimedia guide weaving flat in the Virtual Classroom is a supplement and not a replacement enriching the classroom.

### **2. Introduction**

The multimedia guide virtual classroom to supplement the class time, is a website that is used in each class to make available to students and enrich the educational material published on the Internet resources, also published in this

space programs, schedules, and information inherent in the course and promotes communication outside the classroom boundaries between students and teachers, or between students through forums. This system allows students to become familiar with the use of information technology, also provides access to materials of every kind and from any computer connected to the network, thus allowing the virtual classroom to keep updated with the latest publications of good sources.

### **3. Development**

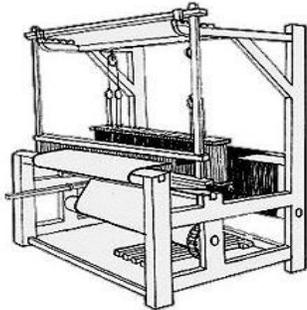
#### **LOOM**

The loom is a device built of wood or metal, which can be artisanal or industrial. The purpose of this machine is to make large-scale fabrics with yarn or other fibers. In the eighteenth century were built the "loom stick" by Edmund Cartwright Briton, who machined the loom adding a motor for driving the shuttle.

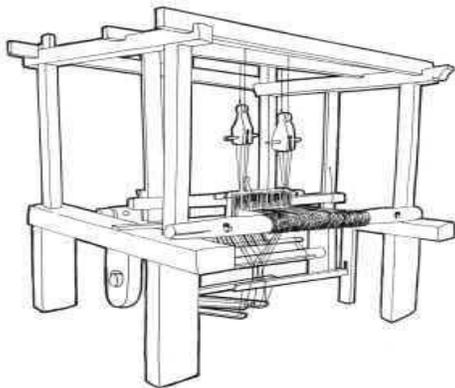
The loom craft is one of the older machines that are known and has lasted until today almost in the same format. The hand looms are classified into three families: **Racks, Vertical and Horizontal.**

**The Racks** are those wooden frames square, rectangular, triangular, hexagonal,

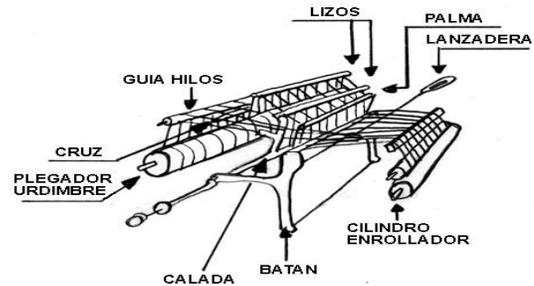
with far less than 50 x 70 cm, for flat woven fabrics.



**Uprights** are wooden boxes, which are held vertically on a base and they sometimes have a table, as a seat, added to their vertical beams. They are mainly used for making tapestries, rugs and cushions in knitted fabric.



**The Horizontal** are machines with a structure of sticks and wooden frames containing needles or screens where they spend hundreds and thousands of threads to weave fabric, primarily for coats, shawls, blankets, ponchos.



### The tissue level

Is that tissue whose structure consists of a series of **lengthwise** (warp) with another set of intersecting **yarns** (hatched) and in its most common form, is hard to stretch both vertically and horizontally. The first fabrics were plain fabrics, built by shuttle looms as is currently used in the communities of our country.

### TYPES OF DESIGN IN FABRIC FLAT

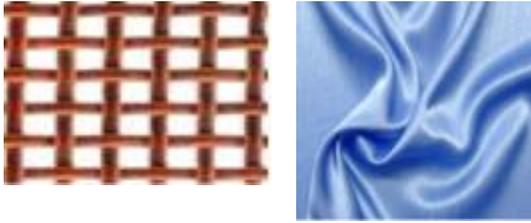
According to the production methods are designed flat fabrics can be classified as follows:

#### DESIGN RATIER

Made with a special accessory loom for building up to 32 different ligaments. The most used are:

#### Taffeta

The weft yarn passes alternately between the even and odd warp. The look is the same for the right than the reverse. It is completely smooth, without drawings.



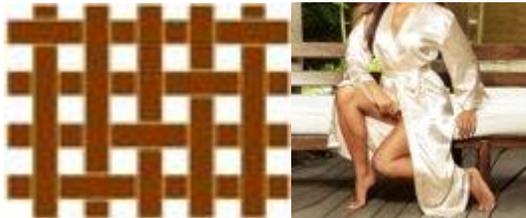
### Serge

The weft passes over two or more warp yarns and under one only, which is the consecutive passes immediately following. This produces an effect of diagonal lines.



### Satin

In the satin ligature points are distributed so that they are invisible to produce a very shiny, smooth surface.



### JACQUARD DESIGN

In this design each warp yarn is controlled individually, generating many different possibilities ligaments. Examples:

#### Brocade

Originally a silk cloth interwoven with gold or silver, where the metal was in the upper flowers or other designs. Currently the tissue is so called strong, all silk, with

drawings of different color than the background.



### Damascus

Very thin fabric, patterned weave where the weft and warp yarns consist of equal thickness, color and quality.

The effect is the drawing plane and is reversible, but lacks the upside right beauty. The most delicate damasks are woven in pure silk.



### Gobelin

They are true works of art made in wool or silk picnics or other similar reasons, with large dimensions that are used to cover walls. They are called tapestries.



## Weaving process

### STEP 1

#### **RAW MATERIAL**

Prepare the raw materials, ie the yarn hanks, the yarn comes in various colors. Each hank or group of wires is placed in the "conera" with the purpose of converting each skein of yarn on a cone of the same color.

### STEP 2

#### **FRAME**



After making the cones of the same color are placed on a wooden frame, and each wire strand passes through a brush for separating the strands.

### STEP 3

#### **URDIDOR**



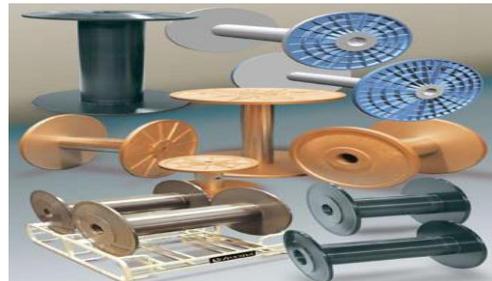
Is the provision of a set of parallel yarns on a folding cylinder, placed in a preset order and length and which **form the warp** yarns or along ranging fabric. In the process of the warp yarns are wound on the folding cylinder also called beam, which is provided with two side plates which serve to contain the spiral wound wires and a brake pulley ensures its unwinding, with uniform tension the loom.

The parameters listed this warp are:

- The number of threads.
- The length of the threads.
- The colorful forming.
- The width of the same.

### STEP 4

#### **Beam**



### STEP 5

## AVETILLAR

"Avetillar" is the process where it joins the yarn by yarn material in the beam and the remaining threads that are on the loom. Bind approximately **1250 threads**.



### The shed

Woven fabric is formed by a series of longitudinal yarns crisscross with another series of transverse yarns. That is, fabric constructed of warp and weft. Device for forming the shed on a textile loom, wherein the elevation system of the warp yarns includes, from top to bottom to give an effect in the fabric produced.

STEP 6

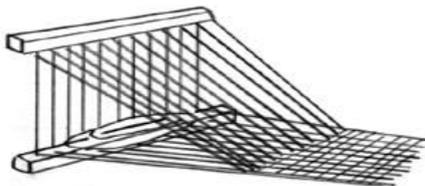
## FABRIC

After this series of steps, now begins the process of tissue in a power loom.

### Weft insertion

Weft insertion by means of the classical shuttle, which can be driven manually or mechanically.

*Clásica lanzadera*



STEP 7

### Winding roller

Formed by a pair of godets and a winder, characterized in that the reel is rotated by a drive roller, the drive roller is reduced speed with respect to the tensioner for tensioning and completely annular elongation produced in the fabric winding roller .

## 4. Results

4.1 The gathered information about weaving processes based on the syllabus Introduction to Weaving, Weaving I, II and Weaving Weaving III.

4.2 The multimedia guide is made of a Flipbook, digital book user friendly, and rise to website [www.utntejeduria.com](http://www.utntejeduria.com), which was necessary in order to implement virtual classroom.

4.3 The multimedia guide is implemented in the Virtual Classroom weaving, which both the teacher and students can now access this information and strengthen the teaching-learning process.

4.4 In Chapter V we have the user manual for the virtual classroom management through Moodle and thus meet this learning environment to perform certain activities as participation forums, send messages, among other tasks.

## 5. Conclusions

5.1 The multimedia guide implemented in the virtual classroom, collect updated information on the processes of weaving, which serves as a reference to supplement the knowledge acquired in the classroom by teachers, thus facilitating the teaching-learning process of weaving flat.

5.2 The media guide to be implemented in the virtual classroom, it was necessary to make a flipbook, which is a digital book very user friendly.

5.3 The ease of access to information in the virtual classroom offers students the opportunity to organize their time and place of study, that, in this way, from your home, office or wherever you are, you can continue studying and performing activities proposed by his teacher.

5.4 The advantage of presenting information in multimedia format, is attached to the student's current and future learning methods, such as virtual classrooms, a method widely used in developed countries and that our country has not yet reached a significant level.

5.5 The photographs and videos that were used to develop the Multimedia Guide, are illustrative, allowing users to improve the system of student learning and teacher interact removed as many concerns of matter.

5.6 The evaluation system that presents the Virtual Classroom gives students a facility to be evaluated in a modern, easy and quick to complete the assessment which will know your note or turn may have a feedback from the field.

5.7 Currently in college there is no updated information and digital weaving. With this work, taking advantage of new technologies and the easy access to internet, I am contributing to the innovation of existing information.

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