JUTE PRODUCT ARTISAN

(Qualification Pack: Ref. Id. AMH/Q7405)
Sector: Apparel, Made-ups & Home Furnishing

(Grade XII)

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NCERT

PSS CENTRAL INSTITUTE OF VOCATIONAL EDUCATION

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PREFACE

Vocational Education is a dynamic and evolving field, and ensuring that every student has access to quality learning materials is of paramount importance. The journey of the PSS Central Institute of Vocational Education (PSSCIVE) toward producing comprehensive and inclusive study material is rigorous and time-consuming, requiring thorough research, expert consultation, and publication by the National Council of Educational Research and Training (NCERT). However, the absence of finalized study material should not impede the educational progress of our students. In response to this necessity, we present the draft study material, a provisional yet comprehensive guide, designed to bridge the gap between teaching and learning, until the official version of the study material is made available by the NCERT. The draft study material provides a structured and accessible set of materials for teachers and students to utilize in the interim period. The content is aligned with the prescribed curriculum to ensure that students remain on track with their learning objectives.

The contents of the modules are curated to provide continuity in education and maintain the momentum of teaching-learning in vocational education. It encompasses essential concepts and skills aligned with the curriculum and educational standards. We extend our gratitude to the academicians, vocational educators, subject matter experts, industry experts, academic consultants, and all other people who contributed their expertise and insights to the creation of the draft study material.

Teachers are encouraged to use the draft modules of the study material as a guide and supplement their teaching with additional resources and activities that cater to their students' unique learning styles and needs. Collaboration and feedback are vital; therefore, we welcome suggestions for improvement, especially by the teachers, in improving upon the content of the study material.

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Module 1	Embellishment Techniques

Module Overview

The word embellishment means ornamentation or decoration. Embellishment enhances the beauty of any surface on which it is done. There are different types of embellishment techniques and these are used for decorating a wide variety of surfaces such as walls, paper, wood as well as fabric. The embellishment techniques used for decorating and enhancing the beauty of fabric surface are called fabric embellishment techniques.

Embellishment also adds value to the product on which it is done. The word embellishment means ornamentation or decoration. Embellishment enhances the beauty of any surface on which it is done. There are different types of embellishment techniques and these are used for decorating a wide variety of surfaces such as walls, paper, wood as well as fabric.

The embellishment techniques used for decorating and enhancing the beauty of fabric surface are called fabric embellishment techniques. Embellishment also adds value to the product on which it is done.

Learning Outcomes
After completing this module, you will be able to:
• Identify activities of finishing and packing department in an apparel industry
• Describe different embellishment techniques in jute products
• Demonstrate embellishment and Jute dyeing techniques
• Explain Care and maintenance of embellished goods
Module Structure
Session: 1 Describe Different Embellishments Techniques in Jute Products
Session: 2 Demonstrate Embellishment and Jute Dyeing Techniques
Session: 3 Explain Care and Maintenance of Embellished Goods

Session: 1 Describe Different Embellishments Techniques in Jute Products

Surface Ornamentation or embellishments is decorations that are normally added to fabrics to make them more beautiful, because of the nature of decorative patterns, which they create. Common materials that can be used for this process include fringe, boutiques, beads and buttons. In many ways, embellishment is the ultimate tool of the decorator. It can be seen, with some degree of accuracy, as the heart and soul of the decorative world. To understand and accept embellishment is to understand and accept decoration.

Let us now understand some common words or terminology that is associated with surface embellishment:

Embellishment: Anything that adds to the visual appeal of clothing or fashion accessories and increases its monetary value is considered an embellishment, ornamentation, or decoration. These items are typically affixed to fabrics without serving any practical use. The process of adding any decorative elements through the application of visual arts is known as embellishment in sewing and crafts. There are numerous ways to adorn a piece of fabric or clothing.

Introduction to embellishment techniques and related terminologies:

1. Surface Embellishment or Surface Ornamentation:

Surface embellishments or Surface Ornamentation refers to beautification of the garments or accessories by adding decorative material on to its surface by various techniques. This results in increased beauty and value of the products because of the nature of decorative patterns, which they create. Different kinds of surface design techniques are used for embellishing the fabric such as embroidery, printing, painting.

Decorative Techniques: Various techniques used for surface decoration or ornamentation in fashion and textile design.

Fabric Manipulation Techniques: Fabric manipulation is the deliberate alteration of a fabric's appearance or texture. This could entail reshaping or

texturizing the fabric. Fabric manipulation is a popular technique used by textile artists to produce original and creative designs and effects in their pieces. Examples of fabric manipulation techniques are pin tucks, pleats, darts etc.

Value Addition: Value addition means increasing the value of a product such as garments or home furnishing item by adding extra features such as embroidery, painting, making it reversible. Surface ornamentation is one of the most common ways of value addition in fashion and textile design.

Accessories:

Trims: Simply put, trims are any raw material other than fabric that are used to make clothing. They aid in the garment's assembly and are immediately bonded to it. They provide the outfit an additional styling touch. Threads, buttons, lining, Interlining, zippers, labels, care labels, interlining, elastic, etc. are a few examples of Trims.

2.   Types of Embellishment Techniques:

"Textile embellishment refers to the process of adding color, pattern, texture or design to fabric through the use of outside mediums such as thread, ribbon, sequins, yarns, buttons, buttonholes and more" **(Atwood, 2008).** Embellishment can be added in a variety of ways. The embellishment techniques can be broadly classified as follows:

• Embellishment by Surface Ornamentation Techniques such as embroidery, printing and painting

• Embellishment by Use of Trims: Ribbons, buttons, bells and other such trims can also be used to embellish different products.

• Embellishment by Fabric Manipulation Techniques: Pin tucks, pleats, gathers and ruching are some of the fabric manipulation techniques that can help in embellishing textiles and apparels.

Overview of embellishment Techniques:

"Textile embellishment refers to the process of adding color, pattern, texture or design to fabric through the use of outside mediums such as thread, ribbon, sequins, yarns, buttons, buttonholes and more" (Atwood, 2008). Embellishment can be added in a variety of ways. The embellishment techniques can be broadly classified as follows:

Printing: Printing is nothing but localized application of colour. It involves layout of motifs in a pre-decided format and then applying colour within it. The application of colour during printing can be done with the help of blocks or stencils or screens. Thus depending upon the tool used for application the printing styles can be broadly classified into:-

    a) **Block Printing**

    b) **Stencil Printing**

    c) **Screen Printing**

- **Painting:** Painting involves applying colour on the garment with the help of a brush and colours in a predecided layout. India is home to many traditional styles of paintings such as warli painting, madhubani and many more.

- **Embroidery:** Embroidery can be done with hands as well as machines. It involves making decorative stitches with needles and thread. Sometimes it also involves use of decorative material such as pearls, sequins. It also includes applique and patchwork though they are not actually embroideries.

- **Embellishment with the help of trims:** Decorative trims such as buttons, bells, ribbons, crystals and stones can also be added to increase the beauty of the products.

- **Embellishment by Fabric Manipulation:** Pin tucks, pleats, ruching are some of the fabric manipulation techniques that can be used for creating attraction and beauty in the products through surface ornamentation.

Fig: 1.1 Cushion Printing

3. Importance of embellishment

Fabric embellishment plays a crucial role in increasing the beauty of any apparel or home furnishing item on which it is done. It is a major constituent of designer wear and apparel categories such as festive wear, bridal wear, party wear and high fashion garments:

- Increases the aesthetic value or the appearance of products.

- Adds more value to the product by making it attractive and different.

- Helps in branding and selling

- Thus, attracts customers

- Embellishment is important as decorative detail or feature added to something to make it more attractive.

- It makes a product better than what it is already.

- Adds beauty and thus increases profit in fabric.

- Makes fabric good according to the taste and demand of consumer.

Advantages of Embellishments:

- Identity and Creativity.

- Add beauty to the fabric and Garment.

- Increase the value of the fabric and the Garment made out of it.

- Shows the personality of the wearer.

- Attract consumers.

- Simple material can be converted into many styles and shapes.

Factors affecting embellishment (general for all fabrics):

The choice of embellishment on any surface in general and fabrics in particular is governed by various factors:

- **Purpose:** One of the main factors that affects the choice of embellishment is the purpose for which product will be used. For ex. A party dress or a cushion cover can be embellished with sequins as it is used occasionally and is not washed and ironed frequently. Where s a daily wear dress or a pillow cover will not be embellished with sequins as they are washed frequently and require frequent ironing so the sequins will get damaged easily. Generally daily wear or daily use items are not heavily embellished.

- **Customer's Requirements:** The choice of embellishment also depends upon the customers as different customers have different liking and disliking. Some customers prefer heavy embellishments whereas others may opt for minimal or no embellishment at all.

- **Base Fabric:** Heavy and sturdy fabrics such as taffeta, casement, denim, modal can take up any amount of embroidery and trims but they may be difficult to print. Whereas lighter and thinner material such as chiffon, georgette may endure only light embroidery or sequins but can be painted easily.

- **Budget:** Since embellishment is an added feature so it comes at an additional cost. Also, hand embellishments are expensive then machine embellishments. The price f embellished goods also depend upon the amount of embellishment. More the embellishment more the price and vice versa.

- **Maintenance:** Most embellished goods require care and maintenance and often have to be dry cleaned or washed by hands. So, people who have busy lives or do not have time for handwashing may not be able to maintain the beauty of the embellished goods and hence they might opt for simple, minimalistic embellishments.

- **Trend:** Nowadays people like to follow latest trends and forecasts. Social media and internet have made it easy to be updated and people have increased disposable incomes and awareness. As a result, they like to follow the latest trends in terms of Colour and material for embellishments.

6. Tools and Materials used for embellishment Tools for Embellishment:

In the context of textile and fashion design or handicrafts, a tool is any object—mechanical or non-mechanical—that facilitates the completion of a specific work such as embroidery, printing or hand stitching. These are often hand operated either manually or with the help of power supply.

Some tools required for surface embellishment are as follows:

- Seam Ripper
- Scissors
- Thread Cutter
- Hand needles
- Awl
- Thimble
- Embroidery Frames
- Pin cushion
- Tool Box
- Tracing Wheel
- Brushes
- Wooden Blocks
- Screens
- Stencils

Fig: 1.2 Tools for Embellishment

Embellishment Material:

Apart from tools and base fabric or surface there is a requirement of additional decorative material such as threads, pearls, mirrors etc. for decorating the product. Some of the commonly used material in surface embellishment or decoration are as follows:

- Embroidery Threads
- Sewing Threads
- Fabric Glue
- Tracing Paper
- Butter Paper
- Sequins
- Pearls
- Fabric Colours
- Dyes and Pigments

Fig: 1.3 Embellishment Materials

7. Embellishment Techniques Specifically for Jute Products:

As we know by now that jute is golden, shiny fabric with a stiff and hard surface. Thus, its use is limited in apparels still but it is used widely in decorative bags, shopping bags, bottle covers, home furnishings and accessories. In apparel also, its use is being increased by blending it with other fibers such as cotton, silk, linen and rayon. It is also used in making decorative articles such as keychains, boxes, mats etc.

The accessories from jute can be made by both jute yarns as well as fabric. The embellishment techniques for jute will thus depend on:

• Physical and chemical properties of the jute products

• Type of Product

• Intended use of the product

• Budget

Following are the embellishment techniques that are generally employed for embellishment of jute products:

• Dyeing

• Printing

• Embellishment by Trims

• Embroidery

• Embellishment by Fabric Manipulation Techniques

• Applique

• Patch

Fig: 1.4 Jute bottle covers

a. decorated with trim (lace) b. hand painted c. block prints

Most commonly Jute products are embellished with patch work, applique work, printing and painting. For finer jute fabric, embroidery may also be used. Jute products such as bags, bottle covers, cushion covers are often embellished with use of trims such as decorative buttons, ribbons, laces also.

Activies

Activity 1:

Visit an embroidery /embellishment workshop and observe the materials and accessories required to do the task of embellishing the Jute fabric.

Materials required:

- A4 size papers
- File
- Pen, pencil, eraser
- Colour pens/pencils/crayons

Procedure:

- Visit an embroidery /embellishment workshop and observe the process of embellishment.
- With permission click pictures or prepare videos to support your report.
- Ask the embellishment in charge or Artisan about the various materials and accessories used while embellishing the Jute fabric.
- Make a report, collect samples if allowed.
- Present the report in class.

Check Your Progress

Fill in the Blanks:

(Printing, additional cost, pin tucks, mirror work, aesthetic value)

1. Embellishment increases _____ of products it is applied on.

2. _____ is nothing but localized application of colour.

3. Embellishment comes with an _____.

4. _____ is an example of fabric manipulation techniques.

5. _____ is an example of Embellishments.

State True or False:

1. Jute is golden, shiny fabric with a soft and smooth surface.

2. The accessories from jute can be made by both jute yarns as well as fabric.

3. Hand embellishments are usually expensive then machine embellishments.

4. Embellishments attracts the consumers.

5. Embellishment is a type of fabric not technique.

Answer in Brief:

1. Explain factors affecting the choice of surface embellishment?

2. Draw and write uses of any 5 tools used for surface embellishment.

3. What do you mean by fabric manipulation? How can it be used for Surface Embellishment?

Answer in Detail:

1. What do you mean by surface embellishment: Write its three advantages?

2. What are the various factors affecting the choice of surface embellishment for jute products?

Session: 2   Demonstrate Embellishment and Jute Dyeing Techniques

This session will emphasis on Various Embellishment Techniques and their use.

Introduction to Various Embellishment Techniques:

There are various ways of achieving surface embellishment. Some of the commonly used and popular methods of embellishment are as follows:

• Printing

• Tie-Dye and Other Dyeing Techniques for Jute

• Embroidery

• Patchwork/Applique

• Use of Different Trims including Metal and Wooden Beads

II. A. Printing: The process of printing involves applying pigments, dyes, or other related ingredients to textile textiles to create patterns. Even while these techniques seem to have originated from hand painting textiles, they are also very old. There is proof that printing was practised in India as early as the fourth century BCE.

Block, roller, screen, and heat transfer printing are the four primary techniques used in textile printing. In each of these techniques, the colour is applied first, usually as a thicker paste, and then fixed (usually by heating or steaming) and rinsing off any excess colour.

Printing Styles: There are three types of printing styles: resist, discharge, and direct. Coloured pastes are printed directly onto fabric in direct printing. In order to discharge print, the fabric is first dyed a background colour that is later removed by reagents, also known as reducing agents that are included in a print paste. While print pastes may also contain colouring materials that aren't destroyed by the discharging agent, resulting in a colourful design, this action may leave the discharged design white on a coloured background. In the resist process, In order to prevent these printed areas from receiving colour, the cloth is first printed with a material known as a resist. Only the areas of the cloth that are not printed with the resist are dyed when it is dyed or pigment padded. Using a resist to print on cloth and then treating it with caustic soda is a unique way to apply this technique to create plissé effects.

Fig: 1.5 Block Printing

- **Block printing:** Block printing is one of the most well-known printing techniques in India.Furthermore, block printing has evolved into distinct styles in every part of India. For ex, in Gujarat Ajrakh printing is practices where as in Rajasthan Sanganeri and Bagru styles of Block printing are practiced. Baagh is the printing style from M.P. Alltheseare done with wooden blocks but there motifsand colours make them different. Rajasthan is well-known for Dabu print, which employs the mud printing technique, are emblematic of the nation's rich cultural legacy. Thinner or blended jute fabrics are often printed with ths style of printing. Sometimes block printed fabric is also applied as patch or appliqueon base jute fabric for making bags, tiffin cases, cushions etc.

- **Screen printing:** Screen printing can be done automatically by a machine or by hand. The design is applied through a screen made of silk or nylon gauze stretched across a wooden or metal frame, on which the design for one colour has been replicated. The fabric is first put out on a printing table, gummed into place or pinned to a back grey. Usually, this is done through photography, but another option is to hand-paint with blocking paint that is appropriately resistant. To ensure precise pattern fitting, a screen is placed over the fabric on the table to prevent registration stops. Print paste is poured on to the screen edge nearest the operator and is spread with a squeegee over the surface of the screen so that colour is pushed through the open parts. The screen is moved until one colour has been applied to the cloth. For application of other colours, the process is repeated with different screens.

  With the growing importance of screen printing, the hand operation has been largely replaced by mechanical methods. In some machines, the screens are flat, as in hand printing; others employ rotary screens. To push colour through the exposed areas of the screen, print paste is applied to the edge closest to the operator and spread out with a squeegee across the entire surface. Until the fabric is covered in a single colour, the screen is moved. To apply other colours, repeat the procedure using separate screens.

- **Varak Printing:** "Chandi Ki Chhapai," also known as "Silver Printing," is a traditional method of printing that is used to delicately adorn clothing or textiles. This type of printing, also known as "Varak Gold or Silver Leaf Printing," employs varaks that are created by flattening gold or silver into a consistency similar to thin paper. Indian candies are likewise adorned with these thin silver sheets.

- **Stencil Printing:** One can make designs on paper or thin plastic and cut selected parts of it to get stencil for printing. The printing can be done by by misting paint or ink onto the surface. The stencil can be used exactly as is, or you can remove it off the paper and use it as a stencil to transfer it onto a substrate (such cloth, walls, or wood) and paint over it. Sanjhi art is a very special kind of paper craft from Mathura that has beautiful patterns and complex visual motifs. To do this, artisans employ scissors with unique designs.

II. B. Tie-Dye and Other Dyeing Techniques for Jute: Dyeing involves completely dipping the fabric in dye solution or colour solution to make it more attractive by changing its colour. It is different from prinying as in printing complete fabric is not immersed but dye is applies locally by stamping with a block or with the help of a brush, stencil or screen.

Tie dying is a resist process that may be used on thread before it is woven (to produce ikat), or on woven cloth. The process of tying parts of cloth tightly before submerging in dye, leaving areas undyed, is used in two classic Indian exports – Bandhani and Leheryia.

Fig: 1.6 Tie dying

II. C. Embroidery: Embroidery, often known as needlework, sprang from women's desire to decorate clothing and home fabrics while expressing their creativity. Little girls learned the craft from their moms and other elder women in the family, as it was primarily a feminine one. With a basic tool, a needle or a hook needle known as an awl or aari, the embroiderer expertly creates beautiful emotions on fabric. Stitching has been practised since the Indus Valley culture. Archaeologically discovered bronze and copper awls from Harappa provide evidence that needlework was a popular craft in antiquity. It

involves making decorative stitches on the fabric with colourful threads. May also involve bead, mirrors, buttons in doing so. It can be done with hand as well as machines. Traditional indian embroideries are done with hand and include phulkari, kaantha, chikankari, zardzozi and many more.

Fig: 1.7 Embroidery

II. D. Applique: Appliqué involves layering fabric patches on a foundation cloth, stitching them in place with a machine or by hand, and either turning under or covering the raw edges with ornamental stitching. Appliqué, which comes from the verb appliquer, which means "to put on," is occasionally used to adorn garments or bed linens. Similar to piecing, it's a technique used to make or adorn quilts. Pippali and phool patti ka kaam from uttar pradeshare traditional applique techniques of India

Fig: 1.8 Applique

II. E. Patchwork: Patchwork is the art of sewing together strips, squares, triangles, hexagons, and other shaped pieces of cloth (also known as patches) into square blocks or other units using a machine or by hand. It is one of the main methods used in quilt making and is frequently coupled with appliqué. Traditional rali quilts of gujarat are example of paatchwork.

Fig: 1.9 Patchwork

II. F. Use of Different Trims including Metal and Wooden Beads:

One of the most common ways of decorating jute products is by using decorative trims such as beads and buttons of various shapes, sizes and material such as metal, wood, bone and plastic, cowrie shells, laces, metallic threads, rhinestones, crystals and so on and so forth. Since jute fabrics are

stiff and cannot be washed often so use of trims is many a times preferred over intricate embroidery or printing because maintenance is easier when the.

Fig: 1.10 Decorating Jute Products

Activies

Activity 1:

Visit a fabric dying or Jute fabric dying unit and observe the materials and process for dying the Jute fabric.

Materials required:

- A4 size papers
- File
- Pen, pencil, eraser
- Colour pens/pencils/crayons

Procedure:

- Visit a fabric dying or Jute fabric dying unit and observe the materials and process for dying the Jute fabric.
- With permission click pictures or prepare videos to support your report.
- Ask the dying in charge about the various materials and processes used while dying the Jute fabric.
- Make a report, collect samples if allowed.
- Present the report in class.

Check Your Progress

State True or False:

1. Patchwork is one of the techniques of printing.
2. Varak printing means silver or gold leaf printing.

3.   Stencil printing is a fabric dying method.

4.   In printing the fabric is completely immersed in the dye solution.

5.   Embroidery is often known as needlework.

Match the Column:

1.	Phulkari	(a)	Applique example
2.	Phool patti ka kaam	(b)	Printing technique
3.	Ralli quilts	(c)	Embroidery technique
4.	Ajrak	(d)	Resist dyeing
5.	Leheriya	(e)	Patchwork kaantha

Answer in Brief:

1.   What do you mean by applique work? Give two examples of traditional Indian applique work.

2.   Differentiate between printing and dyeing. Also give one example of each.

3.   Differentiate between beadwork and phulkari.

Answer in Detail:

1.   Explain use of hand embroidery for surface embellishment.

2.   Explain the process of stencil printing.

3.   Explain block printing.

Session: 3	**Explain Care and Maintenance of Embellished Goods**

This session discusses on the care and maintenance of embellished goods. Preserving the intricate details and allure of products is an art. The session also explores practical activities to ensure the longevity and timeless beauty of embellished items, from delicate beadwork to intricate embroidery.

Care and Maintenance of Embellished Fabrics and Products: Embellished products are very expensive and should be handled carefully as carelessness in their maintenance and handling can ruin not only the appearance but their value also. The trims, embroidery or prints on the embellished products require special care while washing, ironing and storage as these are delicate in nature. Silk threads, beads, mirrors or sequins may get detached or get faded with harsh detergents, bleaches, high temperatures during washing and ironing.

Sometimes the embellished items of clothing, accessories & furnishings may get stained with food and drinks. These should be immediately tackled otherwise they may leave a permanent mark or discoloration on the product they fall on. Also, jute is a natural cellulosic fabric and is prone to damage by harsh detergents, stains, vigorous rubbing. Thus, immense care should be taken while washing and storing it.

Let us now understand about taking proper care and maintenance of embellished goods during washing and storage.

Tips for Washing: As we know by now that Jute is a cellulosic fiber so it is prone to damage by alkalis, microorganisms and sunlight and so it should be washed gently with lukewarm water. Embellished jute products are more fragile to damage owing to the delicate nature of various embellishments such as prints, threads, mirrors and so on and so forth. Thus, following tips should be followed while washing these:

• Preferably all embellished jute products should be hand washed.

• Since warm water may cause the fabric to shrink and harm the dyes so it is advisable to wash with cold water.

• A mild liquid detergent should be used to avoid fading, color bleeding or shrinking.

• It should not be soaked for a very long time.

- Use hands to clean and remove dirt rather than machine wash.

- Do not brush vigorously. Wash by rubbing with your hand

- Thoroughly rinse with cold running water to remove detergent or soap completely from the fabric.

- Avoid twisting or squeezing the fabric as this could cause harm or distortion.

- Dry in shade to avoid discoloration.

- Embroidered or patch worked jute products need special care so as to avoid distortion or loosening of embroidery stitches.

- The embroidery threads should be checked for colourfastness to prevent dyes from running during the washing or stain removal process.

Fig: 1.11 Jute hand washed

Dyed and Coloured Jute Products

Tips for Storing: All spare clothing and accessory items need to be stored when not in use. In certain seasons we might not use certain fibre or fabric types and so these need to be stored away.

Fig: 1.12 Dyed and Coloured Jute Products

Fig. Storage and Care of Embellished products:

Here is a step by step guide for proper storage of embellished jute products:
If you must iron jute, make sure the item is damp while ironing and iron on the inside or wrong side. It is also important to note that harsh heat can

damage jute's original color. So, iron with low heat and dry under moderate conditions. Ensure that the products are clean and dry before storing these.

- Always wash your clothing before storing it to avoid stains getting permanent, smell and dirt accumulation.

- Folding instead of hanging will help in retaining the shape of the embellished products while being stored. However heavily embellished products may be stored by hanging in covered hangers.

- Ensure a dry storage place that is not damp to avoid the growth of mold or mildew and attack by microorganisms as this may negatively affect the embellishment.

- Stains if any should be removed before storing as the food and drinks in the stain may permanently damage the colour or material of the embellishment especially in case of embroidered products, sometimes the threads may weaken also due to harshness of the chemicals in the stain.

- Stains can also darken and blemish the fabric and embellishment both.

- The storage space should be moth proof. Preferably water-based, odorless, biodegradable sprays should be used and harsh chemicals should be avoided as the harshness of chemicals will not only affect the embellishment but also the jute fabric. Moth-proof your wardrobe

- All broken items, loose threads, buttons, sequins etc should be mended and repaired before storing. This will help in keeping the embellished products looking new for a long time.

- Always store the clothing or accessories in proper packaging as packaging not only prevents clothing damage but also keeps the embellishments intact and looking new.

- The embellished product may also be wrapped in tissue paper or muslin.

- Ensure a dry, clean and well-ventilated storage space to avoid damage by microorganisms.

Tips for Stain Removal

A stain is a blemish or spot that stands out visibly from the surrounding material, surface, or medium. It makes the appearance of the product and hence stains are undesirable. They may also cause damage to fabric surface and embellishment. Stains result from the contact of two materials that are very different, either physically or chemically. Food items, drinks, perfumes, medicines, paints and other chemicals are some substances from daily life that may leave stains on the fabric and embellishments.

Accidental staining can cause embellished jute materials to appear worn, degraded, or permanently unclean. It is not recommended to wet clean or steam clean jute as it may cause discoloration of base fabric or embellishments. Since plant fibres are absorbent, there is a risk of shrinkage and puckering if jute is washed vigorously. It is thus advised to use a dry extraction technique.

If something solid drips on the jute, use a knife to clean it up or a brush to shake it off. Avoid attempting to clean using a damp cloth. Blotting is advised in lieu of brushing in the event of a liquid spill. Blotting will assist in removing some of the liquid's layers from the stained product so the remaining material may be removed or gently brushed off. Alternatively, a dry powder and hair dryer can also be used to clean and dry the stained product.

Jute also has the notable property of strongly holding on to smells. If the product comes into contact with an offensive or strong-smelling liquid, it should be air dried. This is equally crucial to doing as surface cleaning. Following are some tips for stain removal of embellished jute products:

- Remove Stains As soon As Possible: This will prevent damage to the fabric and stain getting permanent. any stain is removable if you treat it early enough
- Don't rub vigorously: Blot the stain to avoid embellishments coming out of the product.
- Avoid hot water and preferably use cold water.
- Check labels and care instructions if any to avoid usage of any unsuitable chemical or method.
- Always treat the stain from outside to inside to avoid its spreading to other parts.

Activies

Activity 1: Prepare a PowerPoint presentation or a chart on care and maintenance of embellished goods

Materials Required:

1) Chart paper

2) Pen, pencil, coloured pens and markers

3) Eraser, sharpener

4) Scale

Procedure:

1) Collect required information.

2) Organize the collected information in PPT or chart whichever is feasible to you.

3) Decorate it with pictures and graphics.

4) Get it corrected by your teacher.

5) Discuss and present in the class.

Check Your Progress

MCQ:

1.   Jute is a _____ fiber.
   - Synthetic
   - Manmade
   - Plant
   - Protein

2.   Preferably embellished jute products should be_____.
   - Machine washed
   - Handwashed
   - Not washed at all
   - Only bleached

3.   Preferably jute products should be washed with _____.
   - Hot water
   - Boiling water
   - Solvents like petrol
   - Cold water

4.   All spare clothing and accessories when not in use should be properly _____.
   - Sold
   - Donated
   - Stored
   - Given away

Fill in the Blanks:
(Damp, smells, stains, care labels)

1. _____ should be treated as soon as possible.

2. Before washing embellished products we should check the _____ on it.

3. Storage should not be _____.

4. Jute has the peculiar property of strongly holding on to _____.

Match the Column:

1. Stains   (a)   Clean and dry

2. Jute   (b)   Mild

3. Safe storage   (c)   Undesirable spots

4. Detergents for jute   (d)   Cellulosic fibers

5. Plant fibers   (e)   Very strong absorbent

Answer in Brief:

1. What are stains and why are stains undesirable

2. Why do embellished jute products require more care and maintenance as compared to unembellished products?

3. What kind of moth-proof products should be used for keeping the jute products free of moths?

Answer in Detail:

1. Explain in detail tips for safe storage of embellished jute products.

2. What points should be kept in mind while washing embellished jute products?

3. What all points should be kept in mind during stain removal for embellished jute products?

Module 2	**Finishing Packing and Quality Management**

Module Overview

In today's highly competitive global market, the importance of quality and compliance cannot be underestimated. Quality is a measure of excellence, which distinguishes products and services from those that meet or surpass customer's expectations. Quality encompasses various aspects such as durability, performance, aesthetics, and functionality, among others. Whereas standards are a set of established guidelines or specifications that products or processes must meet to ensure consistency, safety, and reliability. These standards are often developed by industry experts, regulatory bodies, or national and international organizations to guarantee uniformity and enhance consumer trust. Industries such as handloom or handicrafts have a rich history and tradition of craftsmanship and hold a special place in the cultural and economic fabric of many nations. Ensuring high-quality standards is crucial in the handloom sector for several reasons and the importance of maintaining high-quality standards increases exponentially.

It's important to note that the aesthetics of product also comes in quality. So, quality of jute products be amplified with a specific finishing techniques and processes. The latest finishing techniques can be adopted on jute products that can help and support the artisans in producing exquisite, sustainable, and sought-after handloom and handicraft creations.

So, in this unit, we will look aspects of finishing as a utmost importance in manufacturing different products. It adds aesthetic appeal, protects against external factors, enhances functionality, ensures consistency and quality control, facilitates product identification and branding, and enables effective packaging. Without proper finishing, products may lack visual appeal, be vulnerable to damage, underperform, and fail to meet customer expectations. Therefore, manufacturers must prioritize the finishing process to deliver high-quality, marketable products.

In conclusion, what quality and standards are and why they are vital in each phase. How to maintain quality in manufacturing industries. Application of Quality levels at various phases such as sourcing, production, finishing and packing for minimising defects. Factors affecting handloom and handicraft product quality to preserve its cultural heritage, satisfy customers, and remain competitive in the global market.

Learning Outcomes
After completing this module, you will be able to:
• Explain Finishing and packing of jute products
• Describe Quality Standards
• Describe common factors affecting quality of handloom
• Explain Jute Product Inspection
Module Structure
Session: 1 Understand Finishing and Packing of Jute Products
Session: 2 Describe Quality Standards
Session: 3 Describe Common Factors Affecting Quality of Handloom
Session: 4 Explain Jute Product Inspection

Session: 1   Understand Finishing and Packing of Jute Products

This session delves into the meticulous processes that transform raw jute into refined, market-ready treasures. From enhancing appeal to embracing sustainability in packaging, let's explore the essential elements that bring jute products to their completion.

1.   Finishing

The finishing process plays a crucial role in manufacturing various products. It is a step that ensures after the primary manufacturing processes, such as cutting, shaping, and assembling, have been completed. Finishing is the final touch that enhances the appearance, functionality, and overall product quality. Finishing adds aesthetic appeal and impacts significantly on the marketability of the product.

Finishing of jute products includes techniques like painting, coating, or polishing. These techniques can transform a raw product to an attractive, visually appealing product. Finishing also plays a vital role in protecting the product from external factors. Sometimes these items are exposed to harsh environments, such as extreme temperatures and moisture. Applying protective coatings or treatments can significantly increase the product's

durability and lifespan. For example, jute folder covers or dolls hanging inside the cars or outside house.

2.   Finishing of Jute Fibres

India is one of the largest producers of jute products in the world. The best part of jute items is that they don't have joints, especially in smaller products such as coasters, phone covers and door mats etc., which are made from the remains of the larger jute products. Jute is 100% Biodegradable & Recyclable, which is environmentally friendly with low Fertilizer and Pesticide needs. The finishing process of jute products involves several steps to turn raw jute fibres into usable and attractive products.

The finishing of jute products depends upon the finishing of the raw jute also. It is a called as a golden fibre and obtained naturally from the stalks of the Corchorus plants. Once the jute plants reach maturity, they are harvested and retted.

Fig: 2.1 Finishing of Jute Fibres

Finishing of Jute fabrics for making handicraft products:

The finishing process is crucial to enhance the appearance and durability of jute products.

Finishing can involve several steps:

- Jute fabrics are starched to make them stiff and improve their draping fall.
- Jute fabrics can be pressed with hot steam iron to get a smooth and shiny surface, in industries it is done by pressing the jute fabrics between two heated rollers. This process is known as calendaring.
- For improving the strength and water resistance in jute fabric products lamination can also be done. Laminated products are very useful for carrying book, lunch boxes and water bottles etc.

- Jute products can be coated with various substances to add luster, water resistance, or other desirable properties.
- Designs and patterns can be applied to jute products using different printing techniques.

Fig: 2.2 Finishing

Finishing of Jute products

Throughout the finishing process, quality control checks are performed to ensure that the jute products meet the required standards:

- **Sewing of jute products:** Sewing of jute products shall be done by hand or on flat bed sewing machine. For stitching these items cotton, nylon, nylon cotton and polyester cotton threads can be used for durable stitching. As jute fabrics are used majorly for gunny bags for storing and carrying grains. So seam strength should be good.
- **Cutting of excess thread:** Additional or extra thread should be cut or notched with the help of notchers carefully from the jute items.
- **Cleaning of adhesives or gum marks:** Adhesives used for attaching and decorative items such as beads, stones etc. is removed properly. Instead of applying adhesives with a wooden stick, arcticians may use glue gun for neat and clean appearance of the jute products.
- **Proper Cleaning of the products:** If needed, the jute products are cleaned to remove dust, dirt, or any other debris that might have accumulated during the manufacturing process.

It may be necessary to remove dust, dirt, or any other debris that accumulated during the manufacturing of the jute products. This also depends upon the size of the jute products also, small items need thorough cleaning before packing.

3. Packing

- **Packing:** Packing is the process of making a container or box that is suitable for a product to be transported and stored. Few packing materials are used for packing, such as bubble wrap, cardboard packaging, cellophane packaging, foam packaging, etc. In short, packing is the process of covering a product to prevent it from moving and damage.

- **Packaging** can be done in a variety of ways. Packaging plays an important role in ensuring that products arrive at their final destination in pristine condition, meeting customer expectations, and maintaining the quality and appearance of the products. Proper packing also minimizes the risk of damage and spoilage during transportation, thus contributing to customer satisfaction and the overall success of the Jute industry. A well-packaged product or item prevents breakage, leakage, theft, etc.

Packing of Jute Products

Packaging, which is closely related to finishing, not only protects the product during transportation but also serves as a marketing tool to attract potential customers. Once the finishing process is complete, the jute products are packaged and prepared for distribution to various markets and customers. The packing of jute products is an essential step in the manufacturing process to ensure that the finished goods are protected during storage, transportation, and distribution. Proper packaging helps preserve the quality of the jute products and prevents damage during handling.

- **Inspection of the manufactured Product:** In order to ensure consistency in size, shape and colour, the jute products undergo a thorough inspection. Any defective or damaged items are removed from the lot to keep the quality of the packed items/ products.

- **Selection of the right Packaging Material:** Depending on the nature and type of jute product, different packaging materials can be used. The following are some of the most common packaging materials used in jute products:

  ➢ Polyethylene (PE) or plastic bags: these are used for individual pieces of jute products or smaller items like jute bags, pouches, or accessories.

  ➢ Corrugated cardboard boxes: these boxes are suitable for packing bulk quantities of jute products, such as jute fabrics, rugs, or large jute bags.

  ➢ Wooden crates or pallets: they are used for stacking and transporting heavy or delicate jute products, ensuring stability during handling and shipping.

> ➢ Wrapping and Sealing: Jute products are wrapped in the appropriate packaging material to prevent moisture, dust, etc. from entering the product.

> ➢ For plastic bags or cardboard boxes, sealing tapes or adhesive is used to secure the packaging.

- **Labelling and Barcoding:** Each packed jute item/ product should have a label that indicates the product type, the quantity, the size, and the manufacturer or other relevant details. The specific label shall facilitate product branding and packaging. Branding elements, such as logos or product names, can be added. Barcoding can be used for tracking and inventory management.

- **Cushioning and Padding:** If jute products are fragile or breakable, they can be wrapped in extra padding such as foams, bubble wrap or sheets of corrugated material to avoid damage during transport.

- **Filling and Sealing Bulk Containers:** For large consignments, such as jute fabrics, bags, etc., may be transported in larger containers, such as wooden crates, pallets, etc. These are filled to the maximum capacity to reduce shifting during transport and are securely sealed.

- **Transportation:** Once packaged and ready for shipment, jute products are shipped to distribution centers, retail outlets, or other destinations depending on the needs of the market.

- **Storage:** In the absence of immediate distribution, the packaged jute products can be placed in warehouses or other storage facilities where they are neatly stacked and arranged to maximize space and ease of access.

Activies

Activity 1: Prepare a chart on the process of finishing and packaging of Jute Products.

Materials Required:

- A4 size paper or chart paper
- Colored pens or markers
- Ruler
- Pencil
- Eraser

- Reference materials on jute processing (textbooks, online resources)

Procedure:

1. Collect the required information, and pictures.
2. Ask your teacher for the directions about how to prepare the chart.

Organize the collected information in the form of a chart.

Check Your Progress

State True or False:

1. The finishing process plays a crucial role in manufacturing various products.
2. The finishing of jute products never depends upon the finishing of the raw jute.
3. Packaging, protects the product during transportation.
4. Jute products are wrapped in the appropriate packaging material to prevent moisture.
5. Barcoding on jute products is used for tracking and inventory management.

Fill in the blanks:

1. The best part of jute items is that they don't have _____.
2. _____plays an important role in ensuring that products arrive at their final destination in pristine condition.
3. A well-packaged product or item prevents_____, leakage, theft, etc.
4. _____ of jute products shall be done by hand or on flat bed sewing machine.
5. Jute products can be _____ with various substances to add lustre, water resistance, or other desirable properties.

Question Answers:

1. List jute harvesting and retting proess steps
2. Discuss finishing of jute products
3. Discuss packing of jute products in detail

Session: 2 Describe Quality Standards

Quality standards are integral in the dynamic world of Jute products. They are essential for ensuring that products meet or exceed customer expectations. This session will explore the significance of quality standards

Introduction to Quality and Standards

Definition of Quality: As per ISO – 9000:2000 Quality means "The degree to which a set of inherent characteristics fulfils requirements". As indicated by this definition of quality, quality is a collection of characteristics that constitute the capability of an entity to satisfy any stated or implied need. Quality is an indefinite and complex concept and different scholars defined it differently.

Philip Crosby

"Quality is conformance to requirements"

John Steward

"Quality is a sense of appreciation that something is better than something else"

Robert A Broh

"Quality is a degree of excellence at an acceptable price and the control of variability at an acceptable cost"

American Society For Quality Control

"Quality is the totality of features and characteristics of a product or service that bear on its ability to satisfy or implied needs"

Fig: 2.3 Definition of Quality

David Garvin suggested in 1987 that there are eight dimensions to quality. These eight dimensions are very important in defining product quality and help manufacturers meet expectations. It is a management instrument that

can be used as an outline to analyse characteristics of quality. The eight dimensions are

Fig: 2.4 Eight Dimensions

Dimensions of Quality

- **Conformance:** It is one of the dimensions of quality. This means meeting customer specifications or industry standards and workmanship. While developing new designs, measurements are set for the small portions and standards were followed for the raw material. These specifications are usually stated as a goal or "centre"; deviation from the centre is allowed within the specified range. So, Conformance refers to how closely a product complies with its specifications.

- **Performance:** A performance characteristic defines a product's primary or vital function that is related to its function or usage. For vehicles, performance would comprise features like millage per kilometre. In today's smartphones, performance would include clarity of voice received and battery backup. In restaurants performance often relates to prompt service.

- **Features:** Features are those characteristics of products or services that supplement the basic function of the product. An example includes free drinks on a plane.

- **Durability:** Lifetime of the products, which includes repairs. Durability can be defined as the amount of use one gets from a product before it deteriorates. After so many hours of use, the filament of a light bulb burns up and the bulb must be replaced.

- **Reliability:** Reliability is the ability of a product to perform under stated conditions without disappointment for a given period of time. In the case of a new car, for example, you wouldn't expect it to break down frequently after purchase. The most commonly used reliability measurements are

the Mean Time to Failure (MTTF) and Mean Time Between Failures (MTBF).

- **Serviceability:** Speed, courtesy, competence, and easy availability of repair and Maintenance of a product or service is all aspects of serviceability. Customer evaluations of a company's product and service quality are also likely to be influenced by how the company handles complaints when problems aren't immediately resolved.

- **Reputation:** Customer's perception of the product which can be understood from a market research survey.

- **Aesthetics:** The appearance given to a product to attract the end users. It refers to a product's visual appearance and how it contributes to the company's identity. An aesthetic product should not only look good, but also feel good, taste good, smell good, or sound good. This dimension is clearly determined by individual preferences and judgement, however, it can be measured. According to consumer rankings based on personal taste, some clear patterns emerge. However, aesthetics are not as universal as performance.

What are Quality standards?

Quality standards are documents that specify, require, guide or measure a material, product, process, or service in a way that can be consistently applied. Standards rovide accurate descriptions and language, they provide an authoritative and objective foundation for global organizations and consumers to communicate and do business. Standards give organizations the common vision, knowledge, processes, and language they need to meet the needs of their customers.

Importance of Quality Standards:

At first, quality can seem mysterious because what someone perceives as quality is not necessarily what someone else perceives as quality. That's why the need for quality standards and their purpose is so important. A product is considered of good quality when it has no manufacturing defects and there are no significant variations. In order for a product to be considered of good quality, it must meet certain quality standards. These standards must be set to ensure uniformity throughout the product line.

Defined standards and requirements help companies better understand what their consumers perceive as 'quality' and improve the overall picture of what a company should strive for. The quality standards should be set so that the features and characteristics offered by a product are sufficient to meet the implicit requirement of the product.

Importance of Quality: Whether it's in the form of products or services, quality plays a vital role in all aspects of life. It's used to define the level of excellence, superiority or value of a product or service. As good quality goods or services can provide an organization with a competitive edge to play an important part in defining the overall success of a product and finally satisfied customers for today and the future. It also reduces costs due to rework and sometimes product returns. Most significantly, good quality generates a positive atmosphere for the workforce of any organisation, which increases their morale and expands productivity.

The advantages of quality

• It enhances competitiveness

• Strengthens the company's brand

• Gains market share

• Helps increase profits

• Reduces total cost of product

• Reduces rework and wastage

• Raises employee motivation

• Helps with productivity

Concept of Quality: "Quality is the ability of a product or service to consistently meet or exceed customer expectations" or Quality product means "Fit for use" Degree to which a set of essential characteristics fulfils requirements

Q → Quest for excellence

U → Understanding customer's need

A → Action to achieve customer's appreciation

L → Leadership-deternmination to be a leader

I → Involving all people

T → Team spirit to work for a common goal

Y → Yardstick to measure progress

Fig: 2.5 Concept of Quality

Quality Assessment and Quality Control

Fig: 2.6 Quality Assessment

QA stands for quality assurance, and QC stands for quality control. Both terms are used interchangeably, but there are differences between them. Quality assurance (QA) is the process of providing a positive declaration about a product that builds confidence in the outcome. It provides assurance that the product will perform as expected or as requested.QA focuses on preventing defects. It ensures that the processes, approaches, techniques and processes designed for the project are correctly implemented. Quality assurance activities track and verify that the procedures used to manage and generate the deliverables are operational. Proactive quality assurance is Prevention-based. It identifies defects in the process. Quality Assurance must be completed before Quality Control.

Fig: 2.7 Quality Control

Quality control (QC) is the part of quality management that focuses on meeting quality requirements. The goal of quality control (QC) is to identify and fix defects in processes or products. As a result, QC is product-oriented. The goal of QC activities is not to remove or reduce errors but to measure their impact.

Quality control activities

1.   Quality control inspections.

2. Collection of data for quality control.

3. The process of finding, reporting and assessing instances of non-compliance.

4. Recommendations for improvements in the process.

5. Review the impact of corrective measures.

6. Quality control reports should be generated.

7. The quality control data must be utilized for applying corrective measures that can minimize errors to acceptable levels for future use.

8. The finest way to attain quality is through a process-driven quality management arrangement. This arrangement can do.

9. Identify, design and schedule processes and activities to achieve the desired result.

10. Process and product requirements should be set.

11. Measure, examine or test certain process and product features to confirm compliance.

12. Documentation of requirements and decisions with reporting.

Key Difference between Quality Assurance and Quality Control

1. Quality Assurance is intended to avoid the defect, so it's a preventive technique whereas Quality control is intended to identify and fix the defects so, it's a corrective technique.

2. Quality Assurance provides assurance that the quality demanded will be achieved, so it's a managing quality, whereas Quality Control is a process that emphasises fulfilling the quality demanded by verifying the quality.

3. Quality Assurance is a proactive approach or technique of managing quality, whereas Quality Control is a Reactive approach to verify quality.

4. Quality Assurance requires the participation of all team members, whereas Quality Control requires only a testing team.

5. Quality Assurance is performed before Quality Control as QA is involved during the development phase whereas QC's involvement is during the development phase.

6. As compared to Quality Control, in Quality Assurance less time is consumed.

7. In Quality Assurance (SPC) Statistical Process Control statistical technique is applied Example- Verification however in Quality Control (SQC) Statistical Quality Control technique is applied' Example- Validation.

Fig: 2.8 Quality Assurance and Quality Control

Explain TQM and AQL

Total Quality Management is a concept and that originated in way back to 1950s. In 1980's it slowly gained popularity as it is considered a confirmed concept of survival in the competitive world of business. TQM interprets an organization as a collection of processes. It ensures that companies should constantly upgrade their process, work practices and procedures by incorporating the proficiency and expertise of the employees. So, the practice of mastering the whole in order to reach excellence.

Importance of Total Quality Management

Customers always search for the maximum quality in terms of products or services. Every company emphasises delivering customer requirements and tries to offer premium products. For getting a high level of customer satisfaction, companies are required to offer the best quality goods & services but also need to make sure it is cost-effective & efficient.

In this context, TQM is an integral part of a company's long-term strategy. TQM is the result of the efforts and quality improvements made by companies across all departments. The quality improvements made in the manufacturing process, the inventory management, the quality of the end product, the work culture, etc., all contribute to total quality management.

TQM is broadly based on the following principles:

* **Customer-centric/focused approach:** In spite of large workforce, advanced machines, the latest technology or any design quality approach implemented in any company, the quality of developed products and services is eventually determined by the customers. So, Customer-centric TQM must be implemented on all fronts of the company.

- **Employee Involvement:** For achieving the business goals and objectives of any company, ensure the maximum involvement of the employees in quality-related issues. Encourage them to active participation in decision-making while addressing to get the best quality products from their experiences. Their involvement can be increased by organising workshops and by making the workspace more open and devoid of fear.

- **Continual efforts:** A major constituent of TQM is continual improvement. Continual improvement will lead to upgraded and higher-quality processes. Through continual improvement, companies will get improved quality products at more competitive prices. This will exceed the customer's expectations.

- **Strategic Approach to Improvement:** In order to reach the business objectives and vision they must take a strategic approach to quality improvement. A well-thought-out quality strategy is essential to ensure that quality becomes the foundation of all business processes.

- **Integrated System:** A company generally contains various departments and they have different functions. Their functions are interconnected with numerous horizontal processes TQM focuses on. For that, all the employees of the company must have an in-depth understanding of the important processes, quality policies, objectives and standards.

  One of the most important things is to create a high-quality work environment for the employees for achieving company goals and customer expectations. Having an integrated system safeguards continuous improvement and benefits companies to stay ahead of the competition.

- **Decision Making:** The performance or health of any company can be determined by the data which is generated by the measurement of the performance of various departments of the company. Data collected from various departments play a very important role in an effective TQM as this data is analysed for improving the quality, decision-making accuracy, and for forecasts. In order to avoid making emotional decisions, the decision-making process must be based on statistical and situational analysis.

- **Communications:** Communication plays a vital role in TQM. Communication always helps to encourage employees and improve their confidence during day-to-day regular operations. Bringing them into the decision-making process and routine operations that will benefit the company will make them feel empowered and this will lead to a united, successful environment in the organization. This will enable the TQM process to function at its highest level and to drive results.

Acceptable Quality Level (AQL):

"Acceptable Quality Level," or "Acceptance Quality Limit" was coined by statistician Harold F. Dodge in the early 1980s and refined by him and others over the years. The acceptable quality level (AQL) is applied to products. AQL indicates the number of defective components that are considered acceptable in random sampling quality checks. The acceptable quality level is the lowest quality level that a product can achieve. This varies between products. AQL is commonly recognized as an effective approach to random sampling during product inspection with calculated risks for clients and dealers taken into consideration and provides quantitative information to buyers and suppliers on the number of defective products that are accepted under a single inspection in accordance with the AQL sampling requirements. Those products which are likely to pose a greater health hazard will have lower AQL.

How does Acceptable Quality Level Work?

Random samples were tested in this quality system. If defective/faulty items are less in number than the predefined quantity, that product will be considered as meeting the AQL. If the AQL for a specific sample is not met, producers will assess all parameters of the manufacturing process to identify the source of the fault or defect.

QUALITY LEVEL

Fig: 2.9 Quality Level Work

AQL Defects

A defect is any feature of a product that makes it unsuitable for its intended use. Categories of defects are Critical defects, Major defects and Minor defects.

Defects: Critical - A lot of products having critical defects are totally unacceptable and are subject to outright rejection. These products fail to fulfil

the basic standards requirement. This means that there are no rules in place to control product quality. A good example of this is an electric light bulb that burns out every time it is plugged into the power. This is a dangerous product and therefore it has a rating of 0%.

Critical defects:

► Critical defects are those that, if allowed to exist, could cause significant damage to users.

► These kind of defects are not acceptable.

► With 0% AQL comes under critical defects.

Fig: 2.10 Defects Critical

Defects Major - When consumers did not accept the product because of the manufacturing conditions and not due to non-compliance with quality control regulations. These products fall under the category of "major defects". For example, a batch of cars that includes cars that have poor body spraying is considered a "major defect". It doesn't mean it's unacceptable, but it will significantly reduce the car's value. Products in this category have a rating of 2.5%.

AQL Rating of 2.5% explains that only 2.5% of an order quantity can be faulty in complete order for it to be acceptable. If more than 2.5% is faulty, then the agreement between the buyer and supplier will not be as per agreement. example, if 20,000 pairs of shorts are ordered, only 1,250 can be defective to reach an AQL of 2.5.

Major defects:

► In most cases, defects are not accepted by customers because they feel the product will fail because of that defect.

► The AQL for major defects is 2.5%.

Fig: 2.11 Major Defects

Defects: Minor - A product with a minor defect means the product is slightly deviating from the its quality requirements. In most cases, the deviation doesn't

affect the end user, so it doesn't really matter. For example, if you have an electrical appliance that has one or two screws missing but it still works fine, this will be rated 4.0%.

Fig: 2.12 Minor Defects

Acceptable Quality Level changes according to the industry and its products. In the case of medicines, AQL is should be very low, as any faults or defects cannot be accepted in medical equipment or products. They can be harmful to consumers. In the case of garment manufacturing, AQL might be higher. It all depends on the terms and conditions agreed upon between the buyer and producer at the time of placing the order.

Industry Quality Specification and Standards:

Quality Standards are published by the National Standards Body of the United Kingdom or British Standards or the International Organisation for Standardisation or any other reputed or equivalent body that publishes the Specification. Specifications contain the technical information about the products, raw materials and manufacturing of the specific product or products. International Organization for Standardization published standards like ISO 9001 and ISO 14001, as well as ISO 27001. These standards provide an outline for manufacturers or businessmen to operate within.

ISO 9000 & ISO 9001	Quality Management
ISO 19011	Auditing
ISO 14000 & ISO 14001	Environmental Management
ISO 31011	Risk Management
ISO 26000	Social Responsibility

Activies

Activity 1: Prepare a PowerPoint presentation or a chart on Quality and Standards

Materials Required:
1) Chart paper
2) Pen, pencil, coloured pens and markers
3) Eraser, sharpener
4) Scale

Procedure:
1) Collect required information.
2) Organize the collected information in PPT or chart whichever is feasible to you.
3) Decorate it with pictures and graphics.
4) Get it corrected by your teacher.
5) Discuss and present in the class.

Check Your Progress

State True or False:

1. Quality, as per ISO - 9000:2000, is defined as "The degree to which a set of inherent characteristics fulfills requirements."

2. "Features" in the context of quality dimensions refer to the design process.

3. Durability is defined as the lifetime of a product, including repairs, measuring how long one can use a product before deterioration.

4. "Aesthetics" in quality dimensions refers to the visual appearance of a product and how it contributes to the company's identity.

5. Quality standards are documents that specify, require, guide, or measure a material, product, process, or service in a consistent manner.

Fill in the blanks:

1. Performance characteristic defines a product's primary or vital function related to its _____.

2. Durability is the lifetime of products, which includes _____.

3. Reliability is the ability of a product to perform under stated conditions without _____ for a given period of time.

4. Quality Assurance (QA) focuses on _____ defects and ensures that the processes designed for the project are correctly implemented.

5. TQM is _____.

Question Answers

1. Discuss quality and its dimensions.

2. Explain quality assessment and QC

3. Explain TQM and AQL

Session: 3   Describe Common Factors Affecting Quality of Handloom

This session discusses the factors which affect the quality of handloom products

Factors Affecting the Handloom and handicraft product quality:

Handicrafts are artistically attractive and it is not always needed for physical purposes. However, there is no clear dividing line between artistic value and utility. In fact, the mark of good craftsmanship is that it ensures that the object is functional and that it appeals to more subtle forms of intelligence. However, in the case of Handlooms, it is the traditional method of making fabrics with different types of yarns. Now Jute handloom is one of the most popular and well-known handloom products in the country and worldwide. In reality, jute weaving is much more challenging than other coarser fibres. When weaving pure jute or mixed jute fibres on the cotton handloom, the weavers encountered many difficulties related to the quality of developed products mainly because jute fibre is coarse and rough.

Other than the structure and properties of jute fibres there are several other factors which affect the quality of handloom and handicraft products in India. These factors can vary from region to region and from product to product, but here are some common ones:

Raw Materials: The choice and quality of raw materials used in handloom and handicraft production have a significant impact on the final product. The availability of high-quality raw materials, especially natural fibres, dyes, and embellishments. It is vital for producing superior handloom and handicraft items.

1. **Skill and Expertise:** The quality of handloom and handicraft products largely depends on the skill and expertise of the artisans involved. Highly skilled artisans with extensive knowledge and experience in their craft are more likely to produce high-quality products.

2. **Design and Innovation**: The design and innovation in handloom and handicraft products play a vital role in their quality. Innovative designs that combine traditional techniques with contemporary aesthetics can enhance the appeal and value of the products.

3. **Infrastructure and Tools:** Handloom and handicraft production can be increased by modern machinery or equipment and tools. Which will also increase the product quality and efficiency of the artisans.

4. **Tools required for makings handloom items:** Well-maintained tools and equipment with suitable facilities for processes like weaving, dyeing, printing, and finishing, can contribute to improved quality products.

Tools required for makings handicraft items

- Simple tools which are essential for making jute handicraft items should be of good quality are required by the arcticians such as
- Sharp Notchers
- Erasable Fine tip markers
- Glue gun
- Flatbed sewing machine
- Sewing threads
- Ball point needles

5. **Quality Control and Standards:** For ensuring consistent quality improvements in handicraft and handloom productions, the implementation of actual quality control measures is essential. Creating quality standards, leading regular inspections, and sharing feedback with artisans can help them in maintaining and improving the quality of the products.

6. **Market Demand and Pricing:** Market demand and pricing pressures can impact the quality of handloom and handicraft products. When artisans face price limitations, they may compromise on raw materials or production processes, finally affecting the overall quality of the products.

7. **Training and Education:** Continuous training and value-added education for artisans can increase their skills. For improving the overall quality of the product, they should be introduced new techniques and workshops and skill development programs. Their regular training can contribute to the upliftment of handicraft and handloom quality.

8. **Government Support and Policies:** Government policies and support have a significant impact on the quality of the handloom and handicraft sector. Initiatives from the government for promoting fair trade, financial assistance, offering marketing platforms, and protection for traditional techniques can help sustain and improve the quality of handloom and handicraft products.

9. **Identification of defects:** Jute fibre is often referred to as the "golden fibre" due to its versatility, eco-friendliness, and wide range of applications in many areas. However, jute fibres also have some imperfections like any other natural material. These imperfections are identified as defects. These defects have a significant impact on the strength of fibres and their overall quality.

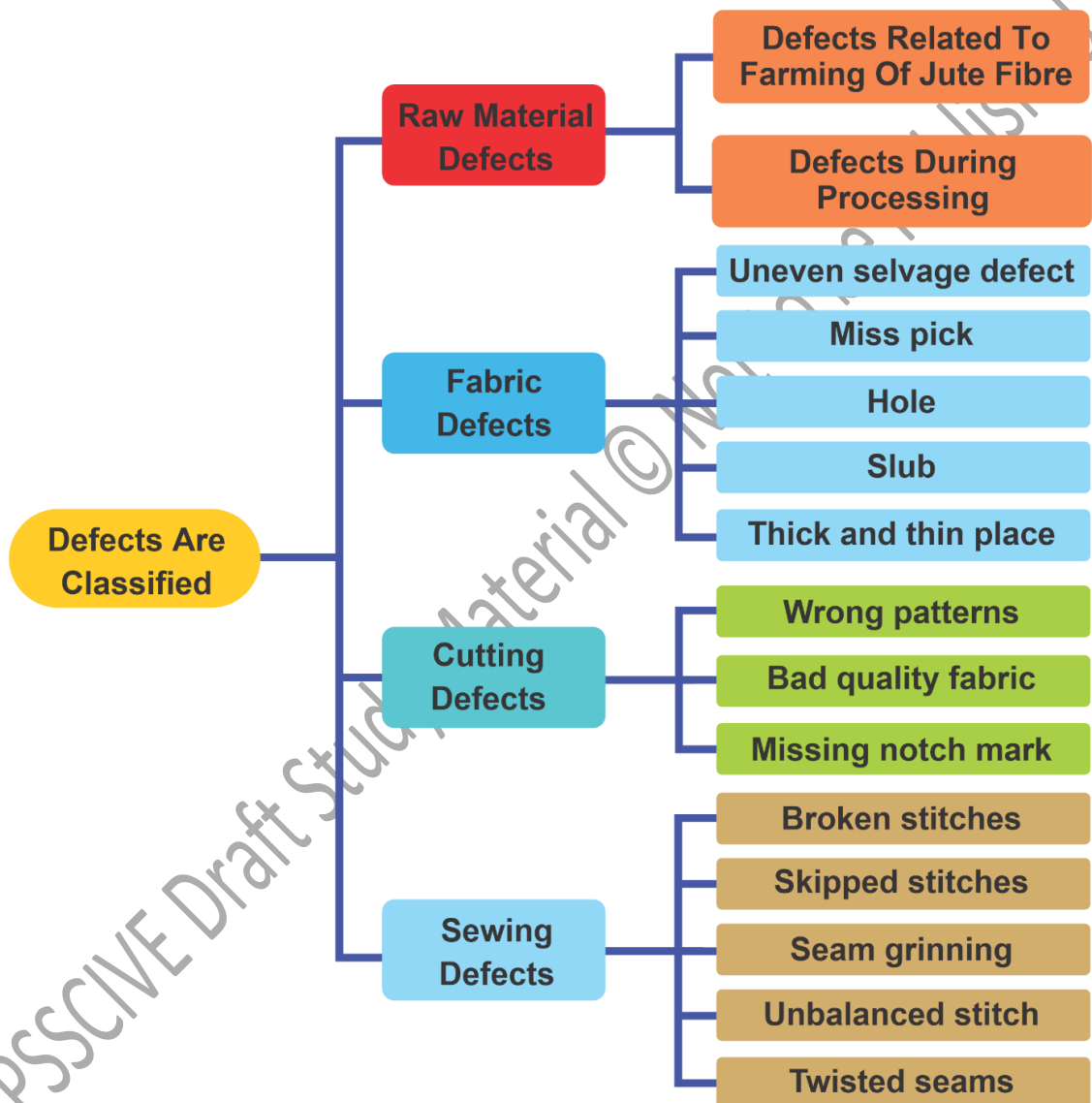Defects are classified as Raw material defects, cutting defects and Sewing defect.

Fig: 2.13 Classification of Defects

1.   Raw material defects

Defects related to farming of jute fibre:

- The term Rooty jute is used to describe fibres with root-like structures or remains on the fibre surface. When the lower part of fibres holds barks known as Rooty Jute.

- Careless steeping or Insufficient retting duration or water supply are the reasons for Croppy Jute. In this defect, the top end of the fibre becomes rough, black and hard. Softness and uniformity are vital, especially in textiles and this quality defect can affect the usability of the fibre.

- The knotty fibre is formed when the fibres are knotted or attached to each other, making it difficult to detach them from the stem of the jute fibre. This problem is caused by punctures or insertion into the growing jute plant, which causes the fibres to become intertwined or group together during the fibre extraction process.

- Dezed or Dead fibres are due to excessive retting in wet conditions, the fibre dulls, loses elasticity and becomes unsuitable for spinning.

- Careless stripping or over-retting leads to loss of firmness in the jute fibres and makes them flabby and hairy this condition is known as Flabby or Fluffy jute.

Defects during processing:

- It is one of the most common defects in jute fibres and this occurs due to insufficient washing the outer barks adhere to some places and create sticky jute. A jute fibre can be sticky or woody if the upper end of the plant is not stripped correctly during processing. Due to this plant remains to get attached to the upper end of the plant and creating a sticky or woody feel to the jute fibres and known as Sticky or woody fibre defect.

- The Runner defect is characterized by an extensive, hard, barky-looking ribbon of fibres remaining in the fibres of Jute.

- When the dry base and hard bark are not removed from the fibres these fibres become hard with barky texture and resulting in Hunka defect.

- Mossy Jute fibres contain broken jute sticks, algae, moss and fibres from short plants that cannot be stripped and cleaned properly.

- If jute fibre is baled with excessive moisture, it may cause a heart damage defect at the centre of the bale. It becomes tendered and in extreme cases, these fibres are reduced to powder in some case.

2. Fabric defects:

- **Uneven selvage defect:** this defect arises due to the faulty weaving in jute fabrics.

- **Miss pick:** Broken weft is a defect in the woven fabric that occurs when the operator runs a stopped machine without selecting the broken weft out of the shade.

- **Hole:** An opening is a type of fabric imperfection where one or more yarns are damaged enough to create an opening.

- **Slub:** If there is a slub in the yarn, then it will show up as a fault in the fabric.

- **Thick and thin place:** Fabric defect where the number of threads differs from the intended number by more than a certain percentage.

3. Cutting defects:

The quality control in cutting section is essential because the correct measured cutting is necessary to obtain the correct shape of the product. Specific parts or panels are first cut according to the design. The measurements of each panels are checked and confirmed before proceeding to the cutting. However, sometimes, even with all the quality control measures in place, some defects do occur at the cutting level. These defects include:

- **Wrong patterns:** This type of mistake is most commonly made when there is no standard pattern is used for making the products or cutting the patterns in incorrect size ratio. This type of error can also be caused by lack of understanding of patterns and their impact on production.

- **Bad quality fabric:** Fabric received without quality inspection.

- **Missing notch mark:** Notch mark not given at the required position of pattern or notch mark in pattern.

These most common cutting defects includes Miss cut, ragged cutting and mismatched plies. All cutting defects can be eliminated by setting quality control points for layers and cut parts.

4. Sewing defects:

- **Broken stitches:** this defect is the resulting from a thread that is too thick for the needle and too thin.

- **Skipped stitches:** when hook didn't pick up the loop from the eye of the needle causes skipped stitches

- **Seam grinning:** The seam itself can open up and create a space between two panels or parts of the woven jute fabric.

- **Unbalanced stitch:** The result of unbalanced thread tension between needle threads and bobbin threads/looper threads.

- **Twisted seams:** Twisted seams are caused by misalignment of fabric components, misaligned notches, and parts off the grain.

Activies

Activity 1: Prepare a PowerPoint presentation or a chart on Factors Affecting the Handloom and handicraft product quality:

Materials Required:
   1) Chart paper
   2) Pen, pencil, coloured pens and markers
   3) Eraser, sharpener
   4) Scale

Procedure:
   1) Collect required information.
   2) Organize the collected information in PPT or chart whichever is feasible to you.
   3) Decorate it with pictures and graphics.
   4) Get it corrected by your teacher.

Discuss and present in the class.

Check Your Progress

State True or False:

1. The quality of handloom and handicraft products largely depends on the skill and expertise of the artisans involved.
2. Modern machinery and tools in handloom and handicraft production can contribute to increased product quality and artisan efficiency.
3. Broken stitches is not a sewing defect.
4. Fabric received without quality inspection can be bad quality fabric.
5. If there is a slub in the yarn, then it will show up as a fault in the fabric.

Fill in the blanks:

1. The design and _____ in handloom and handicraft products play a vital role in their quality.

2. Market _____ and pricing pressures can impact the quality of handloom and handicraft products.

3. The term _____ is used to describe fibers with root-like structures or remains on the fiber surface.

4. A jute fiber can be _____ or woody if the upper end of the plant is not stripped correctly during processing.

5. Uneven selvage defect arises due to the faulty _____ in jute fabrics.

Question Answers:

1. Explain factors affecting handloom and handicraft product quality.

2. Discuss how to identify various defects in handloom products.

Session 4: Explain Jute Product Inspection

Inspections and their method:

One of the foundations for achieving constant improvement is a command of the quality inspection process. As a part of quality, inspection is the process of checking, verifying and ensuring raw materials, components in processing, semi-finished components or finished. An efficient inspection process regulates quality and increases efficiencies in the company. A thorough understanding of the inspections can help in developing a strategy for success.

So, it is a process of evaluating and verifying if the inspected items and products conform with the stated requirements.

Inspection involves:

* Understanding of specifications/ standards

* Measurement of dimensions or parameters'

* Selection of proper instruments.

* Selection of units of measurement.

* Comparison between specified and measured values

Objectives of Inspection:

* Collect information about the product's performance with established standards for engineering production, purchasing and quality control.

* Identify and resolve issues related to low-quality manufactured products to maintain standards.

TYPES OF INSPECTION

a) There are four types of inspection in quality control

b) Pre-Production Inspection

c) In process or During Production Inspection

   d) Pre-Shipment Inspection

   e) Container Loading/Unloading Inspections

  1. **Pre-production inspections:** Pre-production inspections are carried out before production starts. In some cases, pre-production inspections

are carried out by the importers also to check the readiness of the supplier or manufacturers' related types of machinery and workforce. When pre-productions are carried out by third-party inspections they check the quality and quantity of raw materials, accessories and components to be used in their product. Pre-production inspections are very useful for maintaining the quality parameters of raw materials, garniture items and components. With these manufacturers ensure that they are using the right quality of materials for the production of the products with requisite quality standards. It also helps the manufacturers in implementing the right procedures in their production line to avoid delays in their supply chain and on-time deliveries of products. These inspections are usually very useful in the case of new buyers or manufacturers.

2. **In process or during production inspection:** Quality inspections which are carried out while production is still ongoing or at least 20% of the goods produced are known as during-production inspections or in-process inspections. This type of inspection is carried out early in the production lifecycle and can help to reduce the errors made by the manufacturers over the long production lifecycles by identifying issues before producing too many defective products.

3. **Pre-shipment inspection:** It is the most prevalent to verify the quality of the products before shipping. The primary objective of the pre-shipment inspection is to confirm that the finished products are meeting the specifications. Pre-shipment inspections are generally conducted 80% of the production and packing is completed. During inspections, the quality inspector inspects random samples to determine dimensions, all tags and labels, trims and their functionality, and finally workmanship. Prior to loading goods into a container for domestic or overseas travel, the buyer or importer can inspect the goods to detect defects. The major checks in pre shipment inspections are

   - Size Requirement

   - Quality Confirmation

   - Style and Colour

   - Workmanship

   - Correct Functioning Of All Components

   - Package Details

4. **Loading or unloading inspection:** Loading inspection is the monitoring of loading or unloading of the entire goods in the correct way. The quality inspector inspects and evaluates the packaging, quality of the product and shipping container. Other inspections are conducted for ensuring product quality, whereas in loading and unloading inspections it is supervised that products are not mishandled and evaluated the inside condition of the container also because, with small negligence, things can quickly go wrong. So, inspectors ensure that products should be handled by professionals so that possibilities of damage and theft can be minimised. Loading inspections add confidence in the transporting process. Quality inspections decrease the risk.

5. **Visual inspection as a measure of quality control:** According to the American Society for Non-destructive Testing, Inc. (ASNT), "visual inspection is the observation of the surface of a study object to identify the presence of abnormalities according to a specification as a standard or standard of normal". It means a visual inspection is an inspection of a product using only the naked eye. In visual inspections, the surface of the product is checked for any cracks, misalignments, loose threads, stains or corrosion marks and other physical defects.

In visual inspections, no special equipment is required but in-depth knowledge of the product or process is required. In order to recognize the difference between the original condition and the current condition, the visual inspector must have the ability to recognize, i.e. previously knowing, then recognizing, as opposed to the current condition.

VISUAL INSPECTION AS A MEASURE OF QUALITY CONTROL

Fig: 2.14 Visual inspection Quality Control

There are so many inspection techniques but it is a non-destructive testing method for identifying the issues related to manufactured products. So, it's one of the most cost-effective quality control methods.

Visual inspection can lead to lower uptime. Traditional methods of machine inspection require machines to be turned off, which can reduce production efficiency. This is a reactive maintenance method. Today, preventive maintenance methods are preferred by maintenance professionals.

Therefore, visual inspections are not outdated. Visual inspections have become easier due to technological advancements.

For example, now maintenance professionals use drones, remote cameras and AI systems to examine parts of the machinery that are hard to reach or located with hazardous materials.

Fig: 2.15 Modern Visual

Historically, quality inspectors used to carry the torch and magnifying glass to identify the defects along with their eyes as an instrument. However, modern visual inspection has progressed and now digital images and videos are collected remotely with the use of high-quality cameras and drones. For the analysis purpose. Inspectors use those media for reviewing in real-time or later to catch defects.

Automated powered visual Inspections inspection is very common in the automotive industry for finding defects in the production phase. It helps inspectors to catch defects in unsafe areas or restricted places like storage tanks to ensure workers' safety.

Activies

Activity 1: Prepare a PowerPoint presentation or a chart on Jute Product Inspection

Materials Required:

 1) Chart paper

 2) Pen, pencil, coloured pens and markers

 3) Eraser, sharpener

 4) Scale

Procedure:

 1) Collect required information.

 2) Organize the collected information in PPT or chart whichever is feasible to you.

 3) Decorate it with pictures and graphics.

 4) Get it corrected by your teacher.

 5) Discuss and present in the class.

Check Your Progress

State True or False:

1. Inspection involves Understanding of standards.

2. The objective of inspection is to Identify and resolve issues related to low-quality manufactured products to maintain standards.

3. Pre-production inspection is a type of inspection.

4. There are not many inspection techniques.

5. Visual inspections are outdated.

Fill in the blanks:

 1. Pre-production inspections are carried out before _____ starts.

 2. _____ inspection is done to verify the quality of the products before shipping.

3. _____inspection is the monitoring of loading or unloading of the entire goods in the correct way.

4. Modern _____inspection has progressed and now digital images and videos are collected remotely with the use of high-quality cameras and drones.

5. _____powered visual Inspections inspection is very common in the automotive industry for finding defects in the production phase.

Question Answers:

1. Explain Inspection
2. Discuss types of Inspection

Module 3	Jute Products: Jute Bags and Folders

Module Overview

This unit talks about the jute design development and making of handcrafted jute products like jute bags and folders. The students will be learning the use of spec sheets and embellishment techniques as per the requirement of the product. Jute folders are mainly made to keep important papers and documents in place for easy carrying and storing. Jute bags are used for various purposes depending on the size of the bag. Small jute pouches are used for keeping small items like jewellery or cosmetic products. The most common use jute bags are as a lunch bag to carry lunch boxes to school or work. Jute bags are ideal to carry gift items like wine bags, cosmetic hampers, tea and coffee boxes etc.

Learning Outcomes
After completing this module, you will be able to:
• Explain, planning and designing of jute bags
• Describe Construction of Jute bags
• Demonstrate Construction of Jute Folders
Module Structure
Session: 1 Explain, Planning and Designing of Jute Bags
Session: 2 Describe Construction of Jute Bags
Session: 3 Demonstrate Construction of Jute Folders

Session: 1	Explain, Planning and Designing of Jute Bags

Jute has become extremely popular in recent years as an alternative to plastic bags. Whilst bespoke paper bags are great for shops to give to their customers, jute are more durable and long-lasting, making them ideal for gifting or promotional purposes. Jute bags offer a sustainable and environmentally friendly alternative to plastic and other synthetic bags, addressing pressing concerns related to pollution and ecological degradation. Unlike plastic, which takes hundreds of years to decompose and contributes significantly to environmental pollution, jute bags are biodegradable and renewable. The

cultivation of jute has a lower environmental impact, requiring fewer pesticides and fertilizers compared to the production of synthetic materials. Furthermore, jute is a robust and durable natural fiber, making jute bags sturdy and reusable over an extended period. Choosing jute bags over plastic contributes to the reduction of non-biodegradable waste, mitigates the harmful effects of plastic on wildlife and ecosystems, and supports sustainable farming practices. Embracing jute as a viable bagging solution aligns with the global shift towards eco-conscious choices, fostering a greener and healthier planet for future generations.

Fig: 3.1 Jute Bags

Reasons that jute makes excellent material for bags & folders-

- **Eco-friendly:** Jute is bio-degradable and compostable, as well as being recyclable, which makes it the perfect choice for those who are trying to be more conscious of the items they are using.

- **Hard-wearing material:** One bonus of jute bags and folders is that they last so long, making them an attractive option for customers who are wanting to get a lot of use out of their reusable bags on a daily basis.

- **Durable:** Similarly, to being hard-wearing, jute bags are considered to be very durable and can take quite a lot of weight. Jute bags are great for carrying heavier items in as they can have thicker handles and the material is strong. Jute is a great material for shopping bags.

- **Easily customizable:** As jute come in a natural colour, they are easy to print on to and customise. They are an ideal material for companies wanting to showcase their brand on a sturdy product that customers will want to keep on using.

Planning and designing jute bags involves a systematic process that combines creativity, functionality, and sustainability. Here's a comprehensive guide to help you through the planning and designing phases:

PLANNING:

Fig: 3.2 Planning

1. **Define Purpose:** Determine the purpose of the jute bags (e.g., promotional giveaways, retail merchandise, eco-friendly packaging). Understand the target audience and tailor the design accordingly.

2. **Research and Trends:** Explore current trends in jute bag design and sustainable packaging. Gather inspiration from successful designs and eco-friendly practices.

3. **Budget and Quantity:** Establish a budget for production, considering design complexity and materials. Determine the quantity of bags required for the intended purpose.

4. **Material Selection:** Choose the type of jute material based on durability, color options, and environmental impact. Consider incorporating other eco-friendly materials if necessary.

5. **Bag Styles and Sizes:** Decide on the style and size of jute bags based on functionality and user preferences. Common styles include tote bags, drawstring bags, or messenger bags.

6. **Printing Techniques:** Research and choose appropriate printing techniques compatible with jute material. Consider eco-friendly printing options and ensure they align with your design.

7. **Regulatory Compliance:** Be aware of any regulations or standards related to jute bag production and printing. Ensure compliance with eco-friendly and fair trade certifications if applicable.

DESIGNING:

Fig: 3.3 Designing

1. **Concept Development:** Brainstorm and sketch initial concepts for the jute bag design. Consider elements such as colors, patterns, and any specific messaging.

2. **Sustainability Integration:** Infuse sustainability into the design, considering eco-friendly colors, minimalistic patterns, and reusable features. Avoid excessive embellishments that may not be environmentally friendly.

3. **User-Friendly Features:** Incorporate user-friendly features such as pockets, zippers, or handles if they enhance the bag's usability. Ensure the design doesn't compromise the bag's functionality.

4. **Feedback and Refinement:** Share the design with stakeholders, colleagues, or potential users to gather feedback. Refine the design based on feedback received.

5. **Finalize Design Specifications:** Make any necessary refinements and finalize design specifications. Include details such as dimensions, color codes, and any printing requirements.

By following this comprehensive planning and designing process, you can create aesthetically pleasing, functional, and eco-friendly jute bags that align with your brand values and appeal to your target audience.

Activies

Activity 1: Prepare a PowerPoint presentation or a chart Explaining, Planning And Designing Of Jute Bags

Materials Required:

1) Chart paper
2) Pen, pencil, coloured pens and markers
3) Eraser, sharpener
4) Scale

Procedure:

1) Collect required information.
2) Organize the collected information in PPT or chart whichever is feasible to you.
3) Decorate it with pictures and graphics.
4) Get it corrected by your teacher.
5) Discuss and present in the class.

Check Your Progress

State True or False:

1. Jute bags are considered more durable and long-lasting than bespoke paper bags.
2. Jute bags are not a sustainable or environmentally friendly alternative to plastic.
3. Plastic takes hundreds of years to decompose, while jute bags are biodegradable and renewable.
4. The cultivation of jute requires more pesticides and fertilizers compared to the production of synthetic materials.
5. Jute bags are not robust and durable, making them unsuitable for extended use.

Fill in the blanks:

1. Jute bags are considered an _____ alternative to plastic bags.

2. Unlike plastic, which takes hundreds of years to decompose, jute bags are _____ and renewable.

3. The cultivation of jute has a lower environmental impact, requiring fewer _____ and fertilizers compared to the production of synthetic materials.

4. Jute bags are known for being _____-wearing and can withstand daily use.

5. Planning and designing jute bags involves a systematic process that combines creativity, functionality, and _____.

Question Answers:

Discuss the planning and Design process for Jute Bags

Session: 2   Describe Construction of Jute Bags

The construction of a jute bag involves a series of meticulous steps that transform raw jute fibers into a durable and eco-friendly packaging solution. The process typically begins with the cultivation of jute plants, primarily in regions with favorable climate conditions. After harvesting, the jute fibers are extracted from the plants and subjected to a retting process, which involves soaking the fibers in water to facilitate the removal of non-fibrous material.

Once the fibers are extracted and cleaned, they undergo spinning to form yarns, which serve as the foundational material for weaving. The weaving process involves interlacing the jute yarns to create the desired fabric for the bag. Different weaving techniques can be employed, allowing for variations in texture and strength.

After the fabric is woven, it undergoes printing or dyeing processes to add color and patterns, enhancing the bag's aesthetic appeal. The printed or dyed fabric is then cut into the appropriate shapes and sizes based on the bag's design. Skilled artisans assemble these pieces, employing sewing techniques to create the final structure of the jute bag.

The construction may include additional features such as handles, zippers, or closures, depending on the bag's intended use. Quality control measures are implemented throughout the process to ensure that the jute bags meet specified standards for durability, design accuracy, and overall craftsmanship.

The sustainable nature of jute, as a biodegradable and renewable material, makes jute bags an environmentally conscious choice in contrast to plastic or synthetic bags. The entire construction process reflects a commitment to eco-friendly practices, supporting sustainable agriculture, and contributing to the global effort to reduce reliance on non-biodegradable materials. Jute bags, with their natural charm and versatility, stand as a testament to the harmonious integration of traditional craftsmanship and modern environmental responsibility.

Fig: 3.4 Jute Bags

Making a Jute Bag

Jute bags are durable, made of strong natural fibre, so you can use it for a long time. It is a versatile natural fibre giving you plenty of choices as to design, shape, colour, print it as you want. After finalising the design for the bag, the material is selected and construction is done.

Construction steps for a simple jute tote bag with lining.

Materials Required-

- Laminated Jute fabric pieces 12x10 Inch – 2 pieces
- Laminated Jute fabric strip 32x7 Inch
- Twill tape 1 ½ inch width 30 Inch length
- Laminated Jute fabric strips 10x2 Inch – 2 Pieces

Steps of Construction:
For the Jute Bag

- Before cutting of the jute fabric, paper pattern of the bag is made for accuracy. For making a paper pattern, cut a rectangular piece (12x10 inch) of drafting paper. Mark grain line, seam allowances (1/2 inch) and other pattern details to complete the pattern.

Fig: 3.5 Paper pattern for bag

- Using the pattern paper, cut two pieces of laminated jute fabric. These will make front and back pieces of bag.

Fig: 3.6 Cut two pieces

- For providing a 3 dimensional shape to the bag, cut one strip of jute fabric (32x7 inches). Also, cut two strips (10x2 inch) for open edge finishing.

Fig: 3.7 Cut strip

• To assemble the bag, align front and back pieces of bag and join them together by using jute strip making bound seam.

Fig: 3.8 Stitch jute

• For bag handles, take Twill tape (1 ½ X 30 inches) and divide it into two equal parts (15 inches each)

Fig: 3.9 Twill tape for handles

• Finish the top of the bag by stitching strips of fabric (2x10 inch) on either side, sandwich the twill tape between the strip and body of the bag to make handles.

Fig: 3.10 Finishing the top edge and attaching handles

- For finishing the bag, clip extra threads and clean the bag for any dirt/stain. The bag is complete.

Fig: 3.11 Final jute bag

Activies

Activity 1: Design and Construct an Eco-Friendly Jute Bag

Materials Required:

1. Jute fabric
2. Scissors
3. Thread and needle or sewing machine
4. Measuring tape
5. Fabric markers or chalk
6. Decorations (optional, such as fabric paint, buttons, or ribbons)
7. Handles (jute, rope, or recycled materials)

Procedure:

1. **Research and Design:**
   o Start by researching different jute bag designs, focusing on creativity, functionality, and sustainability. Consider what makes a bag eco-friendly and how you can incorporate these elements into your design.
   o Sketch your design, keeping in mind the dimensions, purpose of the bag (e.g., grocery shopping, everyday use), and how you can reduce waste during the construction process.

2. **Gather Materials:**

   o Collect all necessary materials, prioritizing sustainable and recycled options where possible.

   o Measure and cut the jute fabric according to your design specifications.

3. **Construction:**

   o Follow the construction guide to assemble your jute bag. This includes sewing the sides, attaching handles, and reinforcing seams.

   o Ensure that each step is documented with clear descriptions and visuals (photos or drawings)

4. **Decoration (Optional):**

   o Add eco-friendly decorations to your bag. Avoid using materials that are harmful to the environment.

   o Reflect on how your decorative choices align with sustainable practices.

5. **Finalize and Present:**

   o Once the bag is complete, review your work to ensure durability and functionality.

   o Prepare a brief presentation discussing your design choices, how your jute bag aligns with eco-friendly principles, and the environmental benefits it offers.

   o Showcase your finished jute bag to the class, sharing your reflections on the construction process and the importance of sustainable practices.

Check Your Progress

State True or False:

1. Jute bags are not made of a durable and strong natural fiber.

2. The construction of a jute tote bag involves multiple steps, including the selection of materials and finalizing the design.

3. The twill tape can be used to make the shoulder straps for the bag.

4. Jute bags offer limited choices in terms of design and shape.

5. The final step involves smoothening the jute and clipping extra threads and giving a clean look to the bag.

Question Answers/Assignment

Design and construct an eco-friendly jute bag by following the provided construction guide. In your design, emphasize creativity, functionality, and sustainability. Explain how your design aligns with eco-friendly principles and contributes to reducing environmental impact. Document the construction process, detailing each step with clear descriptions and visuals if possible. Finally, showcase your finished jute bag to the class, discussing your design choices and reflecting on the environmental benefits. This assignment aims to enhance your practical skills and promote awareness of sustainable practices.

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Session 3: Demonstrate Construction of Jute Folders

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Designing jute folders involves a thoughtful combination of aesthetics, functionality, and sustainability. The process begins by selecting high-quality jute fabric, known for its durability and eco-friendly characteristics. The choice of jute provides a natural and rustic canvas for creative expression.

The first step in designing a jute folder is to outline the functional requirements. Considerations include the folder's size, the number of compartments or pockets needed, and any additional features such as closures or handles. This initial planning phase ensures that the folder serves its intended purpose effectively.

Once the functional aspects are defined, the creative process begins. Designers can explore various printing techniques to add visually appealing elements to the jute surface. This may involve incorporating brand logos, patterns, or illustrations that align with the folder's purpose. The use of eco-friendly dyes ensures that the design is not only vibrant but also in harmony with sustainable practices.

Handles or closures can be integrated into the design, enhancing both the folder's functionality and its overall aesthetic appeal. Additionally, considering the structural aspects of the folder, such as reinforced edges or stitching, contributes to its longevity and robustness.

The sustainable nature of jute aligns with the growing demand for eco-conscious products. Designers may choose to highlight this aspect by incorporating minimalist and nature-inspired themes. Moreover, jute folders can be designed to be reusable and easy to recycle at the end of their lifecycle, promoting a circular and sustainable approach.

In conclusion, the process of designing jute folders involves a seamless blend of functionality and creativity, all while embracing the environmentally friendly qualities of jute. From the initial selection of materials to the final touches of design, each step reflects a commitment to sustainable practices, resulting in a product that is not only aesthetically pleasing but also contributes to a greener and more eco-conscious lifestyle.

A folding cover or holder, typically made of stiff paper or card, for storing loose papers. Jute document A4 folder are the most common size found, as they allow to protect and organise documents of any type, from A4 to any lower size. The standard size of the jute folder is A4 (13 X 10.5 inch). Jute is a preferred fabric for folders and bags as it is eco-friendly, very sustainable and durable.

Fig: 3.12 Jute Folder

Making a Jute Folder

Jute folders are very popularly used to organise important documents. The folders can include sections inside for separating the documents. After finalising the design for the folder, the material is selected and construction is done.

Construction steps for A 4 size jute folder with embroidered flap.

Materials Required:

- ✓ Laminated Jute Fabric – 20 X 13.5 inches
- ✓ Any embroidered/printed fabric- 15 X 12 inches
- ✓ Paper Fusing – 15 X 12 inches
- ✓ Lining Fabric for flap – 15 X 12 inches
- ✓ 2 Contrast piping strips- 12 X 1.5 inches
- ✓ Magnet Closure – 1 set OR Velcro 1 ½ inch piece
- ✓ Matching thread
- ✓ Regular sewing machine
- ✓ Needle size 18

Steps of Construction:

For the Flap:

- • To give crease free appearance to the flap, stick paper fusing on the backside of the printed/ embroidered fabric using iron.

Fig: 3.13 Sticking paper fusing on Printed fabric

- Now, take the lining fabric and mark the centre. From the centre, mark 6 inch on each side. This will be the length of the flap (12 inches)

Fig: 3.14 Lining and marking of fabric

- Now, on each side, draw a line at right angles 8 inch in length.

Fig: 3.15 Draw line right angles

- From the centre of the length of lining, mark a point 10 inch above. Join the 10 inch mark to the line on either side to give the shape of the flap as shown. Cut this piece with ½ inch seam allowance.

Fig: 3.16 Shape two side

- Keeping the right sides facing each other, stich the lining with the fused printed fabric piece.

- Now, turn the flap right side out, iron and top stitch to finish the flap.

Fig: 3.17 Finishing shape

- Now, seal the lower edge of the flap and trim the extra fabric or threads.

- Mark the centre of the flap, and add Velcro. The flap for the folder is ready.

Fig: 3.18 Add velcro

For making of the Folder

- Before cutting of the jute fabric, paper pattern of the folder is made for accuracy. For making a paper pattern, cut a rectangular piece (20 X 13.5 inches) of drafting paper. Mark grain line, seam allowances (1/2 inch) and other pattern details to complete the pattern.

Fig: 3.19 Cut paper pattern

- Now, on fold of fabric, place the pattern piece and cut the fabric.

- Then fold the fabric into half and top stitch the fold of fabric.

Fig: 3.20 Top stitching fold of fabric

- Finish the side edges with the contrast coloured piping making bound seam.

Fig: 3.21 Finishing edges with bound seam

- Follow the Fig. Fig:3.21 and Fig: 3.22

Fig: 3.22 Edges Finishing

- For top edge finish, attach the flap by stitching. Stich the Velcro on the body of the folder to complete the folder.

Fig: 3.23 Complete folder

> **Points to Remember**
> Always start and finish the seams with the lock stitch.
> Cut/trim extra threads and fabric to give a neat finish.
> Use the machine needle size 18.
> Adjust the stitch size at 3.5

Activies

Activity 1: Design and Construct an Eco-Friendly Jute Folder

Materials Required:

1. Jute fabric
2. Scissors
3. Thread and needle or sewing machine
4. Measuring tape

5. Fabric markers or chalk

6. Velcro or buttons for closure

7. Cardboard or recycled material for structure (optional)

8. Decorations (optional, such as fabric paint, patches, or recycled materials)

Procedure:

1. **Research and Design:**
   - Begin by researching different types of folders, focusing on eco-friendly materials, functionality, and durability. Consider the size, compartments, and closures in your design.
   - Sketch your design, paying attention to how it can be constructed with minimal waste and how it will meet the intended use (e.g., holding documents, notebooks, or other items).

2. **Gather Materials:**
   - Collect all necessary materials, prioritizing sustainable and recycled items, such as leftover jute fabric or recycled cardboard.
   - Measure and cut the jute fabric to fit the size and shape of your folder design. If using cardboard for structure, cut it accordingly.

3. **Construction:**
   - Follow the construction guide to assemble your jute folder. This may include sewing the fabric together, attaching the closure mechanism, and reinforcing the edges for durability.
   - If adding compartments, carefully sew or glue these into place, ensuring they are functional and aligned with your design.
   - Document each step of the construction process, providing clear descriptions and including visuals (photos or drawings) to illustrate your progress.

4. **Decoration (Optional):**
   - Add eco-friendly decorations to your folder, ensuring they align with sustainable practices. For example, you might use fabric scraps, natural dyes, or recycled embellishments.
   - Reflect on how these choices contribute to the overall sustainability of your project.

5. **Finalize and Present:**

- o Review your completed folder to ensure it meets your design criteria for functionality and durability.

- o Prepare a brief presentation discussing your design choices, how your jute folder aligns with eco-friendly principles, and the environmental benefits of your creation.

- o Showcase your finished jute folder to the class, sharing your reflections on the construction process and the importance of incorporating sustainable practices into everyday items.

Check Your Progress

State True or False:

1. The design process for jute folders does not involve a thoughtful combination of aesthetics, functionality, and sustainability.

2. The first step in designing a jute folder is to select low-quality jute fabric, compromising durability.

3. Jute folders are designed to be reusable and easy to recycle, promoting a circular and sustainable approach.

4. Jute is a preferred fabric for folders and bags due to its eco-friendly, sustainable, and durable nature.

5. The construction steps for an A4 size jute folder with an Printed/embroidered flap do not involve using a regular sewing machine.

Fill in the Blanks:

1. Designing jute folders involves a thoughtful combination of _____, functionality, and sustainability.

2. The first step in designing a jute folder is to outline the _____ requirements.

3. The choice of jute provides a natural and rustic canvas for _____ expression.

4. Jute folders can be designed to be _____ and easy to recycle at the end of their lifecycle.

5. A folding cover or holder, typically made of stiff paper or card, for storing loose papers is known as a _____.

Question Answers/Assignment

Design and construct an eco-friendly jute folder by following the provided construction guide. In your design, emphasize creativity, functionality, and sustainability. Explain how your design aligns with eco-friendly principles and contributes to reducing environmental impact. Document the construction process, detailing each step with clear descriptions and visuals if possible. Finally, showcase your finished jute folder to the class, discussing your design choices and reflecting on the environmental benefits. This assignment aims to enhance your practical skills and promote awareness of sustainable practices.

Module 4	Jute Products: Jute Dolls and Their Variations

Module Overview

This unit discusses about the jute design development and making of handcrafted of jute dolls. The students will be learning the use of spec sheets and embellishment techniques as per the requirement of the product. The craft of Jute doll making that emerged in a district of Bengal named Murshidabad, is one such sought after article. Jute twines, rope and jute fabric can be used to make dolls. Jute dolls has versatile uses. It can used as play dolls, decorative dolls showcasing the traditional outfits of various states of India, keychains, handbag charms and trims to decorate hats and other articles. However, the art of jute doll making is not so popular and it is only practiced by a few. This unit encourages the students to learn and promote the jute handicrafts globally.

Fig: 4.1 Jute Dolls

Learning Outcomes
After completing this module, you will be able to: • Explain designing and planning of jute dolls   • Describe Construction of jute dolls   • Describe creative freedom and its use in increasing process efficiency
Module Structure
Session: 1 Explain Designing and Planning of Jute Dolls
Session: 2 Describe Construction of Jute Dolls
Session: 3 Explain Jute doll Variations

Session: 1   Explain Designing and Planning of Jute Dolls

Creating enchanting jute dolls involves a thoughtful combination of creativity, meticulous planning, and skilled craftsmanship. This guide will take you through the essential steps in designing and planning jute dolls, ensuring a delightful outcome that reflects both aesthetic appeal and eco-friendly principles.

Designing and planning for jute dolls involves creating a sketch that outlines the doll's appearance, size, and features. The important steps for planning the jute doll are listed below.

a) **Define the purpose and the style**: The first step to start any project is to decide the purpose for it. Determine the purpose of the jute doll whether it is for decoration, a trim or a specific theme. After finalising the purpose, decide about the style if it is going to be traditional or modern style.

b) **Determine the size:** Once the purpose is decided, the size of the doll is another important decision to finalise the materials to be used.

01 Define the purpose and the style

Determine the size 02

03 Take inspiration

Sketch the design 04

05 Select the materials and tools

Arrangement of Selected Materials 06

07 Product Spec Sheet, Suitable Stitch Type, and Methods

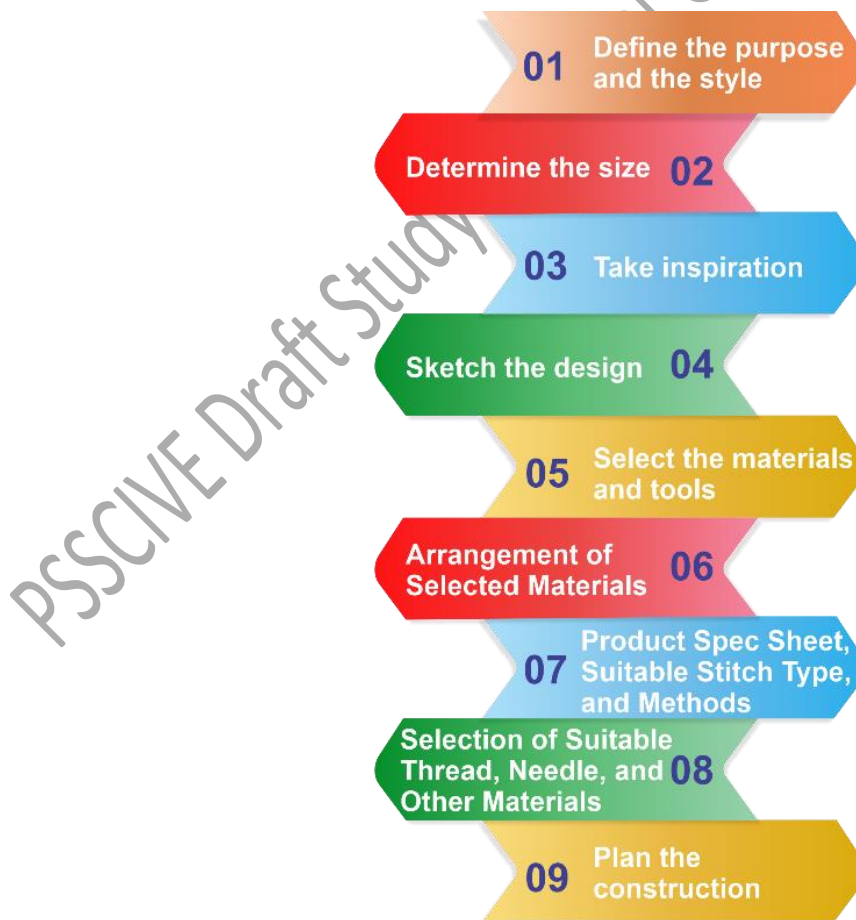Selection of Suitable Thread, Needle, and Other Materials 08

09 Plan the construction

Fig: 4.2 Designing and planning of jute dolls

c) **Take inspiration:** Research and look for various types of dolls already available and take inspiration for the doll to be constructed as per the style, size and the purpose finalised for the project.

d) **Sketch the design:** The foundation of crafting unique jute dolls lies in the initial design phase. Begin by sketching your doll's features, including size, shape, and any distinctive characteristics. Consider the personality you want your doll to exude, as this will influence design elements such as facial features, clothing, and accessories. Draw a rough sketch of the doll as per the size and style. At least have 4-5 sketches before the final sketch is selected. Clearly sketch out the details on the doll and the colour combination.

e) **Select the materials and tools:** Once the final sketch is ready, start collecting the materials – jute fabric or jute yarn or both, threads, needle and other important tools to help in the construction of the doll. Selecting the right jute fabric is crucial for achieving the desired texture and appearance. Opt for high-quality, natural-colored jute to provide a rustic and organic canvas for your doll. Additionally, consider incorporating other sustainable materials like cotton or linen for clothing or embellishments.

f) **Arrangement of Selected Materials:** Once the design is finalized and materials are chosen, organize your workspace for efficient assembly. Arrange the jute fabric, additional fabrics, and any embellishments in a systematic manner to streamline the construction process. Having a well-organized workspace enhances precision and creativity during the crafting phase.

g) **Product Spec Sheet, Suitable Stitch Type, and Methods:** Developing a product specification sheet acts as a blueprint for your jute doll. Include details such as dimensions, color schemes, and any specific design features. This sheet serves as a reference throughout the crafting process, ensuring consistency in your final product.

Choosing the right stitch type and methods is crucial for achieving durability and aesthetic appeal. Consider employing basic stitches like running stitch or backstitch for securing seams and creating intricate details. Experiment with embroidery stitches to add personality and charm to your jute doll's features.

h) **Selection of Suitable Thread, Needle, and Other Materials:** Selecting appropriate thread, needle, and other materials is key to achieving a professional finish. Use sturdy thread that complements the natural tones of the jute fabric. Opt for needles suitable for jute and other fabrics used in your doll's construction. Consider incorporating additional materials like recycled buttons, yarn, or eco-friendly stuffing to enhance the doll's

character and adhere to sustainable practices. These choices contribute to an environmentally conscious approach in crafting jute dolls.

i) **Plan the construction:** Plan the details of the construction. Create patterns if required, cutting of the various parts of the doll, joining the parts together, stuffing if required and decorations applied.

Reasons that jute makes excellent material for dolls:

Fig: 4.3 Excellent material for dolls

- **Eco-friendly:** Jute is bio-degradable and compostable, as well as being recyclable, which makes it the perfect choice for those who are trying to be more conscious of the items they are using.

- **Versatility:** Jute dolls can take on different styles and designs, ranging from traditional and rustic to contemporary and modern. They can be decorated and customized with various embellishments, clothing, and accessories to suit different themes and preferences.

- **Artistic Expression:** Jute dolls provide a canvas for artistic expression, allowing crafters to experiment with different techniques and materials. This makes them an enjoyable and creative craft project. Durable

- **Easily customizable:** Jute dolls offer ample opportunities for customization. Crafters can choose different colours, patterns, and designs for clothing, hair, and facial features. This allows for unique and personalized creations.

- **Sustainable Crafting:** The popularity of jute dolls aligns with the growing trend of sustainable and eco-friendly crafting. Using natural materials like jute promotes environmentally responsible practices.

Activies

Activity 1: Prepare a PowerPoint presentation or a chart Explaining, Design and planning of Jute Dolls.

Materials Required:

1) Chart paper
2) Pen, pencil, coloured pens and markers
3) Eraser, sharpener
4) Scale

Procedure:

1) Collect required information.
2) Organize the collected information in PPT or chart whichever is feasible to you.
3) Decorate it with pictures and graphics.
4) Get it corrected by your teacher.

Discuss and present in the class.

Check Your Progress

True or False:

1. Jute dolls can be used for various purposes such as play dolls, decorative dolls, keychains, handbag charms, and hat trims.

2. The art of jute doll making is widely practiced and popular among artisans globally.

3. Designing and planning jute dolls involves creating a sketch outlining the doll's appearance, size, and features.

4. Determining the purpose of the jute doll is not an essential step in the planning process.

5. The size of the jute doll is an important decision to finalize the materials to be used.

Fill in the Blanks:

1. The essential steps in designing and planning jute dolls involve creating a sketch that outlines the doll's appearance, size, and _____.

2. Researching and looking for various types of dolls already available can provide _____for the doll to be constructed.

3. Once the final sketch is ready, start collecting the materials – jute fabric or jute yarn or both, threads, needle, and other important _____to help in the construction of the doll.

4. Choosing the right thread, needle, and other _____is key to achieving a professional finish in jute doll making.

5. The popularity of jute dolls aligns with the growing trend of _____and eco-friendly crafting.

Question:

Explain the designing and planning of jute dolls.

Discuss the reasons that makes jute an excellent material for jute dolls.

Session: 2   Describe Construction of Jute Dolls

Jute dolls are handmade dolls crafted primarily from jute. Jute is eco-friendly and sustainable fibre, making it an excellent choice for crafting dolls and other decorative items. Jute dolls can be constructed using various forms of jute, including jute fabric, jute twine, and jute ropes. The jute material is shaped into a doll's body, head, limbs, and other features, and then assembled using sewing, gluing, or a combination of both methods. Jute dolls offer a creative and environmentally responsible way to craft decorative items, toys, and gifts. They are appreciated for their rustic charm and versatility in design, making them a delightful addition to the world of handmade crafts.

Construction steps for small size jute doll using jute yarn:
Materials Required-
- ✓ One spool of jute yarn
- ✓ Any coloured yarn – 1 small spool
- ✓ Scissors
- ✓ Card board- 16cm X 10 cm

Fig: 4.4 Material

Steps of Construction-
A. Preparation of the parts
a) For the main body
1. Wrap the jute yarn on the cardboard lengthwise for 25 times.

Fig: 4.5 Wrap jute yarn
2. Carefully remove from the cardboard and cut the yarns from one end.

Fig: 4.6 Cut yarn

b)   For hair

3.   Wrap the jute yarn on the cardboard lengthwise for 12 times.

Fig: 4.7 Wrap yarn 12 times

4.   Carefully remove from the cardboard and cut the yarns from one end.

Fig: 4.8 Cut yarn carefully

c)   For the limbs

5.   Wrap the jute yarn on the cardboard lengthwise for 12 times.

Fig: 4.9 Wrap yarn 12 times

6.   Carefully remove from the cardboard and cut the yarns from one end.

Fig: 4.10 Carefully remove from cardboard

7. Tie the yarns about 1 inch from the edge. Equally distribute the yarns in three parts and braid. Tie to finish the end.

Fig: 4.11 Tie yarn

8. Trim the yarns from each side to make it equal and neat.

Fig: 4.12 Trim yarn equal and neat

B. Assembly of yarns to form the doll

•   Place the bigger set and the smaller set of yarn crosswise to each other and tie tightly to form the head.

Fig: 4.13 Place yarn crosswise

- Divide the body portion into two equal parts and place the braided yarn equally across the centre.

Fig: 4.14 Body portion 2 equal parts

- Tie tightly to form the body and secure the hands.

Fig: 4.15 Tie tightly body and secure

- Divide the yarns on the top into three equal parts and braid to make the hair of the doll.

Fig: 4.16 Making hair three equal parts

- Secure the edge by tying with a yarn and trim to make it even and neat.

Fig: 4.17 Trim hair even and neat

- Trim the yarns from the bottom to make it even and neat. The doll is ready.

Fig: 4.18 Final Doll

- Decorate the doll with the coloured yarn as shown in the images (or as per the theme) to add to the aesthetic appeal.

Fig: 4.19 Finished Doll

Construction steps for small size jute doll using paper, jute yarn and jute fabric.

This second method of construction is another sustainable method of doll making. It requires used paper, jute yarn and fabric.

Materials Required:

✓   Used A-4 size sheets – 4

✓   Plastic bottle- small size

✓   Jute fabric- 16" X 8"

✓   Jute twine- one spool

✓   Jute lace- 1 meter

✓   Oval shape thermocol ball (for head) – 1

✓   Tape

✓   Glue gun

✓   Pearl beads for decoration

Steps of Construction

A.   To form the body

1.   Divide the A 4 sheet into three equal parts lengthwise and cut.

Fig: 4.20 Three equal parts paper

2.   Roll the sheet tightly from one corner and secure with glue at the other end.

Fig: 4.21 Roll sheet and glue

3.   Prepare 12- 13 such paper rolls in the same way.

Fig: 4.22 Prepare 12-13 paper rolls

4.   Cut 2 rolled paper sticks into half. Take 3 half rolled paper sticks and tape together tightly.

Fig: 4.23 Take 3 half rolled paper sticks

5.   Place full length rolled paper stick 1" below across this in the centre and stick this using glue.

Fig: 4.24 One paper sticks put centre

6.   Fold 2 paper rolls on either side of the centre to form the body of the doll.

Fig: 4.25 Fold 2 paper rolls

7.   Secure with thread/tape firmly form below.

Fig: 4.26 Thread/Tape firmly

8.   Flatten one of the rolled paper roll and wrap it onto the top portion to shape the body of the doll.

Fig: 4.27 Top portion shape body

9.   Fix this structure into the neck of the bottle and secure firmly with the tape. The body of the doll is ready.

Fig: 4.28 Body of the doll

B.   To add the fabric and the decorations

1.   Measure the length of the bottle from the neck till the base (approximately 8").Take the jute fabric and wrap it around the neck of the bottle while adding pleats at regular intervals. The pleats add volume at the base of the skirt.

Fig: 4.29 Put jute fabric on bottle

2.   Glue the edges of the skirts together. Finish the hem of the skirt with the jute lace using glue.

Fig: 4.30 Stick Jute lace

3.   To cover the upper body, use the jute twine. Start wrapping the jute twine from the neck of the bottle upwards securing it neatly with the glue. Wrap the jute twine on the upper and the lower arm of the doll.

Fig: 4.31 Jute cover upper body

4.   Finish the waistline using the lace to give it a neat look.

Fig: 4.32 waistline using the lace

5.   For the shoulder and the neck, wrap the jute twine neatly from the front and the back till the neck of the doll.

Fig: 4.33 Shoulder and neck of doll

6.   To form the head of the doll, wrap the jute twine all over.

Fig: 4.34 Head of doll

7.   To form the hair, loop the jute twine 6-7 times and tie in the centre. Cut the edges of the loop and untwist the jute twine then Spread the twine and glue. Stick the hair on the centre of the head. Neatly tie the strands to form a pony teal. Trim the extra and roll to form a bun. To decorate

the centre parting of the hair with pearl bead. Use the pearl beads to form the earnings for the doll. Place the head over the neck and glue firmly.

Fig: 4.35 Final head of doll

8. To form the sleeves of the dress, use the jute fabric. Using the pattern (as shown in the image) trace the shape on the jute fabric. Make 2, one for each arm.

Fig: 4.36 Dress sleeves

9. Decorate the edges of the sleeve as shown in the image and cut. Roll and glue the edges to form the sleeves.

Fig: 4.37 Decorate edges of sleeve

10. Slide the sleeves over the arms of the doll.

Fig: 4.38 Slide sleeves arms of the doll

11. Further decorate the doll as per the theme and the style.

Fig: 4.39 Doll decoration

12. The jute doll is ready.

Fig: 4.40 Finished Jute doll

Upcycle or recycle products by using jute

The above two methods of doll making using jute are not only the methods. There can be various other methods of construction by recycling or upcycling the materials available. Empty plastic bottles, old broken dolls and many other waste items can be used to make jute dolls.

As discussed earlier in the chapter, jute dolls can be used for various purposes like small dolls can be used as keychains, handbag charms and trims for decorations. The medium to big size dolls can be used as play dolls, decoration items or for gifting purposes.

Jute doll craft is an old and sustainable craft which needs revival. Many NGOs and individuals are working towards uplifting this craft and taking initiatives

for global awareness. This chapter makes the students aware of the craft and encourage them to use more sustainable ways of crafting with jute.

Activies

Activity 1- Design and Construct Eco-Friendly Jute Dolls

Materials Required:

1. Jute fabric or jute twine
2. Scissors
3. Thread and needle or glue gun
4. Measuring tape
5. Fabric markers, paints, or natural dyes
6. Recycled materials for stuffing (e.g., old fabric scraps, paper)
7. Embellishments (optional, such as beads, buttons, or recycled fabrics)

Procedure:

1. **Research and Design:**
    o   Research various jute doll designs to understand different techniques and styles. Focus on creativity, aesthetics, and sustainability in your design.
    o   Sketch your doll design, considering details like facial features, clothing, and any accessories. Think about how you can use jute creatively and ensure the doll is both visually appealing and eco-friendly.

2. **Gather Materials:**
    o   Collect the required materials, with an emphasis on sustainability. Use jute fabric or twine for the main structure and recycled materials for stuffing.
    o   Measure and cut the jute fabric or twine based on your design specifications.

3. **Construction:**
    o   Follow the construction guide to assemble your jute doll. This includes creating the body, sewing or gluing parts together, and adding details like facial features and clothing.

- o If using twine, you may need to twist or braid it to create different parts of the doll. For fabric, cut and sew or glue pieces together to form the doll's body.

- o Document each step of the construction process with clear descriptions and visuals (photos or drawings). This will help illustrate how your design comes to life.

4. **Decoration:**

- o Decorate your jute doll using eco-friendly materials such as natural dyes, recycled fabrics, or fabric markers. Avoid non-biodegradable materials that could harm the environment.

- o Reflect on how your decorative choices contribute to the sustainability of the project and the overall aesthetics of the doll.

5. **Finalize and Present:**

- o Ensure your jute doll is complete and meets the design criteria for creativity and sustainability.

- o Prepare a brief presentation explaining your design choices, how your jute doll aligns with eco-friendly principles, and the environmental benefits of using sustainable materials.

- o Showcase your finished jute dolls to the class, discussing the construction process, the design elements, and the importance of sustainable practices in creating decorative and functional items.

Check Your Progress

True or False:

1. Jute dolls can be constructed using various forms of jute, including jute fabric, jute twine, and jute ropes.

2. Jute dolls offer a creative and environmentally responsible way to craft decorative items, toys, and gifts.

3. In the construction steps for a small size jute doll using jute yarn, hair is made by braiding the yarns.

4. The second method of construction for a small size jute doll involves using jute fabric, paper, and a plastic bottle.

5. Empty plastic bottles and old broken dolls cannot be used for upcycling or recycling in jute doll construction.

Fill in the Blanks:

1. Jute dolls are handmade dolls crafted primarily from _____.

2. Jute is an eco-friendly and sustainable _____, making it an excellent choice for crafting dolls and other decorative items.

3. The jute material is shaped into a doll's body, head, limbs, and other features, and then assembled using _____ , gluing, or a combination of both methods.

4. The second method of construction for a small size jute doll involves using used paper, jute yarn, and _____.

5. Many NGOs and individuals are working towards uplifting the craft of jute dolls and taking initiatives for _____.

Question Answers/Assignment

Design and construct jute dolls by following the provided construction guide. In your design, emphasize creativity, aesthetics, and sustainability. Explain how your design aligns with eco-friendly principles and contributes to reducing environmental impact. Document the construction process, detailing each step with clear descriptions and visuals if possible. Finally, showcase your finished jute dolls to the class, discussing your design choices and reflecting on the environmental benefits. This assignment aims to enhance your practical skills and promote awareness of sustainable practices.

Session 3: Explain Jute Doll Variations

Exploring Jute Doll Variations: Jute dolls, with their eco-friendly and sustainable characteristics, have evolved into a versatile craft, offering a myriad of variations that showcase creativity and cultural diversity. Here, we delve into the intriguing world of jute doll variations, exploring the different styles, themes, and techniques employed by artisans to craft these unique and charming creations.

Traditional and Modern Styles: Jute dolls come to life in various styles, ranging from traditional to modern. Artisans often infuse traditional elements, reflecting the rich cultural heritage of regions like Bengal, where the craft originated. On the other hand, contemporary styles embrace innovation, bringing a modern flair to these handmade dolls.

Cultural Representation: One captivating aspect of jute dolls is their ability to represent diverse cultures. Crafters skillfully design dolls adorned in traditional outfits, showcasing the distinct clothing styles of various states in India. Each doll becomes a miniature cultural ambassador, celebrating the vibrant tapestry of our world.

Size and Purpose: Jute dolls vary not only in style but also in size and purpose. From small keychain-sized dolls to larger play dolls, each size serves a unique purpose. The smaller ones make delightful accessories as keychains or handbag charms, while medium to large-sized dolls become cherished playmates or eye-catching decor items.

Embellishments and Accessories: Crafters often elevate the charm of jute dolls by adding embellishments and accessories. Colored yarn, jute lace, and recycled buttons become tools for personalization. This allows for a rich tapestry of creativity, where each doll becomes a canvas for unique expression.

Themed Creations: Jute dolls thrive in themed variations, allowing crafters to explore specific concepts or stories. Whether inspired by nature, seasons, or cultural festivities, themed jute dolls capture the essence of the chosen subject, adding a narrative element to the craft.

Global Fusion: The global appeal of jute dolls has led to a fusion of styles and influences from various parts of the world. Crafters incorporate elements from different cultures, creating dolls that resonate with a diverse audience. This global fusion not only broadens the artistic scope but also promotes cross-cultural appreciation.

Sustainable Crafting Practices: A defining feature of jute dolls is their commitment to sustainability. Crafters embrace eco-friendly materials and techniques, ensuring that each doll aligns with environmentally conscious

practices. This dedication adds an extra layer of significance to these handcrafted wonders.

Artistic Experimentation: Jute dolls provide a platform for artistic experimentation. Crafters explore different techniques, from stitching patterns to embellishment styles, pushing the boundaries of traditional crafting. This experimentation results in dolls that are not just objects but unique pieces of art.

In conclusion, the world of jute doll variations is a testament to the boundless creativity and cultural richness encapsulated in this eco-friendly craft. Whether traditional or modern, small or large, each jute doll tells a story and stands as a testament to the enduring charm of handmade creations.

Creating variations in jute dolls involves experimenting with design, materials, and themes. Here's a step-by-step guide to help you craft diverse and unique jute doll variations:
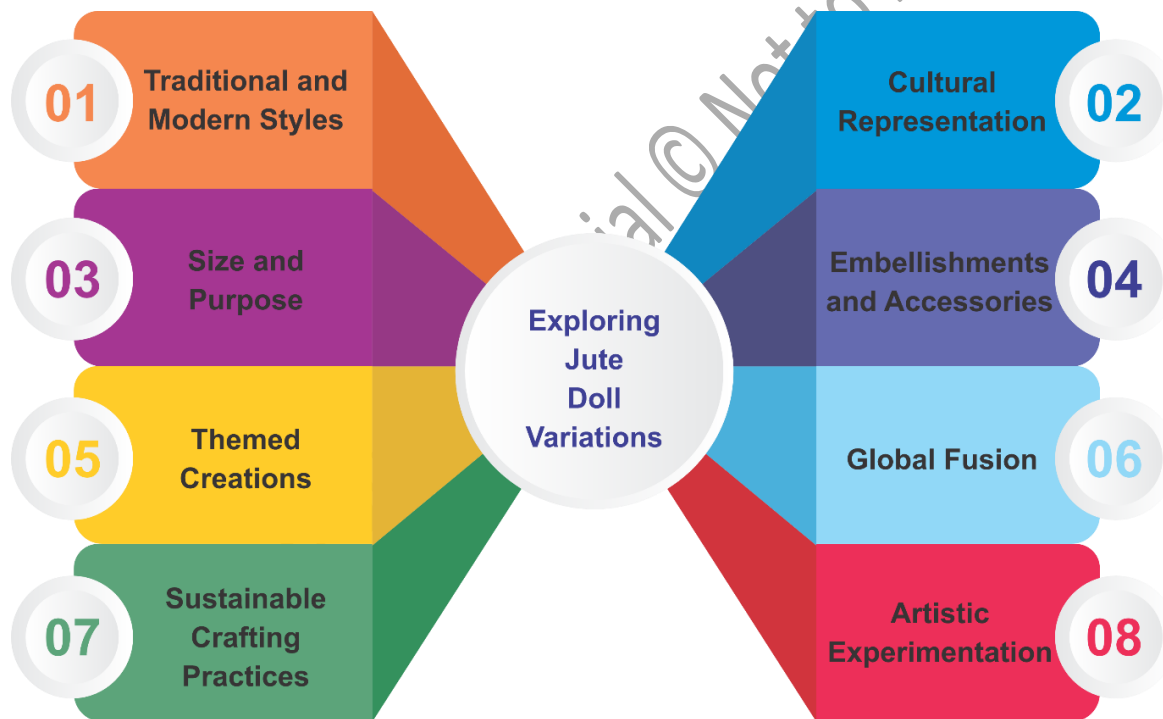

Fig: 4.41 Exploring Jute Doll

Jute doll making process and material details

1. **Explore Design Inspirations:** Start by exploring various design inspirations. Look for traditional and modern styles, cultural elements, and thematic ideas that you find appealing. Gather images, sketches, or notes that inspire the design direction you want to take.

2. **Choose Varied Sizes and Shapes:** Decide on the size and shape of your jute dolls. Consider creating a range of sizes, from small keychain dolls to larger decorative pieces. Experiment with different shapes for the doll's body, head, and limbs to add diversity to your creations.

3. **Play with Colors and Textures:** Introduce colors and textures to your jute dolls to create visual interest. You can use colored jute twine, fabric scraps, or other embellishments to add vibrant hues and varied textures. Experiment with different color combinations to evoke specific themes or moods.

4. **Incorporate Cultural Elements:** Infuse cultural elements into your jute dolls to add a unique touch. Explore traditional clothing styles, accessories, or symbols that represent specific cultures. This can turn your dolls into miniature ambassadors of diverse traditions.

5. **Experiment with Embellishments:** Embellishments can enhance the charm of your jute dolls. Try incorporating various materials like beads, buttons, lace, or ribbons. Experiment with different stitching patterns to create intricate details or patterns on the dolls' clothing.

6. **Theme-Based Creations:** Craft jute dolls based on specific themes. Whether inspired by nature, seasons, festivals, or stories, themed dolls add a narrative element to your creations. This allows for a cohesive and unique collection with a story to tell.

7. **Mix and Match Materials:** Expand your creative palette by incorporating a mix of materials. Combine jute with other sustainable materials like cotton, linen, or recycled fabrics. This fusion can add a dynamic and textured dimension to your jute doll variations.

8. **Personalize Each Doll:** Aim for personalization in each jute doll. Consider giving them distinct facial features, hairstyles, or accessories. This individual touch adds character to each creation, making them feel like unique works of art.

9. **Experiment with Construction Techniques:** Explore different construction techniques to create varied forms. Try different methods of shaping the body, attaching limbs, or creating facial features. This experimentation can lead to innovative and distinctive jute doll variations.

10. **Document and Refine:** Keep a record of your design experiments and variations. Document what works well and refine your techniques based on the outcomes. This iterative process will help you evolve your craft and develop a signature style for your jute doll creations.

01 STEP	Explore Design Inspirations	02 STEP	Choose Varied Sizes and Shapes
03 STEP	Play with Colors and Textures	04 STEP	Incorporate Cultural Elements
05 STEP	Experiment with Embellishments	06 STEP	Theme-Based Creations
07 STEP	Mix and Match Materials	08 STEP	Personalize Each Doll
09 STEP	Experiment with Construction Techniques	10 STEP	Document and Refine

Fig: 4.42 Jute doll making material

Remember, the key to creating diverse jute doll variations lies in your willingness to explore, experiment, and let your creativity guide the process. Enjoy the journey of crafting unique and personalized jute dolls.

Activies

Activity 1- Design and Construct Eco-Friendly Jute Dolls Variations

Materials Required:

1. Jute fabric or jute twine
2. Scissors
3. Thread and needle or glue gun
4. Measuring tape
5. Fabric markers, paints, or natural dyes
6. Recycled materials for stuffing (e.g., old fabric scraps, paper)
7. Embellishments (optional, such as beads, buttons, or recycled fabrics)

Procedure:

1. **Research and Design:**
   - Research various jute doll designs to understand different techniques and styles. Focus on creativity, aesthetics, and sustainability in your design.

- o Sketch your doll design, considering details like facial features, clothing, and any accessories. Think about how you can use jute creatively and ensure the doll is both visually appealing and eco-friendly.

2. **Gather Materials:**

- o Collect the required materials, with an emphasis on sustainability. Use jute fabric or twine for the main structure and recycled materials for stuffing.

- o Measure and cut the jute fabric or twine based on your design specifications.

3. **Construction:**

- o Follow the construction guide to assemble your jute doll. This includes creating the body, sewing or gluing parts together, and adding details like facial features and clothing.

- o If using twine, you may need to twist or braid it to create different parts of the doll. For fabric, cut and sew or glue pieces together to form the doll's body.

- o Document each step of the construction process with clear descriptions and visuals (photos or drawings). This will help illustrate how your design comes to life.

4. **Decoration:**

- o Decorate your jute doll using eco-friendly materials such as natural dyes, recycled fabrics, or fabric markers. Avoid non-biodegradable materials that could harm the environment.

- o Reflect on how your decorative choices contribute to the sustainability of the project and the overall aesthetics of the doll.

5. **Finalize and Present:**

- o Ensure your jute doll is complete and meets the design criteria for creativity and sustainability.

- o Prepare a brief presentation explaining your design choices, how your jute doll aligns with eco-friendly principles, and the environmental benefits of using sustainable materials.

- o Showcase your finished jute dolls to the class, discussing the construction process, the design elements, and the importance of sustainable practices in creating decorative and functional items.

Check Your Progress

True or False:

1. Jute dolls are not versatile and offer limited variations.

2. Jute dolls can represent diverse cultures.

3. All jute dolls are of the same size and serve a singular purpose.

4. Themed variations are not possible with jute dolls.

5. Sustainability is a significant aspect of jute doll crafting.

Fill in the Blanks:

1. Artisans often infuse _____ elements, reflecting the rich cultural heritage of regions like Bengal.

2. Jute dolls have the ability to represent diverse _____, showcasing distinct clothing styles of various states in India.

3. Crafts persons often elevate the charm of jute dolls by adding _____ and accessories.

4. A defining feature of jute dolls is their commitment to _____, with crafters embracing eco-friendly materials and techniques.

5. Personalizing each jute doll is an essential step in creating _____, adding character to each creation.

Module 5	Working in a Team

Module Overview

Learning Outcomes
After completing this module, you will be able to: • Describe value of accountability, adaptability, commitment and trust in the workplace • Explain the process of communication and its applications in the workplace • Identify and report Compliance Deviation
Module Structure
Session: 1 Describe Value of Accountability, Adaptability, Commitment and Trust in the Workplace
Session: 2 Explain the Process of Communication and its Applications in the Workplace
Session: 3 Describe Creative Freedom and it's Use in Increasing Process Efficiency

Session: 1	Describe Value of Accountability, Adaptability, Commitment and Trust in the Workplace

Accountability, adaptability, commitment and trust in the workplace

Organisations exist to achieve well defined goals with the help of a variety of employees working together based on predefined relationships. The extent to which employees contribute to the achievement of organisational goals depend on how well the employees understand and adopt the fundamental principles working together for achieving common goals. Apart from understanding the nature and benefits of these principles, each employee is also required to have clear idea of one's own roles and functions within the organisation. What is also important to appreciate is the fact that organisational performance depends on how effective is the performance of

every employee and how well they are able to adapt themselves to the changing needs of the organisation.

1.1   Importance of accountability, adaptability, commitment and trust

The attitudes and behaviours of the employees play decisive roles in the smooth functioning and success of organisations. While there are several personal factors of employees which affect the operations and achievements of the organisations, a few of these are crucially important since the absence of these can very adversely affect the working of the organisations, immediately and significantly. Described below are the four primary personal qualities and their attendant benefits essential in workplaces.

1.1.1 Accountability and its importance

Accountability is a personal quality and attitude reflected in people's willing acceptance of the responsibility for all their decisions and actions irrespective of negative or positive consequences. An important characteristic of accountability is its voluntary nature. It is also a mark of honesty and integrity which makes the person trustworthy. The robustness of the sense of accountability in any person can be assessed from how quickly and voluntarily they accept their roles and responsibilities and do their duties with commitment and sincerity. People with a sense of accountability are punctual, honest, proactive and conscious of their roles and duties.

Accountability in employees benefits the organisation and the workplace in the following ways:

Fig: 5.1 *Accountability and its importance*

- **Smooth and timely completion of tasks**: Accountability among employees ensures that everyone does their duties without fail and in time. As a result the organisation can get its work done as per plan within the stipulated time.

- **Speedy problem solving:** Employees who believe in accountability will not hide their mistakes but report them quickly which will make way for timely solutions to the problems.

- **Improved employee learning:** Accepting the mistakes voluntarily without getting blinded by ego also enables employees to quickly learn from their mistakes and adopt the necessary steps to prevent such mistakes in future.

- **Better interpersonal relationships and communications:** Since employees who practice accountability will not point the finger at other to deflect the attention from their own mistakes, co-workers will find them trust worthy. This will help create a cordial working environment and interpersonal relationships.

1.1.2 Adaptability and its importance

Adaptability is the ability and willingness of people to readily accept changes and challenges. Changes always happen in workplaces due to a variety of factors such as changes in technology, rules and regulations and market conditions as well as the appointment or the retirement of employees. Changes might also come in the form of successes or failures. Adaptability is a personal quality and capacity required for coping with failures and finding ways to overcome them with strength and diligence. Adaptability is also the personal quality that helps people to make progress by changing with the times. As it is said, time and tide wait for none. Adaptability helps us in learning new things and upgrading our skills well in time so that we always remain relevant to the future.

Adaptability in employees benefits the organisation and the workplace in the following ways:

- **Helps build agile and flexible workplaces:** When employees do not resist changes but are always willing to adapt themselves to changing needs in workplaces, it would be easy for the management to introduce process changes in response to new technologies or changes in customer preferences.

- **Paves the way for creative problem solving:** Problem solving often requires existing procedures and practices to be changed. Employees who possess the ability and skills to change, will also be better suited to identify the sources the problems and suggest creative ideas that help solve the problem quickly.

- **Aids teamwork and contributes to team's success:** The success of teamwork often depends on how well the members are able to rise up to challenges faced by the team from time to time. Team members with

adaptability will be able to come the aid of others who are facing time constraints and also help the team to solve the problems within the resources available to the team.

- **Develops leadership skills among employees:** Those who possess the knowledge and skills required for adapting themselves to different situations and challenges will also gain the knowledge required for guiding others. The experience which they gain through this process will also strengthen their leadership qualities and capacities.

1.1.3 Commitment and its importance

Commitment is a personal disposition that motivates a person to willingly do what is needed under any circumstances. They will also be willing to do more than what their regular duties, if the situation demands it. Commitment shows the level of identification and involvement of an employee with the organisation. There are several factors which contribute to the commitment mind-set. It may be a sense of belonging to the organisation which builds an emotional bonding with it and makes one think of doing the best for the organisation. Sometimes, it can be a strong sense of justice that motivates the person to have commitment to his duties. In this case, people believe that they should take care of the interests of the organisation since the organisation is looking after their interests. Some people might also develop commitment because of enlightened self-interest. In this case, people believe that the current job is good for their future. This belief motivates them to show full commitment to the job - to preserve it. Organisations also promote such sentiments by making employees develop a sense of belonging and that the organisation is doing its best for them.

Commitment of the employees benefits the organisation and the workplace in the following ways:

Fig: 5.2 *Commitment and its importance*

- **Consistent organisational performance**: When employees are committed to their job, they will attend and do their work regularly. A committed workforce can thus ensure that there is no disruption in the flow of work. Commitment of the employees will also ensure that they follow workplace procedures completely and correctly so as to maintain the quality of their outputs.

- **Positive work oriented culture:** When every one of the employees is committed to their respective roles and duties, their productive time will not be wasted in unwarranted conflicts or imaginary workplace problems. The positive environment created by consistent performance and the absence of conflict will build a work-oriented organisational culture.

- **Boosts the morale of teams:** Commitment of the employees to their respective roles and duties will serve as morale booster for teams. The success of the teams depends very much on the level of coordination among the members. When each team member shows commitment, the entire team will feel more confident of achieving its goals and targets. Such confidence will create faith in each other and enable them work shoulder to shoulder towards achieving success.

- **Increases employee retention rate:** Employees who are committed to the organisation for one reason or the other do so since they see value in working whole-heartedly for the organisation. They also develop a sense of belonging and bonding with the organisation. Therefore, employees who are committed to their work are not also likely to leave the organisation. When more and more employees stay with the organisation for longer periods of time, it benefits from the rich experience, improved skills and proactive attitudes off the committed employees.

1.1.4 Trust and its importance

Trust provides the foundation for mutually beneficial relationships. Trust emerges out of the belief that the other person in a partnership would never do anything to harm the other. Trust grows when both the persons in a personal or professional relationship share this belief. Another factor that helps in the growth of mutual trust is the belief that the concerned partners contribute to the creation of a better future for each other. At the same time, trust creation is a slow process since people do not trust others, unless they see demonstrable evidence of trust worthy behaviour. In organisations and workplaces, there is a need for trust relationships not only between the management and employees but also among the employees themselves. Trust relationships make it possible for people to focus on the future without getting bogged down by suspicion and doubts about intentions and ulterior motives of others. Open communication and constant exchange of feedback is

necessary to sustain trust in the workplace, since trust can be easily broken even by unwarranted misunderstandings

Trust among the employees and between the management and employees benefits the organisation and the workplace in the following ways:

- **Facilitates the effectiveness of leadership at all levels:** Leaders cannot be effective unless the followers trust them. Leaders are more effective when they lead by example by creating trust among the employees. A culture of trust enables leaders to implement even tough and difficult initiatives needed at times to revive an ailing organisation. It also helps leaders to introduce novel innovations which can take the organisation to a higher level of performance.

- **Trust creates future leaders:** An environment trust enables those with leadership skills shine as the culture of trust will enable them to grow their leadership skills by enabling others to overcome their problems and contribute to the success of the organisation. The experience gained by them by informally leading others will not only give them good followers but also give them confidence to respond to formal leadership opportunities.

- **Reduces stress in workplaces:** Fear and anxiety are usually one of the biggest sources of stress in workplaces. Employees who do not trust their managers will always be anxious about how their performance will be evaluated by the management. Mangers who do not trust the employees will also remain worried about the performance of the employees under their supervision. The stress created by the lack of trust will only reduce their productivity as they will not be able fully engage themselves in doing their work. Trust between the managers and the employees will reduce stress and make everyone focus on work without getting distressed by imaginary situations.

- **Improves the quality of collaboration:** A culture of trust in the organisation will also encourage team members to more willingly cooperate with each other. One of the usual trust issues among team members is about getting the due credit for one's work. People tend to be secretive and least cooperative when they feel other team members might take away the credit due to them for their ideas and initiatives. On the other hand, when all the team members trust each other, they will collaborate with each other proactively and without reservations.

- **Increases organisational productivity:** When the managers trust the employees and the employees trust the managers and their fellow workers, they would not end up wasting their time in unwarranted arguments or

non-cooperation. When employees and managers fully engage themselves in work, the productivity of the organisation will go up. A trusting environment in the workplace will also facilitate purposeful communication, and well-coordinated work among the employees which would further improve their collective productivity.

1.2   Understanding own roles, duties and accountability

The roles and duties of employees are generally described in their respective job specifications, which are handed over to them at the time of employment or promotion. These specifications may be brief and may not cover all aspects of the job. Employees are, however, expected to know their job roles and duties even before taking up the job as part of their qualifications for the job. They may learn about these as part of their professional or vocational education. They may also acquire this knowledge through apprenticeship or internship training or from experience gained by working in a lower level job of the same type.

One of the reliable sources of information, which provide a good understanding of the requirements of specific vocational jobs is the professional qualification packs published by the concerned professional bodies or government agencies. These are usually based on national occupational standards or industry level standards and thus provide a good basis for understanding the roles and duties employees specialising in specific professions or vocations or technical trades.

Performing the roles and duties in workplaces requires more than the mere knowledge of what to do. Employees must also accept the responsibility for doing their tasks well and in time. The personal quality of taking full responsibility for one's own job and the associated decisions, actions and outcomes is called accountability. Employees who perform their roles and duties with a complete commitment of accountability are valuable for the organisation to achieve its goals.

1.2.1 Roles and Duties of a Jute Products Artisan

The job specifications of the jute products artisan, for example, are described in the relevant qualification pack published by the Handicrafts and Carpet Sector Skill Council (QP Code: HCS/Q7405, Version: 2.0). It provides a list of six National Occupational Standards (NOS) relevant to this job. Each of these NOS, besides describing the tasks to be done and the scope of work, also provide detailed list of the 1) areas of knowledge and understanding (KU) required for performing the concerned task well, 2) generic skills (GS) necessary doing the job efficiently and 3) performance criteria (PC) to be used for evaluating all the work done while completing any task. It is necessary to

have a clear understanding of these standards to perform well as a jute products artisan. However, these are only generalised entry level requirements. Every organisations is entitled to add more responsibilities at the time of appointment or promotion.

Fig: 5.3 *Jute product artisan*

1.2.1.1 The scope of Work of a Jute Product Artisan

The job of the jute products artisan is to make diverse jute products in specified shapes, designs, and sizes to sell and popularise them in the domestic and international markets. Keeping in view the need to attract both national and foreign customers, the artisan must produce quality items that conform to the desired designs and specifications of the customers or follow the market trends. In order to execute the production processes efficiently, the artisans are also expected to have good vision and excellent eye-hand coordination skills. In this context, it is also assumed that the jute products artisan is aware of all the criteria that will be used to assess his or her performance. It is also assumed that they have the necessary skills, knowledge and understanding to do their work properly.

The following are the generic responsibilities of the jute products artisan: During the process of complying with the job responsibilities, the artisans are also required to follow the:

1. **Responsibilities relating to production:** A jute products artisan is expected to make the following jute products as per designs and specifications based on the buyer's demand or the market trends and requirements and in accordance with the quality requirements of the local, national and international customers:

   • Diversified crafted products of jute

   • Table mats and coasters made of jute

   • Jute based home furnishings, decorative items, toys, etc.

- Understand the process flows and follow them properly

- Create and manage teams in the work place

Other responsibilities to be borne along with responsibility for producing jute products are as follows:

Fig: 5.4 *Responsibilities*

- **Maintenance of Machines and tools:** Proper maintenance of the machines and tools and the working area used for producing the jute products to ensure safety and doing the work without disruptions.

- **Material Handling:** Proper and handling of the materials using correct lifting procedures to minimise wastage

- **Proper storage of materials, tools, etc.:** Follow the prescribed organisational procedures.

- **Hazard Prevention and Waste Disposal:** Keeping the workplace hazard free and adopting the correct procedure for waste disposal

- **Taking over and handing over work shifts:** Take charge of the new shift from the previous and hand it over to the next shift in-charge

- **Understanding and complying with the environmental regulations:** Adherence to central, state and local body environmental regulations

- **Understanding and complying with the worker related regulations:** Adherence to central, state and local body regulations relating to gender, persons with disability, etc.

- **Meeting the health, safety and security requirements:** Comply with the applicable regulations and monitor and recognise potential hazards such as environmental, personal, ergonomic, and chemical.

- **Emergency response:** Proper training in the provision of first and emergency response as necessary

1.3 Performing roles effectively at workplace

Effective performance has a very specific implication in the context of organisations. Effective performance is not about doing more work but doing what is required for the organisation to succeed. The success of the organisations are usually defined in the form of measurable and analysable indicators, which are referred to as key performance indicators (KPI). Only that part of an employee's work that helps in the achievement these KPIs will be treated as part of the effective performance of the employee.

The effective performance of an employee is also measured in terms of the employee performance evaluation criteria identified by the organisations. According to this criteria, effective performance is the minimum performance required from the employees based on the targets assigned to them. Of course, these targets will vary from department to department. Only those who perform better than the assigned targets will get rewarded, while those who do not achieve the assigned targets will not be considered as effective performers.

1.3.1 Advantages of measuring the effective performance of employees

The objective of evaluating employee performance is essential to ensure that employees at least meeting the minimum acceptable performance requirements. The following are the advantages of regularly measuring and monitoring employee performance:

- **Accountability:** The practice of regularly evaluating employee performance ensures that the employees remain accountable for their assigned roles and duties.

- **Alignment to goals:** Effective performance also ensures that the performance of the employees is perfectly in line with the requirements of organisational goals or goals set for the employee.

- **Timely completion of tasks:** Effective performance by employees will lead to timely completion of tasks since everyone will be doing the jobs required

for the completion of the tasks without wasting any time on unnecessary activities.

- **Enhanced cost-effectiveness:** By ensuring that employees focus solely on activities directly contributing to the organization's revenues, there is a notable increase in overall productivity. This, in turn, leads to a proportional decrease in operational costs, thereby optimizing cost-effectiveness.

1.3.2 Measurable Examples of Effective Performance by Employees

Effective performance of employees is measured with the help of several parameters. These measurements used for analysing the performance of employees to monitor the progress of work as well as provide rewards and recognition. The following are examples of some of key performance indicators used for assessing effective performance:

- **Time Utilisation Rate:** This indicator reflects the ratio of time spent in effective performance. This is measured in percentage by dividing the total number of hours an employee spends on revenue generating activities by the total number of hours for which the employee is paid.

- **Capacity Utilisation Rate:** This indicator reflects the extent to which any employee is productive as compared to her or his potential capacity. This is measured in percentage by dividing the actual output produced by an employee upon the maximum possible that the employee concerned could produce.

- **Error/Mistakes Ratio:** Effective performance requires that employees keep learning over time and continuously minimises the mistakes committed by her or him. This is calculated as a percentage of mistakes committed during the current year or period over the number of mistakes committed during the previous year or period.

- **Absenteeism Rate:** This indicator reflects the rate of unplanned absence from work due to illness or other unforeseen factors. It is calculated by dividing the number of unexcused absences over any given period of working days. Usually absenteeism is expected to be lower than 1.5%. Higher rate of absenteeism is considered to be against effective performance at workplace.

- **Overtime Rate:** An employee may be working for a longer period than what is prescribed. This indicator is calculated as a ratio of the extra hours worked in a week or month upon the prescribed working hours. Working overtime is considered as a reflection of too much workload or the inability

of the employee to complete the work within specified time frames. In either case, overtime is not considered to be an indicator of effective performance. It only indicates a problem area.

1.4 Adapting to the changing work situation

Adaptability in workplaces does not mean pliability like that of clay which can be moulded by the artisan into desired shapes or figures. Adaptability means the capacity of employees to change themselves in response to the perceived changes in the working environment or technologies used, management practices, etc. It also means updating oneself with the relevant knowledge and skills. Sometimes organisations may be too slow in changing. However people who believe in adaptability will take it upon themselves to decide what is relevant and what is obsolete and prepare themselves to accept changes as and when these are introduced in the workplaces. This tendency might also serve as the springboard for making progress in their careers or even switch to better jobs.

Some of the key components of employee adaptability are as follows:

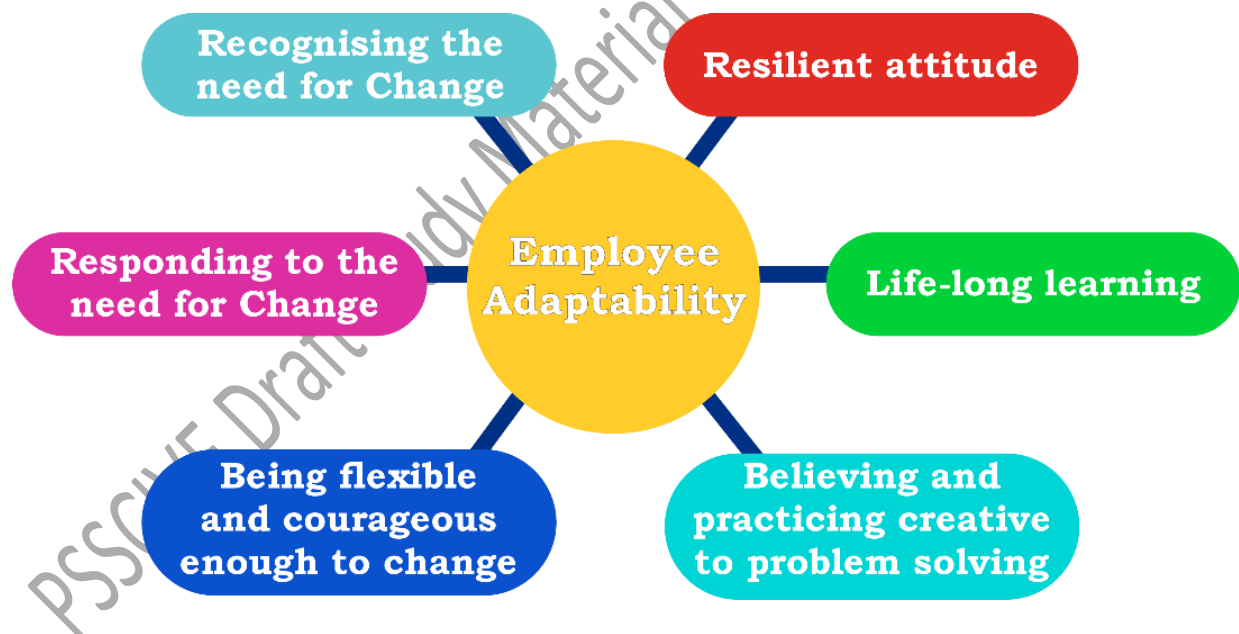Fig: 5.5 *Employee Adaptability*

- **Recognising the need for Change:** To be adaptable, we must be able to first identify the area or type of change required. In order to do this we must have up to date information about the trends in the areas concerning our vocation or profession. Apart from this, we must also identify the reasons that makes it necessary for us to change or advance our knowledge

and skills. Knowing the reasons for change will provide us with the necessary motivation for change.

- **Responding to the need for Change:** We must be forward looking in our approach to life and work. Many people, who are unwilling to get out of their comfort zones, find it difficult to accept the need for change and respond to it. We must accept change as a way of life since nothing is static in life and since everyone is focused in improving the world and their lives all the time.

- **Being flexible and courageous enough to change:** Accepting changes means our preparedness to accept new things, such as new tools and instruments, newer materials, newer practices, etc. If we are rigid about using old tools, sticking to old or outdated practices, we would resist changes. Therefore, we should be flexible enough to replace old ideas, technologies and practices with new ones. There are also people who refuse to change as they fear new things and are afraid of the processes and effects of the change. It is necessary therefore to be confident and courageous to understand the benefits of change and take the necessary steps implement changes.

- **Believing and practicing creative to problem solving:** Changes are always introduced for a purpose, more specifically to solve a problem. Creative problem solves involves unconventional thinking and learning by experimenting with new ideas. People who are accustomed to creative problem solving will accept change as a natural process of creative problem solving. Since creative problem solving involves the use new ideas and procedures, those who practice would easily adapt themselves to the new changes in the workplace.

- **Life-long learning:** Accepting and adopting changes also involves learning new things. Therefore only those who are willing to learn new things will be ready accept and implement changes. Apart from the readiness to learn, we must also constantly learn and adopt new learning skills. We are now living in the age of the Internet and artificial intelligence, which has opened up new opportunities and avenues for learning. We must adopt learning as a life-long process to remain adaptable to changes.

- **Resilient attitude:** Change does not always mean a smooth transition from the present to the future. Sometimes changes might involve a downfall or have pain points before we gather the skills and strength to cope with the change. It is easy to give up and not change at all. We must therefore develop a resilient attitude towards life and the problems it creates from time to time. Adoption of changes in the workplace will therefore require a resilient attitude of the employees.

Activies

Activity 1: Prepare a PowerPoint presentation or a chart on Measurable Examples of Effective Performance by Employees

Materials Required:

1) Chart paper
2) Pen, pencil, coloured pens and markers
3) Eraser, sharpener
4) Scale

Procedure:

1) Collect required information.
2) Organize the collected information in PPT or chart whichever is feasible to you.
3) Decorate it with pictures and graphics.
4) Get it corrected by your teacher.
5) Discuss and present in the class.

Check Your Progress

State True or False:

1. Accountability is a personal quality and attitude reflected in people's willing acceptance of responsibility for their decisions and actions.

2. Employees who practice accountability are more likely to hide their mistakes, leading to delayed problem-solving.

3. Adaptability is the ability and willingness of people to resist changes and challenges in the workplace.

4. Adaptability helps build agile and flexible workplaces and contributes to creative problem-solving.

5. Commitment is a personal disposition that motivates a person to do only the minimum required under any circumstances.

Fill in the Blanks:

1. _____ is a personal quality and attitude reflected in people's willing acceptance of responsibility for their decisions and actions.

2. Trust provides the foundation for mutually beneficial _____.

3. Employees must also accept the _____ for doing their tasks well and in time.

4. One of the key components of employee adaptability is _____ the need for Change.

5. Life-long learning is crucial for accepting and adopting _____ in the workplace.

Answer in Brief:

1. What is accountability, and how does it contribute to the smooth functioning of tasks in the workplace?

2. In what ways does trust benefit an organization?

3. According to the content, what measures are necessary to sustain trust in the workplace?

Answer in Detail:

1. Elaborate on the significance of adaptability in the workplace, citing examples from the content.

2. Discuss the multifaceted nature of commitment in the workplace, as outlined in the content.

3. Explain the various factors that contribute to an employee's commitment and how this commitment can positively impact organizational performance, team morale, and employee retention.

4. Examine the role of measuring effective performance in the context of organizational success.

Session: 2	Explain the Process of Communication and its Applications in the Workplace

The communication mechanisms in organisations are similar to the nervous system in our body. Failures in the communication system can paralyse any part of the organisation. In the case of total communication failure, the entire organisation can become brain dead. The communication process in organisations also works in ways which are similar to our nervous system where the brain plays the biggest role. The top management works like the thinking brain and is the originator most communications. The communication from the employees are like the feedback sent by the various parts of the body. Within the organisational communication system, there could be also intermediate like that of the managers, supervisors and team leaders who are given delegated authority to deal with and dispose of localised communication.

At the same time, it is important to ensure that the communications flowing through the organisational system is accurate and is not distorted in any way during the communication process. This is called effective communication. For the communication system to be effective, employees must have clear understanding of the process of communications but also the lines and mediums of communications used by organisations. Since most organisations rely on written communication for maintaining records and their future analysis, special attention needs to be paid to the understanding of the role and significance of written communications. Teamwork within organisations, however, make liberal use of two way communications among their members. Since teams are increasingly becoming important within organisations, it is also necessary to understand the special features of team level communications.

1.1 The Role of Effective Communications in the Workplace

An effective communication in the workplace is one that correctly conveys to the receiver what the sender intended to convey. In an organisational environment effectiveness is always measured by the end result. Following the proper procedure for drafting and sending the communication alone will not ensure the effectiveness of any workplace place communication. An effective communication must result in the desired end result.

The following are useful guidelines for ensuring the effectiveness of communications:

- **Consider the communication barriers faced by the receivers:** First and foremost understand the capacity of the receiver to decode the contents of communication correctly and follow it without getting confused or misled in anyway.

- **Ensure the reliability of the source:** Authenticate the authority or position of the sender or originator of the communication with the help of suitable codes or signatures so that the receiver is able to understand relative significance of the communication.

- **Make the communication simple and clear:** Use simple language, standardised terms, and clear sentence structure, which can be decoded and interpreted accurately by the receivers.

- **Ensure the correctness of the content:** Be precise and exact about what the receiver needs to understand after receiving the communication. None of the content should be vague or open to misinterpretation.

- **Make the communication complete:** Every communication must be self-contained so that the receiver can understand it straight away without seeking clarifications or consultations.

- **Use courteous language:** Avoid using offensive language. Instead, make the communication respectful of the receiver. Make use of emotional intelligence while drafting to make the communication have desired impact on the receiver.

The following are the valuable benefits that an organisation will derive from effective communication:

- **Enables better decision making at all levels:** Effective communications that convey correct messages provides the basis for taking proper decisions. Unclear and vague communications might lead to unwarranted decisions.

- **Builds transparency and trust:** When effective two-way communications becomes part of the organisational culture, employees will be able to perceive the transparency in the communication process. Open and transparent communications will also nurture the feeling of trust within the organisation.

- **Reduces conflicts and promotes teamwork and coordination:** Clear and transparent communication will also reduce the chances of conflicts in the workplace, which of occur because of misunderstandings and misinterpretations.

- **Efficient management of human resources:** Effective communications between the management and employees will make it possible for the

organisation to rely on actual and accurate data while taking decisions regarding human resources.

- **Boosts productivity and innovations:** A major benefit derived from effective communications is the significant saving in the time, which is otherwise wasted because unclear and purposeless communications.

1.2   The Communication Process

Communication is like a way we share things with others. It involves talking, writing, or using gestures to tell someone something. Think of it as a step-by-step process where we send and receive messages. It helps us understand each other and share our thoughts and feelings. Communication is important in our daily lives because it helps us connect, work together, and learn from each other.

Good communicators have a wide range of skills and are able to adjust their communication style in response to the many variables they face at a given time.

Fig: 5.6 *Communication Process*

The Communication Process includes the following:

1. **Sender:** The burden of responsibility lies with the sender to ensure that the message is understood and that expectation for deliverables are clearly defined. Sender should also consider the barriers that may interfere with the receivers' ability to understand the message. These barriers include language, ethnic cultural beliefs, level of education and/or level of experience.

2. **Message:** Verbal, non-verbal and written communications are affected by the sender's tone and method of communication. While sending a written message, the sender must be sure that it is professional, precise, clear and in simple language. Written communications are open to interpretation by

receiver. Proof the written communication for typographical errors, grammar, punctuation and sentence structure to reduce the chances of miscommunication.

3. **Method and Environment:** Messages are conveyed through channels. These channels are affected by the method and environment which is chosen to communicate. All written communications are one-way communication, as there is no opportunity for people to ask questions, provide feedback, express concern or gain clarification during or immediately after communication.

4. **Receiver:** Messages are delivered to the concerned receivers. Receiver enters into the communication process with ideas and feelings that influence his understanding of the message and send their response.

Good communication enhances productivity, reduces misunderstandings, and fosters a positive work environment, contributing to the overall success of the organization and employee satisfaction. Effective workplace communication involves sharing information, ideas, and feedback among employees and teams. It's crucial for smooth operations, collaboration, and problem-solving.

Communication at the workplace is one of the signs of a high-performance culture. Exchanging information and ideas within an organisation is called workplace communication. However, effective communication occurs when a message is sent and received accurately.

A. **Effective communication at workplace is center of all business goals. Its benefits are:**
   • Oral communication
   • Listening
   • Written communication
   • Public speaking
   • Adaptability

B. **Skills that employers mostly seek are:**
   • Oral communication
   • Listening
   • Written communication
   • Public speaking
   • Adaptability

C. **The importance of good communication at workplace:** Good communication is an essential tool in achieving productivity and maintaining strong relationships at all levels of an organisation.

Employers who invest time and energy into delivering clear lines of communication will rapidly build trust among employees, leading to increased productivity, output and morale. Employees should communicate effectively with colleagues, managers and customers. The message is the outcome of the encoding, which takes the form of verbal, nonverbal, or written language.

1.3 Lines of Communications, Authority and Reporting Procedures

Lines of communication can include a chain-of-command that requires employees to communicate only with their direct superior. Workplace communication is the process of exchanging information and ideas, both verbal and non-verbal, between one person/group and another person/group within an organisation. To establish and manage, various lines of communication within a business is essential so that all workers and managers can contact the communicator, for example a manager communicating to an employee and an employee to a customer.

Protocol is a set of guidelines regarding the chain of command for how various members of an organisation must communicate with each other.

1. **Owner to Manager:** The company owner provides directions to manager as well as any update or news he wants to give employees through manager.

2. **Manager to Employee:** Managers must delegate specific duties to workers and provide directions about work projects. A manager commonly communicates through regular meetings with the entire department. Manager may also schedule yearly employee review sessions with individual workers to discuss performance and productivity.

For example a flow chart of reporting and conducting maintenance in an industrial set-up is given as below:

Fig: 5.7 Reporting and conducting maintenance

3. **Employee:** A line of communication is also established between employees / managers and outside business contacts. Certain employees of a manufacturing unit may have to communicate directly with representatives of companies to supply raw materials, submit orders or request information.

4. **Communication with Customers:** Possibly the most important line of communication at a business is between the employees of a business and its customers. In some cases, certain employees are authorized to speak to clients for business contacts.

2.3.1 Reporting procedures at work place

Effective communication in the workplace is imperative in a leadership role. Having effective communication skills is the key to good leadership. In turn line of communication begins in descending order, i.e. reporting procedure begin from customers to employee, employee to supervisor, supervisor to manager and from manager to industry owner.

Ways of reporting procedures for effective communication at workplace are as follows:

Reporting procedures

01 Open Meeting

02 Emails & messaging

03 One to One

04 Receptive Atmosphere

05 Display Confidence & Seriousness

06 Using Simple Words

07 Using Visuals

Listening to Team Members 08

Using Body Language 09

Tone of Voice 10

Being clear 11

Encouraging Feedback 12

Gesticulate 13

Being Appreciative 14

Fig: 5.8 Reporting procedures

1. **Open Meeting:** It is easier to communicate in the work place situation via open meetings. In this kind of forum, workers will hear, see and feel it. This oral communication is one of the best approaches to communicate effectively with a team.

2. **Emails and messaging through social media groups:** In official settings, written communication via email remains potent. It will enable to pass messages to the members of the team without pulling them out of their workstations. Within the organization, employees often use email to communicate efficiently. For instance, a jute product designer might email a colleague to discuss a new design idea or share design files. Email is also useful for sending official announcements, updates, or memos to all employees simultaneously, ensuring everyone is informed about important matters. Email serves as a vital tool for communicating with external parties. For instance, the procurement team may use email to negotiate prices with jute suppliers or confirm order details. Customer service representatives can use email to interact with customers regarding product inquiries, order status updates, or addressing any issues or concerns. Social media groups or platforms like WhatsApp, or Microsoft Teams provide real-time communication channels. Teams within the unit can create dedicated groups for specific projects or departments. These platforms enable quick sharing of files, updates, and discussions among team members. For example, a jute product development team can have a dedicated Slack channel for brainstorming and sharing design inspirations.

3. **One to One:** Workers understand better when we talk to them on a one-to-one basis. Ensure to maintain eye contact with them to enable the message to sink in.

4. **Creating a Receptive Atmosphere:** To effectively communicate with the team, one must create an interesting atmosphere which is open for communication.

5. **Display Confidence and Seriousness:** Ensure that one must display confidence and seriousness to ensure that one is not taken for granted. When the team members notice any uncertainty and lack of seriousness while communicating with them, they are likely to treat the information with disregard.

6. **Using Simple Words:** To be effective in the communications with the team members, use words that are easily understood.

7. **Using Visuals:** Place visuals at strategic positions around the work place of the team. Delivering messages both through sight and sound gives room for better comprehension.

8. **Listening to the Team Members:** Encourage team members to open up so that the leader can be well informed while communicating with them.

9. **Using Body Language:** Body language will pass the message much faster and better. Master the art of using body language when communicating with the team. Stand/sit up straight, use smiles, handshakes and eye contact.

10. **Using the Appropriate Tone of Voice:** Use the appropriate tone of voice to communicate the message to the team so that the message is not misunderstood and discourage / frighten the receivers. Voice modulation in such scenarios help to be beneficial.

11. **Being clear:** Being clear to communicate to the team members makes it easier for them to understand the message. Make a message to the point for better comprehension. Keep the focus of point to be conveyed straight forward.

12. **Encouraging Feedback:** Do not just talk and walk away, give room for feedback so that one can measure the effectiveness of the style of communication. It will also afford the privilege of knowing if the message was well understood.

13. **Gesticulate:** Use the hands to demonstrate the message. Make hand motions and signals to establish the seriousness of the subject matter while communicating with the team members.

14. **Being Appreciative:** After every communication session, always remember to thank the listeners for their time. One should work hard at these communication tactics and create ground rules to keep everyone up to date, which will ensure the completion of the project with ease. Lines of communication help to facilitate not only to communicate the message accurately, but also timely response to prevent missed opportunities or late delivery of work.

1.4 Importance of Complying with Written Communications

Effective Oral and Written Communication not only helps in communicating one's thoughts clearly and concisely, but also to create focus, energy, and passion. Clear messages help to build trust and integrity between the writer and the reader. Well-written communication helps to define goals, identify problems and arrive at solutions. Employees must clearly write and talk so

that other staff understand the situation without confusion. Effective writing allows the reader to thoroughly understand everything that one is not able to say. Listening, reading, writing and talking are collectively known as effective communication skills.

A written communication is always put into writing form and used when the audience is at a distance or when record is required or where its preservation is essential and required as an evidence. It is in the form of instruction, orders, rules and regulations, policies, procedures, posters, memos, reports and information bulletins.

1. **The importance of written instructions is mentioned as below:**
    a. It keeps evidence of what has occurred or what was stated.
    b. It keeps permanent record for future use.
    c. It reduces the chances for misinterpretation and distortion of information.
    d. It is more reliable when transmitting lengthy information on financial, production or other important data.
    e. It provides an opportunity to put up their grievance in writing and get it supported by facts.

2. **Complying with industries written instructions:**
    a. Carry out work functions in regulatory and accordance with legislation and organisational regulations, guidelines and procedures.
    b. Seek and obtain clarifications on policies and procedures, from the authorized person.
    c. Apply and follow the policies and procedures within work practices.
    d. Provide support to the supervisor and team members in enforcing these considerations.
    e. Comply with health and safety and security related instructions applicable at workplace.
    f. Use and maintain personal protective equipment as per protocol.
    g. Carry out own activities in line with approved guidelines and procedures.

Writing Care Instructions: Care instructions should be written in the form of notices or signages to help employees remind of care or caution to be followed with regard to machinery or wet floor or any hazardous situations.

1.4.1 Equipment operating procedures / manufacturer's Instructions

The manufacturer of machines, as well as the operator, both should take all technical and organisational measures, in order to ensure the safety of machine operators. It includes the general rules for approaching safety issues that should be taken into account by machinery designers in the design process e.g. inherently safe design, safeguarding and protective measures, information for use, mode of application, conformity assessment procedures etc. Use of machine operating manuals should be encouraged to employee designated to use particular machine.

Despite the adoption of measures for inherent safe design, safeguarding and protection, the user is informed about machine design and their parts, running and maintenance of machine.

1. The information may be in the form of accompanying documents and instruction manual, on the machine itself, on the packing and by other means, such as signals and warnings outside the machine. Information and warnings on machinery is provided in the form of readily understandable symbols or pictograms. The operator must have facilities to check the operation of the warning devices all the time.

2. Visual signals, such as flashing lights and audible signals such as sirens may be used to warn of an impending hazardous event, such as machine start-up or over-speed.

3. All the necessary markings on machine itself

   - For unambiguous identification,

   - In order to indicate compliance with mandatory requirements,

   - For safe use.

4. The instruction handbook or other written instructions includes all information for safe commissioning, operating, adjusting and maintenance of the machine.

2.5 Coordination with Team Members and Colleagues

Team communication belongs to a distinct category of communication within organisations. Unlike normal communications which are intended to carry the message correctly, the purpose effective team communication is to generate productive conversations aimed at achieving common goals within the shortest possible time and using minimum possible resources.

2.5.1 Coordination within the teams and across the teams

A team reaches its goals by inspiring members to think openly about the team's challenges and come up with the most creative solutions. Also important in this process is to increase the level of cohesion and coordination in the team to facilitate the implementation its strategies and plans and achieve the goals.

At the organisational level, there will be always several teams working simultaneously doing different things. However the success of the organisation will depend on how all the teams work in coordination with each other and contribute to the achievement of organisational goals. Effective communication and coordination will be necessary not only within the teams but also across all the teams.

What binds the members within a team as well as all the teams within the organisation is shared vision. Every team must first understand and share the organisational vision. Each team, in turn, will need to develop its own vision in coordination with other teams. Each team member will remain united and coordinate with each other based on their shared vision. Similarly, all the teams will remain united and coordinate their activities based on the organisation vision. Effective communication, therefore plays a crucial role in the coordination of all team activities.

2.5.2 Importance of team coordination and the role of communication

Teams achieve success by developing and using strategies and innovations in response to the challenges of its goals. Team communication plays important role in both the development and implementation of strategies.

The following are the reasons why coordination and communication become imperative for the successful functioning of teams:

- **Reduction in repeat and redundant activities:** Coordination with effective communication is necessary to avoid duplication of work within or across the teams as this will only add to costs of operation and delays in the completion of tasks and achieving the final goals.

- **Reduction in conflicts within and across teams:** Coordination with effective communication will also minimise the chances of conflicts in the work performed by individual team members and across the teams. This

will also save the time and resources wasted during the conflicts and the subsequent conflict resolution stage.

- **Improved creative problem solving:** Teams always work as think tanks while developing strategies and scheduling implementation. Free, frank and informed communications among the members will be necessary to spark new and innovative ideas since collective thinking will be more powerful than what an individual can think alone.

- **Improved overall productivity:** When the objectives and working of all the teams are aligned to the organisational vision and goals, there will be minimal wastage time and resources. This will help increase the overall organisational productivity.

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Activies

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Activity 1: Prepare a PowerPoint presentation or a chart on The Role of Effective Communications in the Workplace.

Materials Required:
   1) Chart paper

   2) Pen, pencil, coloured pens and markers

   3) Eraser, sharpener

   4) Scale

Procedure:
   1) Collect required information.

   2) Organize the collected information in PPT or chart whichever is feasible to you.

   3) Decorate it with pictures and graphics.

   4) Get it corrected by your teacher.
   5) Discuss and present in the class.

<div align="center">

Check Your Progress

</div>

State True or False:

1. The communication mechanisms in organizations are analogous to the nervous system in the human body. Failures in the communication system can paralyze any part of the organization.

2. Total communication failure in an organization can render it brain dead.

3. Intermediate roles like managers, supervisors, and team leaders may be delegated authority to handle localized communication within the organizational system.

4. Effective communication in the workplace is solely dependent on following the proper procedure for drafting and sending messages.

5. The reliability of the source is not crucial for effective communication; the content itself is the primary focus.

Fill in the Blanks:

1. The burden of responsibility lies with the _____ to ensure that the message is understood and that expectations for deliverables are clearly defined.

2. Messages are conveyed through _____, and these channels are affected by the method and environment chosen for communication.

3. Communication at the workplace is crucial for achieving productivity and maintaining strong relationships at all _____ of an organization.

4. Clear and concise writing helps build trust and integrity between the _____ and the reader.

5. Effective communication skills include listening, reading, writing, and ___.

Answer in Brief:

1. What are the key benefits that an organization can derive from effective communication in the workplace?

2. Explain the importance of complying with written communications in the workplace.

3. How does effective team communication contribute to the success of an organization, both within individual teams and across different teams?

Answer in Detail:

1. Examine and elaborate on the analogy drawn between the communication mechanisms in organizations and the nervous system in our body. How does this analogy help understand the significance of effective communication in an organizational context?

2. Discuss the various guidelines mentioned for ensuring the effectiveness of workplace communication.

3. Explain the role of coordination and communication in teams, both within individual teams and across different teams in an organization.

Session: 3   Describe Creative Freedom and it's use in Increasing Process Efficiency

Creativity is the art of using our mental visualisation skills to imagine new things and think up new and better ways of doing things. However, creativity of the mind grows only in an environment of freedom. Creativity cannot grow if we restrain our mind from asking questions, imagining alternatives and visualising abstract realities. Someone imagined an aircraft when it did exist and before it was made, the first time. Even the write brothers had to several attempts before finally demonstrating their aircraft in 1903. They had to use creative problem solving to overcome the problem faced by the air craft design in each of their previous attempts. All the new products and technologies are born out of the creative thinking processes of various persons.

Creative freedom refers to the opportunity available to think, imagine and visualise new things buy openly questioning existing things and processes. We develop new things and technologies to save time resources, to improve convenience and comfort and finally to increase our existing knowledge and also to improve our learning skills.

For example, in a jute bag manufacturing unit, creative freedom allows the design team to think outside the box and visualize new jute bag designs. They are encouraged to experiment with different shapes, sizes, and materials, without constraints on conventional designs. As a result of this creative freedom, they conceptualize and create innovative bag designs that not only appeal to customers but also optimize the use of jute fabric and streamline the production process. For instance, one designer, empowered by creative freedom, envisions a foldable jute bag with a unique closure system. This design not only stands out in the market but also reduces the time and material required for production. By implementing this innovative design, the manufacturing unit increases its production efficiency while offering a fresh and attractive product to customers. This example demonstrates how creative freedom can lead to new and efficient solutions in the jute product sector, benefiting both production processes and market competitiveness.

1.5 Creative Freedom and its importance in the workplace

The application of creative thinking in workplaces is not only think of new ideas but to turn these into realities, which help improve the organisational performance.

The following are the salient advantages of creative freedom at workplaces:
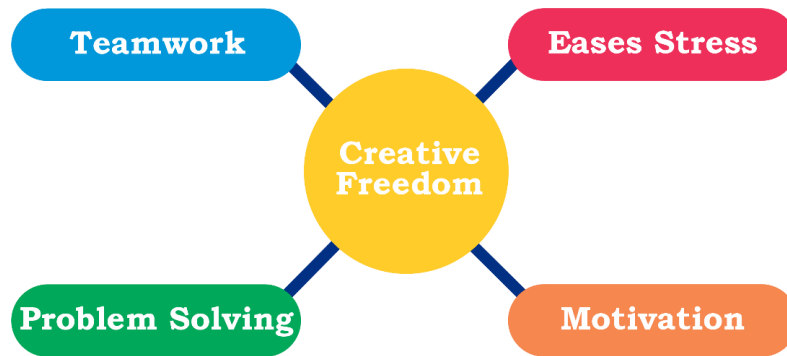

Fig: 5.9 Creative Freedom

- **Promotes teamwork:** One of the main reasons for the success of teamwork is the opportunity it provides for people to use their collective creativity to solve problems that waste time and resources. When people work according set procedures and rules, there is little room for employees to do things in new and easier ways.

- **Helps greatly in problem solving:** Problems that have existing solution are easily solved as a matter of routine. However, problems which have no known solutions or poor solutions require to be solved with the help of creative thinking. Creative thinking inside working places also becomes more productive because of the experience that employees develop over time in solving similar or related problems.

- **Eases stress:** Creative thinking also gives people the confidence that they need not be unduly bothered about operational problems because of their belief in the power of collective creative thinking to solve any problem which might arise in the workplace.

- **Increases the level of motivation among employees:** The freedom given to team members to think freely and come up with creative solution serves as a motivation for people to keep on finding better and better ways of doing things in the workplace.

1.6 Developing the skill of Creative thinking and problem solving

Although creative thinking provides several advantages, it takes time and effort to develop these skills. It requires not only different types learning but also psychological dispositions that are achieved through regular practice.

The following are some of the important steps we can take to develop our creative thinking skills:

- **Learn to think outside the box:** Most problems occur and remain unresolved because of the lack of existing knowledge. The solution to such problems always is outside the existing knowledge. It is therefore necessary to develop courage and skills to question existing knowledge. For example, in a jute product design company, the team wants to create innovative, eco-friendly jute bags. They realize that traditional bag designs are limiting their creativity. So, they decide to question the existing bag shapes and materials, leading them to design unique, foldable jute bags that are both stylish and functional.

- **Be Independent at Work:** Even though working together with others is good, it is also great to be able to work by yourself. You can be creative and solve problems on your own. Get used to doing tasks without someone telling you what to do. For example, imagine a jute mat manufacturing company where an employee takes the initiative to optimize the mat weaving process independently. By experimenting with different weaving techniques without being instructed, they discover a more efficient way to produce high-quality jute mats.

- **Stay on Track with Work:** Creative individuals can get deeply involved in their creative work and sometimes lose track of time. To enhance creativity at work, they should practice staying focused on their tasks. Using techniques like concentration exercises or meditation can help stimulate creative thinking. If they encounter difficulty in concentrating, they should take short breaks to recharge. Over time, with practice, many people discover that it becomes easier to stay focused on their tasks. For example, in a jute carpet factory, creative workers sometimes lose track of time while designing intricate patterns. To enhance their productivity, they practice mindfulness and use concentration exercises to stay focused on their carpet designs, ensuring they meet production deadlines.

- **Do not be afraid of risks:** Creative individuals are open to taking risks at work. They don't get scared of failing; instead, they feel inspired to discover new ways to succeed. By daring to take risks and experimenting with various methods to boost creativity, they can explore new ideas and see if they work. This approach helps them refine their ideas and share them with colleagues to make work better. When they face a problem, they research and figure out solutions on their own, using their analytical skills to generate ideas and improve processes without needing help from others. For example, in a jute rope production unit, a manager encourages the team to experiment with a new, eco-friendly jute processing method.

Although there is a risk of initial failure, the team's willingness to take the risk leads to the development of a sustainable and cost-effective process.

- **Be detail-oriented:** Creative individuals emphasize the importance of being thorough. They value preparation and research, which allows them to think about problems from different angles. When brainstorming or solving problems, they carefully look at all the details to think about all possible solutions and results. Making lists to organize thoughts can be useful. This attention to detail helps them find areas for improvement before putting their ideas into action, leading to higher-quality work. For example, at a jute textile unit, the quality control team meticulously inspects jute fabric for any imperfections or inconsistencies in texture, color, or thickness. Their attention to detail ensures that only top-quality jute fabric is used in the production of textiles, resulting in high-quality products.

- **Make positive use of feedback:** Creative individuals care deeply about their work, but they also understand the importance of getting helpful feedback. When they receive constructive feedback at work, they take it gracefully and think about it. They use this feedback to make their ideas or methods better in the future. This helps them keep learning and growing in their careers. For example, in a jute bag manufacturing company, a designer receives positive feedback about the durability of their bags. The artisan may feel encouraged to incorporate reinforced stitching and stronger handles into their designs. As a result, the bags become more popular and consistently long-lasting.

- **Practice work ethics:** To be creative and promote creativity at work, a lot of hard work is required. Having a strong work ethic is essential, as it allows individuals to dedicate the time and energy needed for creative tasks and projects. To stay focused while working, it is important to reduce distractions and use time wisely. Some people find it useful to set aside specific times each day for creative thinking and brainstorming to ensure they finish their work on schedule. For example, in a jute product unit, employees adhere to a strong work ethic. They allocate dedicated time each day for creative brainstorming sessions, ensuring that they consistently come up with innovative designs while maintaining a disciplined work schedule to meet production deadlines.

3.3 Improving the existing techniques to improve process efficiency

In the case of jute products, like bags, handicrafts, and more, finding ways to do things better and faster is crucial. This means making improvements to

existing methods and processes to boost efficiency. Efficiency is all about doing more with less. When jute product artisans find better ways to do things, it helps in the following ways:

- Cost Savings: Efficient processes often cost less, as they use fewer resources like time, labour, and materials.

- Higher Quality: Improved techniques can lead to better-quality jute products, which can attract more customers.

- Competitive Advantage: Companies that can produce jute items efficiently can offer better prices or higher profits.

3.3.1 Steps to Improve Efficiency:

Fig: 5.10 Improve Efficiency

- **Analyze Current Processes:** First, examine how things are done now. Identify any bottlenecks, where things slow down or go wrong. For example, in a jute bag manufacturing company, you might analyze the process of cutting and stitching jute fabric to create bags. You discover that the stitching process is slower due to outdated sewing machines, leading to a bottleneck in production.

- **Set Clear Goals:** Decide what you want to achieve with your improvements. Do you want to reduce production time, cut costs, or improve quality? Let us say your goal is to reduce production time by 20% in your jute product unit. This clear objective helps guide your improvement efforts towards achieving this specific target.

- **Brainstorm Solutions:** Get together with your team and brainstorm ideas. Encourage everyone to share their thoughts on how to do things better. For example, during a team meeting, employees in your jute mat production unit suggest using a more efficient weaving technique that they have learnt. Encouraging such brainstorming sessions can lead to innovative solutions.

- **Test and Experiment:** Before making big changes, try out your new ideas on a small scale. See if they work and if they make a difference. For example, before revamping your entire jute rope production process, you decide to pilot the new method on a small scale. You experiment with a single production line to assess whether it increases output and quality or not.

- **Measure Progress:** Once you implement changes, keep an eye on how things are going. Are you meeting your goals? If not, adjust your methods as needed. For example, after implementing changes in your jute carpet manufacturing plant, you closely monitor production metrics such as units produced per hour and defect rates. If you notice that the defect rate has decreased but production time remains high, you may adjust your methods accordingly.

- **Continuous Improvement:** Do not stop with just one round of improvements. Keep looking for ways to make things even better. For example, in your jute bag unit, you have successfully reduced waste in the cutting process. However, you don't stop there. You regularly review your processes to find further enhancements, such as optimizing stitching patterns or sourcing eco-friendly dyes for coloring the jute fabric.

Example of improving technical efficiency in the jute product sector:

- **Modern Machinery:** Invest in better machinery that can process jute more quickly and accurately.
- **Training:** Train your workers to use these machines effectively to reduce errors and increase output.
- **Supply Chain Optimization:** Streamline your supply chain to get raw materials when you need them, reducing downtime.
- **Quality Control:** Implement strict quality control measures to catch mistakes early and avoid rework.
- **Energy Efficiency:** Look for ways to reduce energy consumption in your production process to save on utility costs.
- **Automation:** Consider automation for repetitive tasks to speed up production.

Improving techniques to enhance process efficiency in the jute product sector is a smart move. It can help companies save money, produce higher-quality products, and stay competitive in the market. By analyzing current processes, setting clear goals, and continuously looking for ways to improve, jute product manufacturers can thrive in their industry.

Activies

Activity 1: Prepare a PowerPoint presentation or a chart on Creative Freedom and its importance in the workplace

Materials Required:

1) Chart paper

2) Pen, pencil, coloured pens and markers

3) Eraser, sharpener

4) Scale

Procedure:

1) Collect required information.

2) Organize the collected information in PPT or chart whichever is feasible to you.

3) Decorate it with pictures and graphics.

4) Get it corrected by your teacher.

Discuss and present in the class.

Check Your Progress

State True or False:

1. Creative thinking can only flourish in an environment of restrictions and constraints.

2. The Wright brothers successfully demonstrated their aircraft in 1903 on their first attempt.

3. Creative freedom involves the ability to question existing things and processes openly.

4. In a jute bag manufacturing unit, creative freedom allows the design team to only experiment with conventional designs.

5. Creative thinking is not applicable in problem-solving scenarios where solutions already exist.

Fill in the Blanks:

1. Creativity is the art of using mental visualization skills to _____ new things and think up new and better ways of doing things.

2. Creative freedom refers to the opportunity available to think, imagine, and visualize new things by openly questioning existing things and _____.

3. In a jute bag manufacturing unit, creative freedom allows the design team to experiment with different shapes, sizes, and materials without constraints on _____ designs.

4. The application of creative thinking in workplaces is not only to think of new ideas but to turn these into _____ that help improve organizational performance.

5. Efficient processes often cost less, as they use fewer resources like _____, labor, and materials.

Answer in Brief:

1. What are some advantages of creative freedom in the workplace according to the provided content?

2. What are the essential steps mentioned for developing creative thinking skills in the context of jute product manufacturing?

3. What are the potential benefits of improving techniques to enhance process efficiency in the jute product sector, as per the content?

Answer in Detail:

1. How does creative freedom contribute to teamwork and problem-solving in the workplace, specifically in the context of jute product manufacturing, according to the information provided?

2. Explain the steps outlined for developing creative thinking skills and problem-solving abilities in the workplace, focusing on the jute product industry. How can these steps be practically implemented to foster a culture of creativity and innovation?

3. Discuss the significance of improving existing techniques to enhance process efficiency in the jute product sector. Provide examples from the content and elaborate on how such improvements can impact cost savings, product quality, and overall competitiveness in the market.

Module 6	Complying with Workplace Requirements

Module Overview

Developing the ability to effectively perform job functions in unorganized jute and jute products sector is crucial for artisans. While the sector lacks the structured policies and regulations seen in larger organizations, there is a growing emphasis on adhering to established standards, policies, and greening solutions. As the global awareness of sustainable and eco-friendly practices increases, jute artisans must adapt to these demands to remain competitive.

Effective coordination and communication within a team are equally vital for success in the unorganized sector. Jute artisans often work in small, tight-knit groups or as individuals. To ensure productivity and harmony, they must proactively prevent conflicts and miscommunications. Polite and respectful communication can enhance teamwork, leading to better-quality products and improved livelihoods. Applying organizational standards, even in the absence of a formal organization, is essential. Artisans who consistently produce high-quality jute products not only build a strong reputation but also set an example for their peers. Inspiring and motivating others to adhere to these standards can uplift the entire community of artisans, raising the overall quality and competitiveness of their products.

Learning Outcomes
After completing this module, you will be able to: - Understanding and adhering to organisational standards, Government regulations and greening solutions   - Effective teamwork and communication Skills in the Workplace   - Applying and promoting organizational standards
Module Structure
Session: 1 Understanding and Adhering to Organisational Standards, Government Regulations and Greening Solutions
Session: 2 Effective Teamwork and Communication Skills in the Workplace
Session: 3 Applying and Promoting Organizational Standards

<table>
<tr><td>Session: 1</td><td>Understanding and Adhering to Organisational Standards, Government Regulations and Greening Solutions</td></tr>
</table>

Organisational standards and government regulations are applicable equally to the organised and unorganised sectors. Similar is the case with environmental regulations and voluntary initiatives. With the growing competitiveness in the market place, organisations in the unorganised sectors are also required to adopt modern management principles and standards. Persons engaged in these sectors will need to make use of self-learning to develop the necessary capabilities to understand and comply with the organisational standards, governmental regulations and greening solutions.

1.   Self-learning and Improvement

Education is what we get from schools and colleges. Teachers impart the knowledge and skills using a variety of methods. Self-learning is a process of teaching oneself using one's own knowledge and skills to learn more - from what we do, experience or come to know from books and other sources of information and knowledge.

1.1   Importance of self-learning

Self-learning is necessary to understand and apply what we did not learn from schools, colleges and training institutions. Self-learning helps in advancing our knowledge and skills. It is a life-long process. It results in continuous improvements in our knowledge and skills and makes us more and more productive. It can lead to rewards and recognition. It is also the source of new ideas. It makes us more and more self-confident and gives us the courage to take up new initiatives.

Self-learning also helps improve the quality of our life and work. With the help of self-learning, we can avoid repeating the same mistakes and find better ways of doing anything, the next time. It helps decide what is best among the available options and use time and resources more efficiently. It provides a better understanding of the impacts of all our actions on the environment and guides in reducing the environmental impacts of the past.

Self-learning plays an important role in workplaces, since organisations mostly use written documents and other verbal communications to describe

the work to be done and prescribe the relevant procedures. Similar is the case with laws and regulations of the government, which apply to the organisations, the workplace, the workers and every individual. Self-learning must therefore aim at gaining the necessary linguistic (language related) skills for understanding the documents written in different styles also.
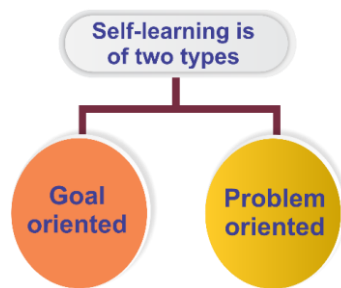
1.2 Types of self-learning

Fig: 6.1 Self-learning

1)   **Goal oriented and**
2)   **Problem oriented**

1. **Goal oriented Self-learning:** In the goal oriented approach, we first identify the objectives of the learning project or initiative and then acquire the information resources and analytical tools required to develop the necessary knowledge within a specified period of time.

   In the context of jute product making, a goal-oriented self-learning example would be a jute artisan setting a specific objective to improve their weaving technique to create intricate patterns within three months. To achieve this, they might identify the need for specialized weaving patterns and acquire relevant resources, such as pattern books or online tutorials. They would then diligently practice and apply the acquired knowledge, tracking their progress over the designated time frame to meet their learning goal. This goal-oriented approach empowers the artisan to enhance their skillset effectively and efficiently.

2. **Problem oriented Self-learning:** In the problem oriented learning approach, the learning goals may not be clear till we know the causes of the problem. These require the development of analytical skills which help in first understanding causes. Once we understand the causes and dimensions of the problems, we may then use the goal oriented approach to find the solutions for each of the causes.

In the context of jute product making, a problem-oriented self-learning example could be an artisan encountering a persistent issue with the durability of their jute bags. Instead of having a predefined learning goal, the

artisan takes a problem-solving approach. They first analyze the bags' weaknesses, researching factors such as jute quality, stitching techniques, and load-bearing capacity. As they identify the causes behind the problem, they may realize that weak stitching is a significant issue.

Now, armed with the knowledge of the problem's cause, they can switch to a goal-oriented approach. They set a specific learning goal: to improve their stitching technique for jute bags. They gather resources like tutorials, expert advice, and suitable stitching equipment. Over time, they practice and refine their stitching skills, ensuring that the bags they produce are more durable and meet the desired quality standards.

In this case, problem-oriented self-learning initially focused on understanding the underlying issues, and once those were identified, the artisan transitioned to a goal-oriented approach to find solutions and improve the quality of their jute products.

1.3 Role of self-learning in unorganised sectors

Self-learning is of immense value in unorganised sectors and informal workplaces. Organisations engaged in these areas do not develop and enforce standards and standard operating procedures as much as it is done in the organised sector. Individuals working in these sectors, therefore, have a greater responsibility to use self-learning techniques to understand the workplace requirements and legal regulations and contribute to the growth and productivity of these organisations.

Imagine an artisan named Rina who works in an informal jute product-making workshop. The workshop does not have formalized standards or operating procedures, and it mainly relies on the skills and experience of its workers. Rina specializes in making decorative patterns on jute bags, but she notices that her products lack consistency and durability, which affects their marketability. The following are the steps in the self-learning process adopted by Rina, and the impact on the workplace:

STEP 01 Identifying the Problem

STEP 02 Research and Self-Education

STEP 03 Experimentation and Practice

STEP 04 Continuous Improvement

STEP 05 Impact on the Workplace

Fig: 6.2 Self-learning process steps

➢ **Identifying the Problem:** She first identifies the problem, which is inconsistent and less durable jute bags. However, there are no established guidelines or supervisors to turn to for solutions.

➢ **Research and Self-Education:** Recognizing the need for improvement, she decides to take matters into her own hands. She begins researching various techniques, materials, and jute quality factors that could be contributing to the issue. She watches online tutorials, reads articles, and connects with other artisans to gather insights.

➢ **Experimentation and Practice:** Armed with newfound knowledge, Rina starts experimenting with different decorative techniques and jute materials. She carefully monitors the results of her experiments, recording which techniques yield more durable and aesthetically pleasing bags.

➢ **Continuous Improvement:** Rina doesn't stop there. She continues to refine her techniques based on her observations and feedback from customers. Over time, she becomes an expert in weaving durable and beautifully designed jute bags.

➢ **Impact on the Workplace:** Rina's dedication to self-learning not only improves the quality of her products but also has a positive impact on the entire workshop.
  o Her colleagues notice her success and start seeking her advice and guidance, fostering a culture of shared learning.
  o The workshop's reputation grows as the quality of their jute products improves, leading to increased orders and revenue.
  o Rina's self-improvement efforts inspire her co-workers to explore self-learning, which collectively enhances the workshop's productivity and competitiveness.

In this example, Rina's self-learning journey highlights the significant role that self-initiative and education play in the unorganized sector of jute product making. Her dedication not only leads to personal growth but also contributes to the overall development and success of her workplace within this informal and unorganized industry.

2. Understanding organizational standards and government regulations.

Organisations usually specify minimum workplace standards, which every employee must follow. These minimum requirements may be specified in the form of norms, standard operating procedures (SOPs), policies, codes, guidelines, targets, protocols, etc. aimed at achieving the organisational goals

and complying with government regulations as well as social and environmental responsibilities. These also help create and maintain the organisational culture and ensure the proper quality of the products and services. Another major objective of workplace standards and procedures is to ensure the health and safety of the workers as well as avoid damages to the workplace and the environment. Apart from the compulsory standards, organisations might also specify norms for measuring voluntary performance improvements.

In contrast to the structured environment found in organized jute industries, the unorganized jute product sector often operates without well-defined workplace standards and procedures. This informal sector relies more on the skills and experiences of individual artisans and workers, with less emphasis on formalized norms and regulations.

2.1 Organisational standards and procedures

The following are the commonly used organisational standards, policies and procedures:

Fig: 6.3 Organisational standards and procedures

1. **Codes of Conduct:** These cover employee behaviours in areas such as organisational values, conflict of interest, attendance, client interaction, etc.

2. **Standard Operating Procedures:** These cover process flows and controls, machine/tool operations, material handling, client interaction, etc.

3. **Quality Management Systems:** These cover checks during the production process, sample tests after production, criteria for finished product rejection, etc.

4. **Performance Management and Rewards Systems:** These include training and development programmes, performance reporting, evaluation and rewards systems, etc.

5. **Information and Communication Management Systems:** These cover data input duties and data access rights, protocols and formats for external communication, etc.

6. **Organisational Security Protocols and Controls:** These cover rights and restrictions on the use of organisational property, systems and privileges, etc.

7. **Health and Safety Procedures:** These include procedures for preventing operational hazards and accidents, emergency response systems, workplace monitoring systems, etc.

2.2 Governmental Regulations

Governmental regulations are binding on the organisations as well as each and every person involved in any breach of law. Therefore, every individual worker must also understand and follow these without fail. Laws are enacted by both the Central and State Government as prescribed in the Constitution.

The Government of India has instituted several policies and regulations to promote and regulate the jute industry. These policies cover the mandatory use of jute packaging materials for specific commodities, such as food grains and sugar, to support jute farmers and manufacturers. The National Jute Policy also guides the industry's strategic development, emphasizing sustainable cultivation practices and technological advancements. Additionally, government agencies like the Jute Corporation of India play a vital role in implementing policies, ensuring fair pricing for raw jute, and maintaining a steady supply chain. These regulations and policies aim to foster the growth of the jute sector while safeguarding its sustainability and the livelihood of those involved.

The common Government regulations and rules relating to organisations, workplaces and workers fall into two categories:

2.3 Laws and Regulations covering the setting up and functioning of workplaces

- Laws on the setting up of organisations such as Companies, Co-operative Societies, Societies, Trusts, etc.

- Laws concerning workplace operations such as factories, mines, commercial establishments and non-profit organisations, etc.

- Laws regarding employment of full time worker, contract workers, migrant workmen, apprentices, etc. and the prevention of child labour.

- Laws governing taxes to be paid to the central and state governments and local bodies.

2.4 Laws and Regulations relating to workers and their rights and privileges

- Laws about wages, minimum wages, bonus, provident fund, and gratuity, equal remuneration to men and women, maternity benefits, compensation for workplaces accidents. .

- Laws governing trade union activities and industrial disputes

- Laws for employee's health and welfare such as employee state insurance, unorganized workers' social security, public liability insurance, etc.

- Laws applicable to specified categories of workers in plantations, private security, journals and newspapers, mines, beedi making, cinema, docks, etc.

1. Contributing to Environmentally Responsible Workplaces

Environmentally responsible workplaces have become a necessity in view of the growing environmental consciousness among the consumers and the society at large. While organisations could initiate green initiatives voluntarily, it has become necessary employees working in the unorganised sectors also adopt eco-friendly practices.

An example from the unorganized jute product sector could involve small-scale jute artisans who craft products like bags and handicrafts. These artisans may not have access to extensive resources or formal training but can still contribute to sustainability. These artisans can explore efficient use of jute scraps and waste materials, making them into smaller items like coasters or keychains. This waste reduction strategy can not only minimize environmental impact but also maximize their resource utilization and income

generation. In this example, artisans in the unorganized jute product sector can voluntarily embrace eco-friendly practices and can make a positive impact by adopting sustainable methods, contributing to a greener and more socially responsible jute product industry.

3.1 Understanding environmental impacts and related Governmental regulations

Governmental laws and regulations cover not only the protection of the overall environment but also specific areas of significant environmental concerns such as air, water, forests including wildlife, biological diversity, coastal areas. In addition, our country is also part of global initiatives aimed at environmental protection.

Some of the major areas environmental concerns are related to air including the atmosphere, water including oceans, forests and plant life, soil, noise, radiation, etc. These concerns arise out of the hazards these pose to human health as well as the damages they are causing to the health of the planet Earth and its life forms.

Jute and jute products have a significant environmental impact in India. Jute cultivation requires a substantial amount of water, which can strain local water resources if not managed sustainably. The use of pesticides and chemicals in jute farming can have negative environmental impacts if not regulated properly. In some cases, the expansion of jute cultivation has led to deforestation and habitat loss. Jute processing and manufacturing of jute products may involve chemical treatments and energy consumption, which can contribute to pollution and greenhouse gas emissions. The dyeing and finishing of jute textiles can also have environmental consequences if not carried out using eco-friendly practices.

3.2 Atmospheric environmental concerns

- **Air pollution:** It is caused by harmful gases emitted by industries and other human activities like excessive burning of fossil fuels, smoking degrades the quality of air and make it unbreathable or lead to lung diseases like cancer. These might also create haze and smog that reduce visibility which lead traffic jams and accidents. Some of the particles and gases, which contribute air pollution include: Carbon Monoxide, Nitrogen Dioxide, Sulphur Dioxide, Ozone, Particulate Matter and lead.

- **Greenhouse gases:** These substances contribute to global warming. During the day, the Earth receives heat from the sun, and at night,

the hot air rises to the top of the atmosphere, which is cooler. Greenhouse gases act like a protective layer, allowing some heat to escape while retaining enough to maintain a suitable temperature for life on Earth. However, excessive greenhouse gases can trap too much heat, leading to a rise in Earth's temperature. This, in turn, melts polar ice, raising sea levels and potentially causing global disasters. It's essential to strike a balance in greenhouse gas levels for the well-being of our planet.

- **The Ozone layer in the atmosphere:** It is essential for preventing too much ultra violet rays reaching the Earth and causing skin cancer, cataracts, and impaired immune systems. The ozone layer is weakened and punctured by a series of chemical reactions resulting from the halogens of chlorine and bromine. The reduction in the emissions of the sources of these reactive gases has helped heal the Ozone layer hole observed over the Antarctic. There is a continuous need for protecting the Ozone layer.

- **Energy conservation or reducing carbon footprints:** It has become a very important way of controlling greenhouse gases and air pollution as it helps reduce the use of oil and coal which are among the primary contributors to air pollution.

3.3 Water pollution concerns

1. **Water pollution and Marine pollution:** The effluents reaching the rivers and other waterbodies adversely affect the quality of freshwater and make it undrinkable by humans and other life forms and unsuitable for irrigation. Drinking polluted water can cause grave health problems. The heavy metals and harmful chemicals entering the waterbodies can also enter the food chain, when polluted water is used for irrigation, and harm human health. It is caused by the vast amounts of harmful effluents and very slowly degrading materials like plastics washed into oceans by rivers and rains as well as dumped directly into it by industries and other human activities. The slow degrading materials consume more of the oxygen in the ocean leaving less and less for the fishes and other marine animals and creatures. These also block the sunlight reaching the marine vegetation leading to their decay. Spillage of crude oil has also become a major cause with similar effects.

2. **Water conservation:** It has also become essential for supporting the growth in human population and at the same time control water

pollution. When we use less water, the resulting pollution is also less.

3.4 Forest and biological diversity related Environmental concerns

1. **Deforestation:** Cutting down too many trees is bad for our planet. Trees help keep the air clean by using carbon dioxide and giving us oxygen. When we chop down a lot of trees, it releases more carbon dioxide into the air, making it dirty. Deforestation also messes up the weather, causes soil to wash away, makes more deserts, and takes away homes from animals and people who live in those areas. Plus, we get less oxygen, and there's more carbon dioxide, which is not good for us. So, it's important to take care of our trees!

2. **Biodiversity:** We worry about losing many different types of living things because of cutting down too many trees, which takes away their homes and messes up the weather. Hunting animals illegally (poaching) makes this problem worse.

3. **Tree conservation:** Trees contribute to the overall health of our planet, supporting various species and ecosystems. By preserving trees, we protect habitats, mitigate climate change, and promote a sustainable and balanced environment, ensuring a healthier and more resilient Earth for present and future generations.

3.5 Organisational Initiatives

While governmental regulations specify mandatory requirements, government policies encourage organisations to take voluntary initiatives beyond the regulatory standards. Most forward looking organisations adopt sustainability as an integral part of their organisational strategy. They not only try to make their products and services environment friendly, but also help create greater environmental awareness among the people.

3.6 Employee contributions to environmental sustainability

The Indian Constitution clearly mandates that every citizen must "protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures."

Whether working in the organised or unorganised sector, every employee has a dual respect to environmental responsibility:

- To adopting environment friendly practices in the workplace and

- To perform the duty of an environment friendly citizen of the country

There are several ways in which each one of us can help protect the environment. These strategies are summarised in the form of Five Rs as follows:

- **Refuse:** We can save the environment by refusing to buy products made of environmentally harmful ingredients like plastics or toxic chemicals. This will demotivate producers to stop making items that use environmentally harmful raw materials or processes and switch over to using eco-friendly ingredients and processes.
- **Reduce:** Every product and service consumes energy and materials. Every worker involved in the process consumes food and other resources. All these come with environmental costs. When we reduce the consumption of any item or service by optimising its use, we would proportionally reduce the environmental impacts of our consumption.
- **Reuse:** We can reduce the environmental impacts of our consumption by making more use of what we already have. For example, we can delay the purchase of new clothes by reusing the old clothes more and more.
- **Repurpose:** It is an alternative reusing a product as much as possible. A plastic container can be used as a pot for growing plants or herbs. It only requires creative thinking to find alternative uses for even partially damaged items that cannot be repaired. This will reduce the need for buying new items, which would help save the environment.
- **Recycle:** We now have several recycling technologies, which can help reprocess the ingredients of old goods for use as raw materials for making new things. For example, used plastics can be can be shredded into flakes or melted into pellets to mould new products. Of course, old items must be cleaned thoroughly to remove all the dirt and dust before recycling.

Refuse - Replace, don't purchase

Reduce - Cut back

Reuse - Use over and over again

Repurpose - Reform, repair, DIY

Recycle - Reuse materials as resource

5R's: A Path To Sustain ability

Fig: 6.4 Figure: Five R's of Sustainability

Activies

Activity 1: Prepare a PowerPoint presentation or a chart on Role of self-learning in unorganised sectors

Materials Required:

1) Chart paper
2) Pen, pencil, coloured pens and markers
3) Eraser, sharpener
4) Scale

Procedure:

1) Collect required information.
2) Organize the collected information in PPT or chart whichever is feasible to you.
3) Decorate it with pictures and graphics.
4) Get it corrected by your teacher.
5) Discuss and present in the class.

Check Your Progress

State True or False:

1. Jute cultivation has no environmental impact, as it is a natural and sustainable fiber.

2. The Ozone layer is not relevant to the discussion of environmental impacts in the jute industry.

3. Efficient use of jute scraps and waste materials in the unorganized sector contributes to sustainability.

4. Water pollution concerns in the provided content are related to noise pollution.

5. Every citizen, whether in the organized or unorganized sector, has a responsibility to adopt environmentally friendly practices.

Fill in the Blanks:

1. Goal-oriented self-learning involves identifying the objectives of the learning project and acquiring the information resources and analytical

tools required to develop the necessary knowledge within a specified period of_____.

2. Every citizen, whether in the organized or unorganized sector, has a _____to adopt environmentally friendly practices and perform the duty of an environment-friendly citizen of the country.

3. The reduction in the emissions of the sources of reactive gases has helped heal the _____layer hole observed over the Antarctic.

4. Jute _____requires a substantial amount of water, which can strain local water resources if not managed sustainably.

5. _____responsible workplaces have become a necessity in view of the growing environmental consciousness among the consumers and the society at large.

Answer in Brief:

1. What are the two types of self-learning discussed in the context of jute product making, and provide a brief explanation of each?

2. How do governmental regulations contribute to the protection of the environment, specifically in the areas of air and water pollution?

3. Explain the significance of the Five Rs. (Refuse, Reduce, Reuse, Repurpose, Recycle) in the context of environmental sustainability, and provide one example for each.

Answer in Detail:

1. In the context of unorganized jute product making, discuss the role of self-learning and provide a detailed example of how an artisan's dedication to self-improvement can impact both individual growth and the overall productivity of the workplace.

2. Explore the environmental concerns related to jute cultivation and processing in India.

3. Discuss the potential impacts on air, water, and forests, and suggest initiatives that small-scale jute artisans in the unorganized sector can adopt to contribute to a more environmentally sustainable jute product industry.

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Session: 2   Effective Teamwork and Communication Skills in the Workplace

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The advantages of teams and team work can be easily being understood by recalling how team sports are played. Within a football team, for example, the centre forwards play an offensive role to score goals, while the goal keeper's role is to defend against the goal scoring attempts of the opponents. A cricket team includes batters, bowlers and a wicket keeper - each specialising in a particular aspect of the game. But each one of the players is committed to the common goal of winning.

Every one of the team members must do their best to make the team win. A captain's role is to only encourage and motivate everyone to give their best. Individual excellence alone is never good enough to ensure victory. A bowler's effort will go in vain in the game of cricket, if the fielder or the wicket keeper fails to take the catch or hit the stumps in time. A batter requires the partner to take runs with perfect coordination. Complementarity, cooperation, coordination, communication and commitment of the team members are essential for teams to win.

1.   Team-work and coordination with team members

Organisations have also adopted the concept and principles of team-work to achieve excellence in their operations. Team-work has become even more necessary for organisations to perform better because of the growing complexity and challenges of their operations. Teams succeed where individuals fail because of the advantages of collective wisdom over individual thinking, as well as the larger skill sets available to a team than what a single individual possesses.

In the unorganised jute product sector, the adoption of teamwork principles can significantly enhance the quality and productivity. While many artisans in this sector operate independently or in small informal groups, adopting teamwork can offer various benefits. Collaborative efforts can lead to the sharing of knowledge, techniques, and creative ideas among artisans. For instance, a group of jute artisans working together may collectively brainstorm innovative designs or problem-solving strategies, leading to the creation and marketing of unique and high-quality jute products. Moreover, teamwork can also provide inter-personal support among artisans, helping them navigate through the challenges and uncertainties. The principles of teamwork can empower jute artisans to collectively excel in their craft and contribute to the growth and sustainability of their sector.

1.1   Basic Principles of Teamwork

Teams are built upon the principle of 'united we stand and divided we fall'. The strength of a team, therefore, depends on how well the members of a team complement each other and coordinate their actions. Team-work is much more than a group activity. The difference between groups and teams arise from the way they are formed. Groups are generally formed based on age-groups, educational qualifications, geographic location, etc. or by dividing a larger number of people into smaller groups based on different criteria. But teams are always formed with a specific purpose, which it must achieve. Team members are therefore carefully selected keeping in view the knowledge, skills and experience required for achieving the objectives of the team.

Every member should have not only the ability to contribute towards the achievement of the goals but also the willingness, commitment and sense of urgency to achieve the common goal. All the team members will be collectively and individually responsible and accountable. Both successes and failures will be of the team and not of any particular individual.

1.2   Strategies for successful teamwork

Teams cannot succeed just by having the right type of members. How the team members understand the goals, develop a strategic plan and act on it shoulder to shoulder determines the success of teamwork. The following are some of the essential requirements of successful teamwork.

01 Goals come first

02 Clarity of goals

03 Strategic planning

04 Clarity on roles, flexibility and accountability

05 Matching the skillsets with the goals

06 Cohesion and coordination

07 Resilience to challenges

Fig: 6.5 Teamwork Strategies

- **Goals come first:** Teams are built to achieve specific goals and the achievement of these goals should get the highest priority. Personal goals and interests must not be allowed to come in the way. Goals must be understood and agreed to by all the team members.

- **Clarity of goals:** It means that there is a common understanding and agreement among all members about every aspect of what needs to be achieved and the steps needed towards such achievements. The goal should not be mistaken for completing a task. The team will achieve its goal only when the tasks done by it produced the desired results, effects or impact.

- **Strategic planning:** Strategic planning involves choosing the best or the most optimal path from the variety of alternative paths available for achieving the intermediate and final goals. Strategic planning must be worked out by fully utilising knowledge, skills and capabilities of all the members. Strategic planning is also essential to achieve the goals within the specified time and available resources. It is also essential to ensure that the performance of the team or any of its members do not suffer for want of time or resources.

- **Clarity on roles, flexibility and accountability:** Teamwork implies that all the members are simultaneously engaged in completing a strategic task or is providing support to another in completing any assigned task. While each member plays a leadership role in their respective assigned tasks, the supporting team members must leave their ego aside and willingly perform the role of a follower or helper. At the same time, the responsibility for completing the tasks assigned by the team will be that of the concerned individual.

- **Matching the skillsets with the goals:** Availability of the necessary skills and expertise is an essential condition for the success of the teams. Every member of the team must therefore continuously develop and sharpen their skills. The same goes for knowledge. In the age of fast changing technologies and consumer psychologies, the teams must also constantly update their knowledge and awareness that are relevant to their goals. One of the critical skills needed in teams is creative, critical and analytical thinking. They must also develop the communication skills necessary for facilitating constructive discussions at team meetings.

- **Cohesion and coordination:** These are very necessary to achieve the goals within the specified time frames and available resources. These are also important for keeping every member of the team fully engaged at all times in tasks necessary for the achievement of goals. It means there is no conflicts in the work done by different members of the team and everyone's work is positively aligned to the achievement of the goals.

- **Resilience to challenges:** It might not be always possible to do everything right the very first time. Final success will depend on how well the team copes with intermediate failures and challenges. What is critical for creating resilience in the team is to improve its capacities to quickly learn

from mistakes with the help of a problem solving approach and outside the box thinking.

2.   Behavioural aspects of successful teamwork

Teamwork is very different from the highly competitive working environments where individual excellence in performance can get counted and rewarded. Teamwork requires a different mind-set and psychological dispositions which are helpful for the teams to achieve its goals. Every team member should possess these behavioural attributes without exception. There is no room for members who only partially fulfil the behavioural requirements.

2.1   Essential behavioural requirements of team members

The following are some of the essential behavioural requirements to be a member of a successful team:

- **Empathy:** Empathetic persons easily recognise and correctly understand the feelings, experiences, and emotions of others by putting themselves in the shoes of others. Empathy therefore plays a vital role in understanding the goals and the views and opinions of the team members. Persons without empathy cannot effectively contribute to the essential requirement teamwork such as collective thinking, coordination and cohesion with other team.

- **Integrity:** Persons with integrity are honest and authentic under all circumstances. This characteristic enables and encourages every other team member also to be honest with them. Integrity greatly helps making correct team decisions as people with integrity would not wilfully hide anything which is relevant to proper decision making by the team. Their honest opinions and feedbacks will help the team to be realistic in their decisions.

- **Open mindedness:** Self-opinionated people get rigid in their views and ideas. They also develop biases and prejudices because of their fixed ideas. No one's knowledge is never complete and it is necessary to consider the views and ideas of others willingly and with respect. This is an essential requirement for encouraging honest and unhindered discussions among team members. People with closed minds will usually try to impose their ideas or become stubborn leading to wastage time and fruitless discussions. The team will also fail to get honest feedback from the members on all relevant issues.

- **Effective control over ego and greed:** It is only natural for people with expertise to develop a sense of pride. They are also keen to reap the rewards

that are proportionate to their talent and skills. However, when self-pride turns into ego and the search for reward becomes greed, it can create barriers to honest communications and free, fair and frank discussions. These traits might block others from willingly cooperate with them.

- **Energetic and resilient:** The goal oriented nature of team activities demands hard work. A team might also experience rushed working conditions to meet tough deadlines. There is thus no room in any team for persons with lazy and laid back approach and attitude towards work. Apart from being energetic, they must also be able pull through intermediate failures.

- **Life-long learner:** Keenness to learn is a critical requirement for team members since the teams will always be faced with newer and newer challenges in their quest for success. Team members might also be required, at times, to carry out research and analysis within very short periods of time, particularly for problem solving. It is necessary that team members have the required research temperament besides having the necessary self-learning skills.

- **Active collaborator:** While collaboration is a vital requirement for team performance, active collaboration is necessary for team's success. As opposed to passive collaboration in which a member cooperates with other members, active collaborators help create new knowledge and innovations by providing critical inputs and feedback. It also builds and enhances the existing knowledge of the team. Active collaboration is known by the additional value it adds to any cooperative or collaborative action.

- **A good leader and an effective follower:** Success in teamwork, no doubt, depends very much on the quality of the team leadership. However, team members will need to be leaders of their own assigned tasks. All team members are leaders and followers at the same time and the entire team is collectively and individually responsible for the successes and failures. Therefore every team member should have excellent leadership qualities along with the attributes of active collaborators.

- **Trust worthy:** Mutual trust is a basic requirement for building cordial and effective interpersonal relationships. Team performance requires close coordination and collaboration, which is possible only under conditions mutual trust. Building trust relationships among members will also be necessary to deal with all possible internal conflicts and ego clashes.

- **Effective Communicator:** Frequent meetings and discussions create the foundations for successful teamwork. Every team member must therefore have the necessary language skills and communication abilities to

contribute the most to team discussions and collaborative work without wasting the time of others.

- **Positive thinker:** The role positive thinking cannot be overemphasised. Since teamwork will always have the usual highs and lows, team members will have to always think positively to overcome temporary problems and transform them into winning opportunities. At the same time, positive energies of individual members will help create team synergy. Synergy is the extra strength that a team gets over and above those of individual members because of the collective work, - accomplished with the positive energies of all members.

- **Enjoys shared glory:** Selfish people who seek personal glory and gratification will be least suited for teamwork. The feeling of shared glory is about treating success as a collective achievement and recognising the fact that the final success would not have been possible without the contribution of each member along the way to success. Before winning the finals, a team must win the preliminaries, quarter-finals and semi-finals. Good team players will genuinely feel as much happy about the achievements of others as they enjoy their own achievements.

3. Communication Skills in the Workplace and Language Proficiency

Organisations rely on a variety of communications to get the work done. The effectiveness of the communication within a team is a key requirement for the efficient use of efforts and resources in the achievement of the organisational goals within the desired time frames. Effectiveness in communication is determined based on whether it achieves the desired result or not. Most of the aircraft accidents during landing and take-off result from the communication problems between the air traffic controllers and the aircraft pilots. Effective communication between them ensures smooth landing or take off. Defective communications, on the other hand, lead to accidents and disasters.

Consider a group of jute artisans working in a small, unorganized workshop. Each artisan brings unique skills to the table, from weaving, dyeing, finishing, stitching etc. For their workshop to thrive, they must communicate seamlessly and efficiently. Clear communication ensures that raw materials are allocated appropriately, work progresses smoothly, and final products meet quality standards. In this context, effective teamwork involves artisans coordinating their efforts, sharing insights, and resolving challenges collectively. Such teamwork not only enhances product quality but also accelerates production, making their workshop more competitive in the market.

3.1 The Communication Process

Communication is simply the act of transferring information from one place, person or group to another. Effective communication is presentation of views in a way best understood by the receiver. All communications always involve two parties namely the sender or the originator and the receiver. The communication process involves the transmission of information from a sender to a receiver through a medium or channel. It typically begins with the sender encoding a message, which can be in the form of thoughts, ideas, or emotions, into a communicative format. This encoded message is then transmitted through a chosen channel, such as spoken words, written text, or non-verbal cues. The receiver then decodes the message, attempting to understand its meaning and significance. Feedback may be provided by the receiver to confirm understanding or seek clarification. Effective communication occurs when the sender's message is successfully understood by the receiver, fostering mutual understanding and facilitating the exchange of information.

Fig: 6.6 Communication Process

The message can be sent in variety of ways. In any simple communication process, the sender transmits a message through signals, signs and codes or in words to the receivers who are expected to interpret and understand it and act accordingly.

A traffic signal for example uses red, amber and green lights to tell the travellers to stop, wait or go road, at crossings. This process is called encoding. The red light will mean 'STOP' not only in English language but also

in every other knowledge. The process by which the drivers interpret the traffic signals is called decoding. In this process it is assumed that both the sender and the receiver have a common and clear understanding of what the different colours of the traffic signals actually mean.

Every communications need not be as simple as the traffic signals. For example, all road signs are standardised, but there could be drivers who do not understand all the road signs. This problem is mainly because of the lack of effort on the part of the drivers to remember all the road signs. At the same time, the traffic authorities might also blamed for not publicising these signs adequately or for not enforcing the traffic sign related rules fully. What these examples show is that communication problems could arise either at the sender's side or the receiver's side. These problems are generally called the barriers to communication.

3.2 The Communication Barriers

Organisations, however, use more of verbal communications in written or spoken form. The effectiveness of verbal communications depend on the language proficiency of both the sender and the receiver. They might also suffer from a variety of communication barriers. These barriers might multiply in the case of two way communications involving two way interactions. The more the number of interactions, the greater will be the chances of miscommunication and unintended or undesirable consequences.

Communication barriers experienced by both senders and receivers are classified into environmental and personal factors.

- **Environmental barriers:** These include the lack of standardisation and the use of language, which could be understood differently by different readers or listeners. Every communication should be tested for its effectiveness to achieve the intended result. Another common factor is the timing of the communication as well as the time given to the recipient to understand and act upon the communication. For example, if a voice communication is made to a machine operator at work, they may be too preoccupied to listen.

- **Personal barriers:** These include factors such as unwillingness to listen and apply the mind to understand it. Communication problems will also occur when people are not attentive or easily get distracted. Persons who lack empathy or commitment to the work assigned to them as well as the organisational goals might also fail to correctly interpret the communications received them. Persons who fail to learn from the training programmes provided by the organisations are also likely to fail in correctly

understanding of the various terminologies used in organisational communications.

3.3 Language Proficiency and Communication Skills

While organisations must ensure that their communications are clear, concise, and timely, the employees who need to act on it or respond to it must develop the requisite language proficiency, particularly in the use of terminologies relevant to their work. They must always pay full attention to communications without getting distracted.

The attributes of effective communications are summarised in the form of seven Cs:

Fig: 6.7 7C's of Communication

1. **Clear:** We must use words that do not confuse. We must convey exactly what the communication is supposed to mean.

2. **Concise:** We must use the minimum possible number of words. We must also simple sentence construction grammar. We should not also beat around the bush.

3. **Concrete:** We must relate our communication to real and practical things. We must avoid making reference to anything that is based on our own imagination.

4. **Correct:** We must ensure that our communication does not mislead or create confusion.

5. **Coherent:** There should be no internal conflicts within the communication. All the statements must be logical.

6. **Complete:** The communication should not leave out any essential information. The receiver should be able to understand the communication as it is without the need for using any other reference material.

7. **Courteous:** The language of the communication must be polite. It must encourage the receiver to read it or listen to it without feeling hurt or developing any kind of mental resistance towards it.

Activies

Activity 1: Prepare a PowerPoint presentation or a chart on Effective Teamwork And Communication Skills In The Workplace

Materials Required:

1) Chart paper
2) Pen, pencil, coloured pens and markers
3) Eraser, sharpener
4) Scale

Procedure:

1) Collect required information.
2) Organize the collected information in PPT or chart whichever is feasible to you.
3) Decorate it with pictures and graphics.
4) Get it corrected by your teacher.

Discuss and present in the class.

Check Your Progress

State True or False:

1. Team sports, like football and cricket, serve as analogies to understand the advantages of teamwork.

2. Individual excellence is sufficient to ensure victory in a team-based setting.

3. The principles of teamwork are not applicable in the unorganized jute product sector.

4. Team members should be selected based on age groups, educational qualifications, and geographic location.

5. Matching skillsets with goals is not essential for successful teamwork.

Fill in the Blanks:

1. Empathy is considered an essential _____ for successful team members.

2. Team members must have an open _____ to encourage honest and unhindered discussions.

3. Trust among team members is a basic requirement for building cordial and effective _____ relationships.

4. Effective communication is crucial for the efficient use of _____ and resources in organizations.

5. Environmental barriers can include the timing of communication and the lack of _____ in language.

Answer in Brief:

1. Explain the difference between groups and teams, highlighting the key characteristics of teams.

2. Discuss three essential behavioral requirements for team members in order to contribute to successful teamwork.

3. What are the seven Cs of effective communication, and why are they important in organizational communication?

Answer in Detail:

1. Explore and discuss the strategies for successful teamwork mentioned in the content. Provide examples and elaborate on how these strategies contribute to achieving team goals.

2. Describe the communication process outlined in the content, including the roles of the sender and receiver. Explain how effective communication can contribute to the success of teams in the workplace.

3. Examine the behavioral attributes required for team members, as outlined in the content. Choose two attributes and elaborate on how they positively impact team dynamics and contribute to overall team success.

Session: 3   Applying and Promoting Organizational Standards

Be it in the organised or the unorganised sector, the individual needs to take the responsibility for achieving excellence and advance one's own progress. We can continuously improve our performance by advancing our knowledge and skills through self-learning and using personal management tools and practices. We may also make personal progress by pursuing vocational courses, which help strengthen our knowledge and skills in specific areas. There is also the need for evaluating our own performance regularly and motivating others also to improve their performance for achieving excellence in the workplace.

1.   Developing Personal Development Goals and Management Tools

The following are some personal management tools which are easy to develop and use. At the same times these tools help improve the level and quality of our performance in the workplace and also in our day to day life significantly.

1.1   Developing Personal Development Goals

Everyone thinks of two types of goals, namely 1) life goals and 2) professional goals. While life goals may cover a longer life span and cover very broad based objectives, professional goals are usually for relatively shorter periods and include more specific and narrow aims.

While most of us think of professional goals, we hardly write these down. It is important to write these down since a statement of goals not only creates clarity about what we want to achieve but also will serve as a constant reminder and motivator towards achieving our goals. In addition, it would also help evaluate our performance over time.

The following are the important steps we can take to develop our career goals:

- **Assess the possibilities and opportunities:** We must first explore all the available career prospects given our current knowledge, skills and certifications.

- **Compare the options:** Based on an objective analysis of your own strengths and weaknesses, select the career paths that are most suited for you.

- **Classify your choices according to timeframes:** Group the identified career choices which can be achieved in less than a year into short term goals and group the rest into long term goals.

- **Develop the strategy to achieve Short term goals:** Examine what you would need to achieve short term goals in terms of on the job learning, additional experience and the new skills you would require to achieve your short term goals

- **Develop the strategy to achieve long term goals:** Examine what you would need to achieve short term goals in terms of technical and professional qualifications, training and development you would require to achieve your long term goals.

Reflect upon the ideas and data gathered in the previous steps and draft your goals in the following SMART structure:

- **Specific:** Write down the specific short term and long term goals from out of the choices identified by you in the previous steps.

- **Measurable:** Specify the goals in terms of measurable values or other parameters based on which the degree of achievement or failure can be easily assessed.

- **Achievable:** Make sure that you can achieve the specified goals with your own best efforts.

- **Relevant:** Ensure that the short term goals are relevant to the achievement of you long term goals. Also ensure that your short and long term goals are relevant to your overall professional and life goals.

- **Time-bound:** Specify the time period within which you hope to achieve each goal. This is necessary to add a sense urgency towards their achievement and to understand the extent of achievements in any given time period

- **Review and Revise:** Periodically review the progress you are making towards the achievement of the goals as well as the changes in the nature of opportunities available and make realistic and practical changes in the goals.

1.2 Developing and Using Personal Management Tools

As in the case of professional goals, it is important to develop and write down the personal management tools for raising the level of one's own productivity. Some of the easy to use personal management tools are as follows:

- **Checklists:** There are two types of checklists namely 1) daily checklists that include all the tasks that you must complete on a single day and 2) Task specific or situational checklists that cover all that one should do in a given situation or complete a complex task. A checklist usually consists of very clearly and specifically mentioned items of 'Dos' and 'Don'ts'. Each item on the list of 'Dos' will also have a check box which can be crossed to indicate whether the particular step has been completed or not. A checklist is never complete without the mention of the list of 'Don'ts'.

- **Schedules:** Some of the activities in workplaces may need to be repeated or followed up over fixed time periods. In such cases it is necessary to maintain daily, weekly, monthly, quarterly, and half yearly and annual schedule to ensure that none of the required actions are missed anytime. There could also be process specific and maintenance specific actions, which must be taken one after another in given time slots. The scheduling tool can be an important tool for ensuring the safety, security and productivity of workplaces and its machinery.

- **Accounts:** While accounts usually involve financial transactions, the workplace accounts are about materials, time and energy consumed by departments or processes. Knowing the exact amount of materials and other inputs consumed by a product or process will be helpful in not only planning future purchases of these inputs and their proper management but also find ways to improve their productivity.

- **History sheets:** Experiences gained at workplaces particularly while identifying and solving a problems can be of great value to organisations. However, these experiences are hardly noted down for future reference. It is therefore necessary to maintain history sheets each and every problem faced in the workplace and the ways in which these were resolved. This will not only help avoid the recurrence of such problems but also take quick actions to rectify similar problems.

1.3 Developing Personal Management Practices

Apart from developing and using productivity tools, it is also important to adopt a variety of personal management practices, which would not only help personal development but also contribute to organisational growth and strength. The following are some of the important personal management practices, which can benefit both the individual concerned and the organisation.

- **Time Management:** Time management is usually associated with being punctual or completing a task within an assigned time. However, the real objective of time management should be to maximise the value of your time

by maximising the value of what you are able to achieve within total time available with you. Efficient time management requires that you prioritise where and how you spend your time. A simple way to do this is to focus on doing what is important and urgent. While delegating the not so important but urgent tasks, we should avoid spending time on the unimportant and not so urgent tasks. What is also important is to realistically set time targets for completing different tasks. Time Management, however, does not imply overworking and getting burnt out. In reality, it aims at maximising the productivity of your time and therefore considers the breaks between tasks that help you to perform better in the next task as an integral part of the time management strategy. At the same time, we must also avoid unnecessary distractions and unproductive activities

- **Interpersonal relationship Management:** Interpersonal skills are like the lubricants used in engines to eliminate friction and improve performance. A workplace is also similar to an engine with so many people doing different things and at the same time collectively contribute to the success of the organisations. When the interpersonal relationships are not smooth there can be avoidable conflicts, costly communication gaps, lack of coordination among team members and adverse effects on organisational productivity. To build smooth interpersonal relationships one has to be empathetic and possess the necessary degree of emotional intelligence. It means that we are open patiently listen to others and understanding their perspectives without getting judgemental. It also means that we have the necessary communication and negotiation skills to resolve conflicts and remain focused on achieving common goals. Some of the strategies which can help build better interpersonal relationships include collaboration and teamwork, professional networking, and developing leadership skills.

- **Management of personal health and finances:** Though these activities appear to be beyond the scope of organisational productivity, problems faced by individuals in these areas tend to have significant adverse effects on organisational functioning. Just as a healthy mind goes with a healthy body, healthy organisations go with healthy employees. Both physical and financial health of its employees are important. While physical health makes them physically and mentally fit, financial health is necessary for their psychological health. To contribute effectively to the organisation, every employee must adopt a healthy lifestyle and physical fitness. Financially also, they must regularly save and invest enough to ward off anxieties and insecurities over the future.

2. Evaluating one's own performance and achieving excellence

While organisations review the performance of employees for the purpose of giving rewards and recognition, self-evaluation primarily aims at learning for the future by reflecting on our past performance. Although most organisations now make personal evaluation a part of employee's annual performance assessment, the actual self-evaluation differs in purpose and format. There is also no fixed schedule for carrying out self-evaluation.

Self-evaluation is not also a fault finding mission. Although we might seek feedback and advice based on self-evaluation, the findings and plans, which emerge out of it, are our own and no one else needs to know them ever. The benefits of self-evaluation would always depend on how honest we are in evaluating our performance. The extent of the benefits which we can derive from self-evaluation would, however, depend on the amount of facts we have relating to our past performance. We will be able to achieve much more, if we had developed and used the personal management tools described in the previous section. Any review or evaluation can be only as good as the quality of the data used in it.

2.1 Role of self-evaluation in the unorganised sector

Self-evaluation is especially relevant to persons working in the unorganised sectors and informal workplaces since formal performance evaluation is mostly absent in these places. Self-evaluation can give persons working in such places the following advantages:

- **Self-confidence and motivation:** Reviewing the achievements and recognising the skills and abilities, which contributed towards it will boost one's self confidence and motivate them to achieve more and more in future.

- **Development of leadership skills:** Persons who critically review own performance and learn from it for further improvement will acquire the necessary knowledge and skills to guide others, which will in turn create leadership qualities.

- **Recognition of hidden potential:** An honest and comprehensive self-evaluation will not only help identify the further steps one can take to perform better and better in their present careers but also help discover the untapped talents and skills, which can open up new career or business opportunities.

2.2 Types of self-evaluation and the common steps

There are different ways of evaluating one's own performance. What is important for carrying out for self-evaluation is their reference criteria. We may evaluate our performance based on 1) our goals, 2) successes, 3) failures

and 4) feedbacks received from others, In addition, we may also do self-evaluation for any specific purpose such as for identifying the area for acquiring formal certification or training or to prepare for switching jobs.

The self-evaluation process involves the following steps:

1. Make a detailed list of performance areas where you want to evaluate your progress.

2. Indicate the criteria to be used for assessing the progress in each of these areas.

3. Mention the time within which success was to be achieved.

4. Write down the level of success achieved against each in percentages.

5. Analyse how easy or difficult was the process of achieving each item.

6. Start from the toughest and list the reasons for the struggle as well as the ease of achievement in other cases.

7. Identify areas where making further progress appears to be difficult and place a – mark against these.

8. Identify areas where you feel progress can be made in future and place a + mark against these.

9. Rate each area based on it is importance such as most important, important, less important and not important. Place 5 star marks against the most important, 4 star for important, 2 star for less important and 1 star for not important.

10. Rate each area based on how urgent it is such as most urgent, urgent, less urgent and not urgent. Place 5 star marks against the most urgent 4 star for urgent, 2 star for less urgent and 1 star for not urgent.

11. Rank the areas in the descending order of the number stars obtained. (Maximum 10 and minimum 2)

12. Divide the ranked list into two parts with list1 having items having + mark and list 2 having – mark.

13. Identify the reasons for success or struggle in areas in list.1 having 8 to 10 stars.

14. Review the list. 2 and see if any area with 8 to 10 stars can be moved to list1.

15. Reflect on the areas in the list. 1 having 8 to 10 stars and classify them according to the level of success achieved in Step 4.

16. Focus your attention on improving the performance according to the level of success.

17. If your list 2 contains areas with 8 to 10 stars, you must consider switching your job.

18. The areas in list1 with 8 to 10 stars and 80 to 100% success are your core strengths. You should develop them or find opportunities where you can use them and make better progress.

2.3   The role of feedback in self-evaluation.

Feedback from both managers and fellow workers can be very helpful in further improving the findings of our self-evaluation. However, it would be necessary to filter such feedback for in-built biases in their opinions. We would also need to improve our communication skills to obtain genuine feedback from others as these would be valuable for our career growth.

3.   Motivating others to follow the organisational standards

Excellence in the workplace can be achieved only when everyone perform performs to their best. When everyone does their work in the best possible way, it becomes easy and delightful for every other person to perform their duty well. However, lack of motivation might cause people to get lazy or less energetic and slow in completing the tasks assigned to them. Lack of motivation can also lead to distraction, which reduces their level of attention to work that affect the quality of their works. Distractions can also disrupt workplace activities, since distracted people neither listen to the instructions attentively nor provide timely feedbacks.

2.2   Importance of motivated workforce

Motivated workforce is a critical requirement of organisational success.
The following are some of the significant benefits of a motivated workforce:

- **Improved performance:** When employees are adequately motivated, they not only attend work regularly but also do their work attentively. There would be less conflicts among the co-workers and greater degree of coordination. There would be lesser degree of friction with the management and the employees will spontaneously identify themselves with the goals of the organisation and commit themselves towards achieving these goals. All these positive developments will result in improved performance of the organisation.

- **Increased productivity through innovation:** Motivated employees will not only do their work enthusiastically but also find ways to do their work in a better. Motivation will also boost their self-confidence, which is essential creative and innovative thinking and participating in collaborative activities.

- **Positive workplace culture:** Employee motivation also provides the foundation for smooth interpersonal relationships and communications. This will make the employees enjoy the work and contribute their best over longer periods. Employees who remain in the organisation for longer also become more productive because of the experience and expertise gained by them over time.

2.3 Factors influencing employee motivation

There are several factors that create and sustain employee motivation. Since motivation is a psychological factor, it can get affected on a day to day basis. Also, not everyone feels motivated by the same set of factors. Therefore, it is necessary to know all the factors and carefully attend to them on a regular basis to sustain positive motivation levels among all employees. The following are the motivational factors identified by researchers to be important:

Fig: 6.8 Employee Motivation

- **Leadership:** Leaders must create an environment of trust, which makes the employees believe that the leaders know what is necessary for the employees to grow and be satisfied with the progress they are making.

- **Workplace Culture:** A good organizational culture that helps people focus on their without getting distracted by interpersonal conflicts and anxieties about their own future in the organization.

- **Growth Prospects:** The organization must offer career advancement opportunities that are at least comparable to those of top organizations in the sector.

- **Professional Development:** Employee satisfaction should be measured not in just in terms of money. They must be given adequate opportunities to acquire advanced knowledge and skills which will make them eligible for better paying jobs.

- **Recognition and Rewards:** Remuneration packages must reflect the management's keenness to reward excellence and impactful improvements in performance.

- **Positive work environment:** A positive workplace environment is one where no employee feels threatened. The environment should create a sense of confidence in the organization.

- **Flexibility:** With the growing complexity at workplaces and life, it has become necessary to increase the level of flexibility available to employees to cope with stress.

- **Belongingness:** Motivation is psychological factor, which can thrive only in an environment of psychological safety and feeling good just as we feel about our families. Such sense of belonging also motivates people to offer their best.

- **Work/life balance:** Imbalance between personal and professional live has become a very important source of stress in life. By permitting and encouraging people to attend to their social on par with their work will make more employees loyal and motivated in the workplace.

- **Meaningful work:** People always wish to feel proud of their work and they feel happy and motivated when they do work which makes a positive impact on the lives of other people. Workplace must include social responsibilities like environmental protection to make their employees feel happy about their work.

3.3 The role of leadership in employee motivation

Motivation is a feeling that requires the support of leadership for its sustainability. The following are some important initiatives which leaders including team leaders can take to create a motivating working environment.

- **Inspiring Vision:** Employees look up to leaders to show the way. Leaders must lead by example. Inspiring vision given by the leaders will keep the workforce motivated.

- **Clear Goals:** Leaders must also make the organisational goals very clear to everyone. People will feel motivated and confident when they have clarity about what they should achieve.

- **Opportunities for Self-development:** The level of motivation rises when people can look forward to a better future. Leaders must create self-development opportunities that promise better prospects for the employees.

- **Collaborative Work Culture:** Leaders must create more opportunities for collaborative work. This would encourage them to appreciate each other's work and motivate them even more.

- **Create Trust and Autonomy:** Leaders must demonstrate their trust in the workforce by letting them enjoy autonomy in their own sphere of working without feeling like captive workers.

- **Recognise and Reward Hard Work and Excellence:** Leaders must recognise and reward not only excellence but also hard work. It is important to have all types of employees. People must be recognised in some way or the other so long as they are giving their best to the organisation.

Activies

Activity 1: Prepare a PowerPoint presentation or a chart on employee motivation

Materials Required:
1) Chart paper
2) Pen, pencil, coloured pens and markers
3) Eraser, sharpener
4) Scale

Procedure:
1) Collect required information.

2) Organize the collected information in PPT or chart whichever is feasible to you.

3) Decorate it with pictures and graphics.

4) Get it corrected by your teacher.

5) Discuss and present in the class.

Check Your Progress

State True or False:

1. Vocational courses only focus on long-term career goals.

2. Checklists can be both daily and task-specific, including 'Dos' and 'Don'ts'.

3. Schedules are essential for maintaining workplace safety, security, and productivity.

4. Accounts in the workplace primarily involve financial transactions.

5. Efficient time management implies overworking to maximize productivity.

Fill in the Blanks:

1. Everyone should _____ their career goals to create clarity and motivation.

2. _____ are easy-to-use tools for improving personal productivity.

3. Time management aims at maximizing the value of your time by focusing on what is important and _____.

4. In interpersonal relationships, _____ are used to eliminate friction and improve performance.

5. Self-evaluation is particularly relevant for individuals working in _____ and informal workplaces.

Answer in Brief:

1. What are some key steps in developing personal development goals for one's career?

2. How does self-evaluation benefit individuals working in the unorganized sector?

3. Identify two tools mentioned for personal management and briefly explain their importance in raising productivity.

Answer in Detail:

1. Explain the importance of time management in personal and professional development. Provide specific strategies for efficient time management, and discuss how it contributes to overall success.

2. Elaborate on the steps involved in the self-evaluation process. Discuss the types of self-evaluation and how it can be beneficial for individuals, particularly those working in unorganized sectors.

3. Describe the role of leadership in employee motivation according to the content. Highlight key initiatives leaders can take to create a motivating work environment and foster a positive workplace culture.

ANSWER KEY

MODULE – 1

SESSION: 1

Fill in the Blanks
1.   Aesthetic value
2.   Printing
3.   Additional cost
4.   Pin tucks
5.   Mirror work

True or False
1.   False
2.   True
3.   True
4.   True
5.   False

SESSION: 2

True or False
1.   False
2.   True
3.   False
4.   False
5.   True

Match the column
1.   (c)
2.   (a)
3.   (e)
4.   (b)
5.   (d)

SESSION: 3

MCQ

1. Plant
2. Handwashed
3. Cold water
4. Stored

Fill in the Blanks

1. Stains
2. Care labels
3. Damp
4. Smells

Match the column

1. (c)
2. (d)
3. (a)
4. (b)
5. (e)

MODULE– 2

SESSION: 1

True or False

1. True
2. False
3. True
4. True
5. True

Fill in the Blanks

1. Joints
2. Packaging
3. Breakage
4. Sewing
5. Coated

SESSION: 2

True or False

1. True
2. False

3.   True
4.   True
5.   True

Fill in the Blanks

1.   Function or usage
2.   Repairs
3.   Disappointment
4.   Preventing
5.   Total Quality Management

SESSION: 3

True or False

1.   True
2.   True
3.   False
4.   True
5.   True

Fill in the Blanks

1.   Innovation
2.   Demand
3.   Rooty jute
4.   Sticky
5.   Weaving

SESSION: 4

True or False

1.   True
2.   True
3.   True
4.   False
5.   False

Fill in the Blanks

1.   Production
2.   Pre-shipment
3.   Loading
4.   Collected
5.   Automated

MODULE – 3

SESSION: 1

True or False

1. True
2. False
3. True
4. False
5. False

Fill in the Blanks

1. Environmentally friendly
2. Biodegradable
3. Pesticides
4. Hard
5. Sustainability

SESSION: 2

True or False

1. False
2. True
3. True
4. False
5. True

SESSION: 3

Fill in the Blanks

1. False
2. False
3. True
4. True
5. False

True or False

1. Aesthetics
2. All
3. Artistic
4. Eco-friendly

5.   Folder

MODULE – 4

SESSION: 1

True or False
1.   True
2.   False
3.   True
4.   False
5.   True

Fill in the Blanks
1.   Features
2.   Inspiration
3.   Tools
4.   Materials
5.   Sustainable

SESSION: 2

True or False
1.   True
2.   True
3.   True
4.   True
5.   False

Fill in the Blanks
1.   Jute
2.   Fiber
3.   Sewing
4.   Jute fabric
5.   Global awareness

SESSION: 3

True or False
1.   False

2.   True
3.   False
4.   False
5.   True

Fill in the Blanks
1.   Traditional
2.   Cultures
3.   Embellishments
4.   Sustainability
5.   Variations

MODULE – 5

SESSION: 1

True or False
1.   True
2.   False
3.   False
4.   True
5.   False

Fill in the Blanks
1.   Accountability
2.   Relationships
3.   Responsibility
4.   Recognizing
5.   Changes

SESSION: 2

True or False
1.   True
2.   True
3.   True
4.   False
5.   False

Fill in the Blanks
1.   Sender

2.   Channels
3.   Levels
4.   Writer

5.   Talking

SESSION: 3

True or False
1.   False
2.   False
3.   True
4.   False
5.   False

Fill in the Blanks
1.   Imagine
2.   Processes
3.   Conventional
4.   Realities
5.   Time

MODULE – 6

SESSION: 1

True or False
1.   False
2.   False
3.   True
4.   False
5.   True

Fill in the Blanks
1.   Time
2.   Responsibility
3.   Ozone
4.   Cultivation
5.   Environmentally

SESSION: 2

True or False

1. True
2. False
3. False
4. False
5. False

Fill in the Blanks

1. Behavioral requirement
2. Mindedness
3. Interpersonal
4. Efforts
5. Standardization

SESSION: 3

Fill in the Blanks

1. False
2. True
3. True
4. False
5. False

True or False

1. Write down
2. Checklists
3. Urgent
4. Interpersonal skills
5. Unorganized sect

List of Credits

Graphics

Verma Prachi:- Fig. 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 1.12, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 2.12, 2.13, 2.14, 2.15, 3.1, 3.2, 3.3, 4.2, 4.3, 4.41, 4.42, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8

Photographs

Singh Raghuveer:- Fig. 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11, 3.12, 3.13, 3.14, 3.15, 3.16, 3.17, 3.18, 3.19, 3.20, 3.21, 3.22, 3.23, 4.1, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11, 4.12, 4.13, 4.14, 4.15, 4.16, 4.17, 4.22, 4.23, 4.24, 4.25, 4.26, 4.27, 4.28, 4.36, 4.37, 4.39, 4.40,