

MAKING A WHITEBOARD FROM MELAMINE IN ERPAK VILLAGE, RT 05/RW 04, CISAUK VILLAGE, CISAUK DISTRICT, TANGERANG REGENCY

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Abstract

Whiteboards have been a staple in offices, universities, studios, and schools since the 1990s—nearly 40 years after their invention by photographer and Korean War veteran Martin Heit. They quickly eclipsed blackboards in popularity because they are easy to write on and erase, and are suitable for individuals with dust or chalk allergies. Today, whiteboards are generally preferred over blackboards, largely because they offer a more modern, cleaner aesthetic. Unlike writing on a blackboard with chalk, using a whiteboard keeps your hands clean, and the text produced by markers appears much clearer. However, their relatively high cost is a distinct disadvantage. A defining feature of a whiteboard is its smooth, glossy surface, which facilitates easy writing; however, not all whiteboards are made from the same material. Each material possesses unique characteristics that dictate how the board is used. There are six common materials used for whiteboard surfaces, one of which is melamine. Melamine boards consist of plywood coated with melamine, resulting in a smooth, shiny finish. These boards are often used for decorative purposes to enhance a room's appearance. While white is the most common color, they also come in green, blue, red, and cream. Melamine boards are typically available in standard plywood sheet sizes but are thinner, usually measuring 2–3 mm in thickness. To address the issue of cost, this article offers a solution for building your own whiteboard using easily accessible materials ranging from a basic, makeshift board to one that rivals or exceeds the quality of commercial products. Constructing a whiteboard from a melamine board requires a power drill. Once you have purchased a white melamine board, you can mount it directly onto a wall; the drill is needed to install wall anchors (fischers) to hold the mounting screws securely. At a fraction of the cost of a store-bought whiteboard, you now have a homemade whiteboard of comparable quality.

Keywords: Whiteboard, Melamine, Kampung Erpak

INTRODUCTION

In Erpak village RT05/RW04 Initially it was a children's recitation pioneered by Ustadzah Siti Suhaibah in 2016. The activity was carried out at her home, The study was held in the afternoon from 4:00 PM to 5:30 PM WIB and from 6:00 PM to 8:00 PM WIB. During the study, he taught several aspects of reading the Quran and the Iqro method. And understand book Safinah And etc. As time goes by time participant The number of students has increased to more than 60 students, initially only 5-10 students due to the support and desire of the community for educational institutions for children. Whiteboards have various types and shapes based on their development. What kind of whiteboard model uses markers because it looks cleaner. The following are the types of whiteboards, Melamine whiteboards are the first boards to use melamine resin. The material is on this type of slate surface and is coated with wood layers or board composite. Type this board is Which most general Available on the market and readily available. For example, this type is widely used to illustrate topics using markers in schools and universities. This type is known for its wide selection of sizes, and the price, of course, depends on the size of the board. Paper Laminated Board Whiteboards, like whiteboards, use double-sided or ivory white and other materials. The material is then laminated to create an attractive design. When used in schools or universities in the past, this type was more widely used. in office. And can used For board bulletin timetable Work office. Board Porcelain writing boards are a type of magnetic board made from porcelain or ceramic. Because they use coated steel plates, they are very strong. The advantage of this type of whiteboard is that they can be easily removed even if the writing medium used is plastic. whiteboard marker. By Because That, No surprising If board write type This more They are more expensive than other types of whiteboards because they have an attractive appearance and can be easily removed for writing on. The standard size of a folding study table in Indonesia namely having a maximum study table height of 23 cm with a height of 24 cm, the maximum height of the blackboard and space for putting writing

or drawing tools is 47 cm. For the length of the table Study fold the that is 60 cm and 35 cm wide.

The science of improving the overall quality of life by harmonizing or balancing all facilities that used Good for activities and relaxation, both physical and mental with human capabilities and limitations. Ergonomics, also known as ergonomics or human factors, is used in many fields including ergonomic anatomy, architecture, industrial products, physics, physiotherapy, industrial engineering, and the military. Materials are something Which built or written from material. Material That Alone is material raw materials that are converted into finished fiber by industry or individuals. From this definition, we can conclude that material is something material Which used For make something more useful products or finished products. Plywood, commonly called triplek, is a factory-made board made from layers of wood (wood veneer) glued together. Plywood is one of the most widely used wood products due to its flexibility. cheap, can printed, can recycled repeat And No own technique manufacturing complicated. Layer wood layers, Also known as veneer, glued with adapt textured corners for a stronger effect. These layers are generally stacked in odd numbers to prevent warping and create a balanced structure. Uniform layers make board circuit No stable And easy ruin it. Wood layers or wood present layer in various thickness start from 0.8 mm until 25 mm And available in various levels of quality.

Erpak Village RT05/RW04 in Cisauk Village is one of the villages in the Cisauk area. Subdistrict Cisauk Regency Tangerang Province Banten. The boundaries of Suradita Village, Cisauk District are as follows: North: bordering with Village Cibogo And Ward Cisauk Next Door West: bordering with Village Next Door Steamer South: bordering with Province Java West Adjacent East: bordering with City Tangerang South of the Village Suradita own wide region $\pm$ 600 Ha. As for distance village Suradita with service and government services are:

1. Distance from Subdistrict Cisauk 2.5 km
2. Distance from Tangerang Regency 30 km
3. Distance from the Province Banten 80 Km

Administratively, the Suradita village government consists of Neighborhood Associations (RT) and Citizens' Associations (RW). (RW) as much as 82 RT And 9 Rw as well as divided become 2 hamlet or Block, that is Hamlet I and Hamlet II. Suradita Village is included in the Typology of Villages bordering other Provinces and other Regencies.

LITERATURE REVIEW

Blackboards began to be widely used in the 19th century. This medium was considered revolutionary at the time because it allowed teachers to present material to the entire class simultaneously. However, the use of chalk generated dust that could... bother health. On end century 20th, whiteboard start introduced as an alternative blackboard. Whiteboard First time use surface melamine Which They are inexpensive and easy to produce. Over time, whiteboards with more durable ceramic and glass surfaces emerged. Technological advancements have brought innovations in the form of interactive smartboards. Smartboards allow integration with computers, the internet, and projectors, making learning more interactive. Teachers can display presentations, videos, and educational applications directly on the whiteboard. The evolution of the whiteboard reflects the adaptation of technology to the needs of the environment. technology simple Which impact big on practice education. Whiteboard not only increase cleanliness And health, but Also support learning technology- based .

Whiteboard Melamine

Whiteboard melamine is type Which most cheap And most Lots used in schools. The surface is made of a lightweight, easy-to-manufacture melamine layer. However, its weakness is that it easily leaves marker marks, so it requires special care. maintenance more intensive. Whiteboard glass own appearance elegant And Modern. The surface is durable and stain-resistant. However, glass whiteboards are relatively expensive, making them typically used in offices or meeting rooms. Ceramic or porcelain whiteboards are highly durable and stain-resistant. Their scratch-resistant surface makes them suitable for intensive use in schools or universities. Ceramic whiteboards are more expensive than melamine, but the quality is comparable. Magnetic whiteboards own surface Which allows use magnet For Sticking notes or pictures. This type is very practical for discussion or presentation activities. Materials show that ceramic is superior in durability, while melamine is more economical. For use community. Election type whiteboard must customized with the needs and budget of educational institutions.

Function in Learning

Whiteboards function as visual media that enable teachers to write down concepts, draw diagram, as well as emphasize bullet points important. Visualization This help students understand material Which abstract become more concrete. Whiteboard support interaction of two direction. Teacher can write question, temporary student give answer directly on the board. This creates a more active and participatory classroom atmosphere. In group discussions, the whiteboard becomes a collaborative tool. Students can write down their ideas, draw diagrams, or create mind maps. Thus, the whiteboard functions as a receptacle creativity And thinking together. Blackboard produce dust lime which can irritate the respiratory tract. Whiteboards are safer because they use ink-based markers. Medical research shows that long-term exposure to chalk dust can cause respiratory tract irritation. Whiteboards are easier to clean than blackboards. Markers can be erased with a special eraser without leaving much residue. In contrast, chalk often leaves white marks on blackboards. Writing on a whiteboard is clearer and more contrasting, especially when using colored markers. This makes it easier for students to read from a distance. Blackboards tend to be less clear, especially in large classrooms. A smartboard is a digital whiteboard connected to a computer and projector. The surface is touch-sensitive so teachers or students can interact directly with the displayed material. Smartboards allow integration with the internet, learning applications, and multimedia. Teachers can display videos, simulation, or quiz interactive in a way direct in board. Teacher can write concepts, formulas, or diagram in a way clear so that student more easy understand material. Writing Colored markers also help emphasize important points. Whiteboards allow students to jot down ideas, create mind maps, or solve problems together. This encourages group work and active engagement.

METHOD

Framework Solution Problem

From the formulation of the problem that has been conveyed, the solution offered in this community service is to provide assistance to partners to make it easier to understand. material so that material acceptable with easy by participant educate from the facilitators And source person Which expert, in field skills Making Board Write Melamine materials in Erpak Village RT05RW04 in Cisauk Village, Cisauk District, Tangerang Regency.

Realization Solution Problem

Residents need writing materials for learning activities, community meetings, or announcements. Buy board write in accordance budget, Board write installed in hall inhabitant, at a time given directions for use.

Audience Target

It is hoped that with this activity the community will get explanations and knowledge. more wide about manufacturing board write melamine, without must depends to board carpenter write. Matter – matter Which covering damage – damage small can analyzed And repaired by yourself.

Place And Time

Place, And time implementation activities are as following:

Activity Venue: Community Title: "Making Melamine Whiteboards in Erpak Village RT05RW04 in Cisauk Village, Cisauk District, Tangerang Regency".

Time Implementation of Activities : 07 June 2026

Activity Method

B. Method Activity

The main ingredient in making this marker is white plywood. Making it requires several tools and materials, some of which are as follows: Plywood White, Wood, Saw, Nail, Hammer, Tool Measuring Tape, Brush, Paint

If all tool And material on Already Ready, can continue process manufacturing board write markers, here are the steps in making a marker whiteboard:

Do Measurement

The first step in creating a whiteboard with markers is to take measurements. These measurements should be based on the board's needs and the area where it will be placed. This will ensure it can be fully utilized once finished.

Cutting

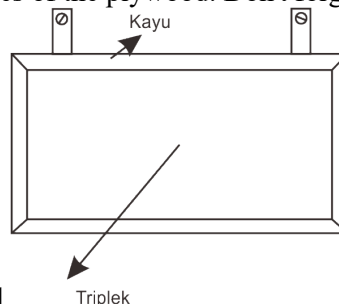
Existing materials will likely have varying sizes and won't match the desired dimensions, so you'll need to cut them. To cut plywood and wood, you can use a saw.

Assembly

Once the cutting is complete and the materials are ready, you can assemble each piece into a whiteboard. The wood is used to hold each edge of the plywood together. To attach the pieces, use nails. Choose the right nails to ensure they don't crack or damage the wood or plywood.

Process Finishing

Once the chalkboard has begun to take shape, you'll need to finish it. This process will make your chalkboard look attractive. Apply paint to the wood around the edges of the plywood. Don't forget to check each part to ensure it's



securely attached.

Frequently used whiteboards often leave ink residue. Here are some things you can do:

Always test whiteboard marker new before writing

Cheap whiteboards, such as melamine ones, are prone to ghosting, a faint, dark ink stain that's difficult to erase. Permanent markers can leave these marks, even after painstaking erasure. Prevent this by testing a new marker before writing on it.

Scratch the tip of the marker on the edge of the board while applying a little pressure (as if you were writing). If Can deleted with easy, means whiteboard marker the "friendly" For board. Idea This is also great for preventing smudges if you buy the wrong permanent marker.

Use eraser gentle

Whiteboards with large pores or scratches will absorb more ink. These boards will be more difficult to erase completely. Use an eraser with a soft surface to prevent "pits" from scratches, and discard old erasers with rough surfaces.

Tape and glue that are too strong can also create additional pores that can absorb ink. Make sure you don't apply tape or glue too often, especially if the board is a cheap one.

Clean up board a week very

If your whiteboard is frequently used, clean it thoroughly at least once a week. Use a specialized whiteboard cleaning fluid and a soft cloth to clean the entire surface. Use a little rubbing alcohol for stubborn stains, but be sure to wipe the surface dry with the cloth.

Avoid usage soap or foam cleaner

Soap, foam cleaner/washer plate, And fluid similar not enough suitable For board write White. This liquid can erode the smooth surface of the board, causing it to deteriorate more quickly and making it more susceptible to ink absorption. If you want to use alcohol on stubborn stains, make sure to use only a small amount, and don't let the liquid dry on its own without wiping.

Clean up eraser regularly

A whiteboard eraser that's too dirty can quickly damage the board. Use a damp towel to wipe ink off the surface, but don't soak the eraser.

If the whiteboard eraser is still not too dirty, you can reduce the debris or dust. Which stick in its surface. Use cloth clean or even end sucker small dusters to suck up dust and particles that can erode the surface of the board.

Don't let ink long drying

Rule maintenance board write white is No let ink whiteboard marker dry up during 24 hours or more, as it will be easier to leave a mark. If using an old board for writing, always wipe off the marker ink after use. Erase all the ink until there is no trace left.

Guard condition surface board write white is key For make it still durable and comfortable to write on. All of these methods will make the board last longer, even with frequent use.

RESULTS AND DISCUSSION

Before existence board write, activity Study and meeting inhabitant often time This was done with limited media. Information was only conveyed verbally or using simple paper. This made communication less effective, especially when explaining concepts or delivering announcements that required visualization. With the new whiteboard, residents now have adequate writing resources. A large whiteboard was installed in the community hall so it can be used for various communal purposes. Children and teenagers in Erpak Village can now learn together in a more interactive way. Whiteboards allow tutors, volunteers, or parents to write down material, draw diagrams, and take important notes. This improves the quality of learning because children not only hear explanations but also see what is written. This improves their ability to absorb the material. more Good. Besides For education, board write also used in meeting RT/RW. Information regarding the agenda, attendance list, and meeting decisions can be written clearly. so that all participant meeting can understand content discussion. Board write become media that fosters transparency and accountability in decision-making. Residents feel more involved because they can directly see the points being discussed. The process of procuring these whiteboards is inseparable from the community's spirit of mutual cooperation. Through deliberation, residents agreed to raise funds together. Some contributed money, while others provided labor for installation. Lecturers engaged in community service also assisted in this process, creating synergy between academics and the community. This togetherness strengthens the sense of solidarity and concern among residents. After the whiteboards were installed, inhabitant Also agree system maintenance. Board write guarded its cleanliness, and use whiteboard marker or lime arranged so that No damage surface. There is timetable take turns to ensure the boards remain in good condition. This demonstrates that residents not only receive the facility but also take responsibility for maintaining it to ensure its continued benefits. The availability of whiteboards has a positive social impact. Residents feel more valued because their needs are being addressed. Children are more enthusiastic about learning, while parents are proud to see the new facility in their village.

Psychologically, this increases citizens' self-confidence in organizing activity together. Before existence board write, children in Erpak Village learns in a simple way: listening to verbal explanations from parents, volunteers, or Teacher lessons. Method This make children fast bored Because No There is visual media Supportive. After the whiteboard was installed, learning patterns changed significantly. Children could now directly see the writing, drawings, and diagrams created by the teacher. This fostered curiosity and made them more focused. The whiteboard became a communication medium. two direction. Teacher No only explain, but Also invite children writing on the board, drawing, or answering questions directly. Children feel more involved because they can actively participate. This interaction creates a more lively learning atmosphere, in where children No only become listener passive, but Also perpetrator active in the process learning. Material lesson Which abstract now can visualized with Easy. For example, math lessons can be written step-by-step on the board so children can follow the process clearly. Science lessons can be illustrated with simple sketches, and Indonesian can be practiced by writing sentences on the board . This help children understand draft Which previously difficult they catch only through explanation oral. Board write Also become receptacle creativity. Children love drawing, write story short, or make game educative in board. Activity This not only improves academic skills but also trains their imagination and courage to perform in front of their peers. Thus, the whiteboard serves a dual purpose: as a formal learning tool and a medium for creative expression.

Interactive learning activities foster new motivation. Children are more enthusiastic about coming to the community hall to learn together. They feel that learning is no longer a boring obligation, but rather a fun activity they can do with friends. This enthusiasm also spreads to parents, who increasingly support their children in actively participating in learning activities. Learning with a whiteboard encourages children For Work The same. They often requested do question Groups work at the board, discussing, or taking turns writing answers. This fosters social, communication, and teamwork skills. Children learn to respect their peers' opinions, while also building a sense of community. flavor believe self when opinion they written And discussed together. As is board write, children used to Study in a way visual And interactive. Habit This will have a long-term impact on their academic development. They will be better prepared for formal education because they are already accustomed to the learning methods used. use media write. Besides That, skills communication And courage come on stage in public will be an important provision for their future.

CONCLUSION

The creation of the blackboard was successfully carried out through the spirit of mutual cooperation among residents and support lecturer in activity devotion public. Inhabitant now own means adequate writing that can be used for children's learning activities, community meetings, and delivery information. Impact real seen on increasing

interactivity Study children, the effectiveness of deliberations, and a sense of community. This success demonstrates that participatory problem-solving can work well and provide sustainable benefits. Residents need to maintain the cleanliness and condition of the whiteboard to ensure its durability and long-term use. Create a schedule for whiteboard use for children's learning activities, community meetings, and announcements to ensure its use is more organized. In addition to the whiteboard, residents can seek additional facilities such as study tables, bookshelves, or simple teaching aids to support educational activities.

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