WOODWORK TRAINING WITH LAMINATING TECHNIQUES FOR PAEDAGOGIA SLB STUDENTS

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A B S T R A K

Kesempatan untuk berlatih, berusaha dan mandiri adalah hak setiap manusia. Kenyataannya, masih ada manusia yang sulit mendapatkan kesempatan untuk berlatih dan mengembangkan diri dengan keterampilan baru yang ada. Kesempatan untuk mendapatkan pelatihan terkadang tidak dipertimbangkan bagi penyandang disabilitas. Keterbatasan fisik, mental dan intelektual menjadi penghalang untuk bisa setara dengan non-disabilitas. Keterbatasan aktivitas bukanlah alasan untuk tidak belajar dan berlatih. Kemampuan manusia memiliki kecenderungan untuk memahami suatu keterampilan yang diberikan metode yang tepat dan pemahaman praktis yang tepat. Mudah dipahami, inovasi metode implementasi menjadi solusi bagi penyandang disabilitas. Kemampuan tidak muncul secara tiba-tiba tetapi membutuhkan bantuan. Pelaksanaan kegiatan pelatihan bagi penyandang disabilitas yang dilakukan oleh tim pengabdian masyarakat di SLB Paedagogia Surabaya memberikan stimulus yang positif. Terbentuknya pemahaman betapa mudahnya membuat bangku yang memiliki nilai estetika, fungsional dan ekonomis. Melalui teknik laminasi triplek pada cetakan lengkung, mahasiswa memahami salah satu teknik pertukangan. Dengan pendekatan pedagogik, penerapan teknik laminasi dengan menyederhanakan tahapan produksi memberikan kemudahan bagi siswa difabel. Pendampingan melekat yang dilakukan bagi siswa difabel merupakan sarana transfer ilmu.

A B S T R A C T

The opportunity to practice, try and be independent is the right of all human beings. In reality, there are still human beings who find it difficult to get the opportunity to practice and develop themselves with the new skills that exist. Opportunities to get training are sometimes not considered for people with disabilities. Physical,

mental and intellectual limitations become a barrier to be equal with non-disabled people. Activity limitations are not an excuse not to study and practice. Human ability has a tendency to understand a skill that is given the right method and the right practical understanding. Easy understanding, innovation in implementation methods is a solution for people with disabilities. Ability does not appear suddenly but requires assistance. The implementation of training activities for people with disabilities carried out by the community service team at SLB Paedagogia Surabaya provided a positive stimulus. The formation of an understanding of how easy it is to make a bench that has aesthetic, functional and economic value. Through the technique of lamination of plywood on curved moldings, the students understand one of the carpentry techniques. With a pedagogic approach, the application of the lamination technique by simplifying the production stage makes it easy for students with disabilities. Inherent assistance that is carried out for students with disabilities is a means of transferring knowledge.

INTRODUCTION

The opportunity to practice, try and be independent is the right of all human beings. But in reality there are still human beings who find it difficult to get the opportunity to practice and develop themselves with the new skills that exist. Opportunities to get training are sometimes not considered for people with disabilities. Physical, mental and intellectual limitations become a barrier to be equal with non-disabled people. Self-development for people with disabilities sometimes requires a futile struggle when competing with non-disabled people. Independence with limitations is an obstacle for people with disabilities to move forward.

Independence seems just wishful thinking because they need help from others. Their limitations become limits for themselves for others. With these limitations, various kinds of skills are needed which in the end hope can be useful for others. Skills become a bridge for people with disabilities to be partners for non-disabled people. Such conditions are of concern to the government, the private sector and observers of people with disabilities to empower them so that they are of benefit to others.

The Kaliasin Education Foundation - Surabaya, which specifically pays attention to people with disabilities so that they have skills, sometimes feel left behind by the development of innovations that are constantly developing. Various new skills that exist should also be felt by people with disabilities as alternative provisions that might become the passion of people with disabilities. The constraints faced when training and guiding people with disabilities have resulted in not many non-disabled people willing to train. This also occurs due to a lack of empathy and awareness to make knowledge transfer and learning methods owned by the trainer. The inability to change learning methods and systems built for people with disabilities turns out to be selfish and feels that the abilities they have are not for people with disabilities. Leaving aside the ability of people with disabilities to be able to do something, is an excuse not to be related to difficulties when transferring knowledge/skills. Problems like this are the reason why new knowledge reaches people with disabilities too late. The limitations of physically disabled people are not necessarily limited to intellectuals. Mental and intellectual limitations, also not directly limited to the physical. This has been

proven by the community service team in several training activities which are said to be difficult if carried out by persons with disabilities. However, with the mentoring method and proportional division of work tasks, it is possible to collaborate between non-disabled people and disabled people in the chair and table production process with the lamination process. A chair and table production process that our team has developed so that people with disabilities can do it. The distribution of work proportions applies the abilities possessed by each person. The portion of work for non-disabled people is different from the work portion for disabled people. The synergy that is formed produces good work and has economic value. Communication is important in collaborative work with people with disabilities.

According to Effendy (2017), communication can be done primarily, namely direct communication between a person and another person or group. In dealing with people with disabilities. Communication is more unidirectional. Verbal language is sometimes difficult to understand, so there is a need for cues, demonstrations or examples of activities to be carried out. This communication difficulty needs to be understood first by the coaching team which in reality is not easy. In essence, the information conveyed and understood. This communication barrier is also an obstacle when we have certain intentions but are not understood by people with disabilities. For those with physical disabilities but good intellectual ability and fluent hearing and communication are not obstacles to the transfer of information.

Non-disabled people consider the limitations that exist in disabled people to be an obstacle if the transfer of knowledge is given to them. This assumption is empirically not wrong, but practically it is found that limited abilities have more abilities in people with disabilities. These advantages come to the attention of the team to be able to apply mentoring methods and division of labor in a production process. One disabled person with another disabled person has different advantages. These advantages will be synergized with the needs of the production process that will be carried out with non-disabled people. Thus, at certain times and certain processes, different people with disabilities are needed to carry out production activities. With ongoing assistance, it will become a structured habit for people.

METHOD

The implementation of community service activities is specifically designed to receive benefits, in this case persons with disabilities. The method used is training, mentoring and empowerment. The three methods applied show that the activity is continuous. Paedagogia SLB students receive carpentry training using the molding curved lamination technique. Continuation of empowerment training is carried out at carpentry workshops that are given to schools through community service grants given by the Ministry of Education and Culture in 2022. With this empowerment method it is hoped that carpentry workshops can run and do not rule out providing training to the surrounding community as knowledge skills that have economic value. In the initial implementation stage, training was carried out on the introduction of lamination techniques to produce bench products in accordance with the design drawings that had been prepared.

At this stage the training will start from introduction to product production according to design. This stage will be carried out in several parts, namely: 1) Chair and Table Design Chair design will be

carried out with a team and persons with disabilities, in this process an understanding of chairs and tables as well as curved objects and the lamination process is of particular concern so that persons with disabilities understand the direction of further activities. This understanding emphasizes more on the real form of objects around it so that it is easy to understand. At this stage the chair and table solution that the team has designed is complete with the chair and table mockup that they will make. They will make appropriate design drawings and mockups later, opening their minds about the importance of thinking and embodying it in real products; 2) Mold Making. In this training, persons with disabilities will be trained in making simple molds that will be used to bend plywood. The mold will use wood, metal, rubber or plastic surrounding it. The manufacturing process is based on the design plan that we will make together. Through simple work tools, they can work with people without disabilities. The essence of mold making is curvature so that it will look dynamic and aesthetically pleasing; 3) Glue and Lamination Process, in this process you will be taught how to mix two-component epoxy glue used as an adhesive between plywood. Then they will be taught to apply the glue to the area of the plywood to be glued. After all the plywood to be put together has been glued together, the lamination process is carried out on the mold that has been made. This lamination process will use wood clamps that are easy to use; 4) Smoothing and Smoothing Process, after finishing lamination, the fused plywood layers need to be leveled and smoothed the uneven edges. This process can use a rotary sanding machine, hand sanding machine or manual sanding machine. 5) Dyeing Process, chair components are flattened and smoothed, then basic coloring is carried out so that the desired color is like; 6) Unifying the Components, the coloring that has been done will be continued in the process of assembling the chair components using a dowel/peg connection system which is easy to do. All of these training activities apply cooperation and assistance so that the transfer of knowledge is easily accepted by persons with disabilities; 6) this stage is the process of assembling several components that are ready to be assembled into benches.

RESULTS AND DISCUSSION

There was no understanding of education for people with disabilities by the training team. This can be seen from the team's knowledge that is not from the education sector. However, based on the experience that was carried out on people with disabilities who are members of the *Komunitas Sahabat Difabel* in the city of Semarang and the *Rumah Anak Prestasi* in Surabaya (Prabani 2022). The community service team ventured to provide carpentry training at one of the special schools in the city of Surabaya, namely Paedagogia SLB. The feeling of wanting to share simple knowledge about carpentry techniques to people with disabilities who are members of Special Schools (SLB) provides a different challenge. Schools certainly have curricula and methods that they already understand for inclusive students. Implementation of this training because the team has simplified the method of carrying out the process of making benches. Simplification is carried out at the stage of the production process. This hope was realized during the training until the product was finished. The implementation of the training involves several students who have limitations, namely 1) Deaf and Speech Impaired, there are two students who have these special needs; 2) Intellectual Impairment, limited ability to reason and think experienced by two students; 3) Emotional Impairment, one

student has emotional limitations. Of the three categories of limitations, a personal approach is needed for each student. But in general the implementation of the method used is the same. According to Haug 2016, in particular, inclusive education has the courage to teach students who are inclusive together normally. However, each student receives instruction according to their abilities and interests. There is great hope from the team to be able to transfer knowledge to SLB students despite their lack of competence.

Team limitations in carrying out are not a barrier to knowledge transfer. Through the pedagogical approach that the team studied, then applying it in training, it was proven to be able to stimulate thinking for SLB students to understand alternatives for making benches with the plywood plane lamination technique on curved media. The stages of training, like other knowledge, begin with planning a design with pictures. An explanation of what students will achieve in the training is explained visually. This initial stage provides a clear description of the objectives to be achieved. Planning is a thought process for the future. Planning is done to prepare what will be done. Through planning, an outline or stages will be obtained that systematically regulates the steps to achieve the goal (Taufiqurokhman, 2008). Through collaboration, it will be instilled in people with disabilities

Communication using pictures and mock-ups is considered effective in forming mindsets and understanding the intent of this training. in the end will form the participation of people with disabilities to be able to interact with the team. The desire to participate in activities is a psychological pressure from everyone (Salusu, 1998). Even though their form of participation is different from non-disabled people, it is necessary to understand them and direct them to understand the truth. Participation is an insistence on human psychological needs as individuals. Communication and participation solutions are positive responses that will be responded to to give a sense of friendliness so that the transfer of knowledge goes well.

SLB students are directed to understand pictures. Verbal communication and gestures are used to transfer intentions and goals. In the next stage, the tools that will be used in the work are introduced. Some tools are allowed and there are tools that SLB students are not allowed to use. Dangerous tools such as cutting tools are avoided from SLB students. The use of this tool is only intended for companions who are not disabled. The understanding of the tool does not experience problems because physically and practically it can be directly demonstrated by students. The lamination practice stage becomes an activity that students feel is a new experience that has never been done before. Glue is smeared on the plywood, uniting several plywood in a pile, placing the plywood stack on the printed media and the lamination process with clamps is very much in demand and looks enthusiastic about doing it. This stage is the emphasis in training. Students are invited to understand a simple process to produce multiple plywood laminations and produce shapes according to the mold.

Even though the team's competence is not pedagogic knowledge for people with disabilities, up to this stage it seems that the knowledge provided has been understood by students. According to Wulandari (2021) teachers in special education still have a lack of knowledge of their students. This knowledge is mainly about teaching methods and skills that can actually be learned through teacher skills training. This was also felt by the team when dealing with SLB students. However, the experience encountered during interaction, communication and practice,

requires skills and pedagogic mastery when training.

Up to this stage students have seen the direction of the training. The training team showed the design drawings again, students were asked to indicate which areas or components they had made. The next stage is smoothing the laminated area to be smooth and even. At this stage students are asked to smooth with a rotary sanding machine that is safe for them. One by one they carry out the process and feel for themselves the areas that were previously rough then become smooth. All chair components that have been mashed are then colored with dyes that use water as a diluent to make them safe for students. Until this stage, everything has been running smoothly and is understood by student. After all the components are dry, then do the assembly. The role of the team as a companion is more dominant at this stage of activity. Students act as assistants in the assembly process. The need for tools and materials used can be assisted by students. They become aware of the need for tools and materials needed when assembling. With limited abilities, students become useful for non-disabled people.

Even though planning education and skills for people with disabilities requires analysis and accuracy of the type of training, as Aprilia (2019) said that the skill needs of students with disabilities require identification of the accuracy of the subject and identifying the type of training according to the needs of students with disabilities. In this training, the process of identifying the student's abilities was carried out by the teacher at the Paedagogia SLB school - Surabaya. The selection of students by school teachers has chosen students according to their abilities and interests. This can be seen when the training took place, the team did not experience significant difficulties when providing explanations and transferring knowledge. The training was carried out as expected.

It's a joy in training, when the assembled bench is complete. At that time students were asked to again compare the design drawings and match them with the actual benches they had made. Cheerful, happy and happy faces were seen on them when the benches were finished and according to the design drawings. It was heartwarming for the team to see their joy and success in transferring simple knowledge about carpentry.

This training process is in line with what Wikasanti (2014) said, vocational skills education is education that emphasizes the skill aspects of students according to their talents. The skills education relates to models, principles and procedures in carrying out a task. Thus the steps applied to SLB Paedagogia Surabaya students can be said to have followed the appropriate vocational education rules.

The continuation of this training is to provide continuous assistance and empowerment of people with disabilities so that they benefit themselves and others. An important process in community service is empowerment. There are three things that are important in community empowerment, namely: 1) Enabling; creating an atmosphere that allows society to thrive; 2) Empowering; Strengthen the potential of the community; 3) Protection; Protect, defend the interests of society (Munawar Noor, 2011). Of these three important things, people with disabilities really need it to build self-confidence. This requires continuous assistance so that they feel that someone is protecting them and ultimately have confidence in living life. Obtimism becomes the basis of the lives of those who have deficiencies.

Design Product

Tool introduction

Picture: 1
introduction
Source: Team Pengabdian Kepada Masyarakat 2022

Gluing process

Bending process

Curved Lamination Process

Sanding With Rotary Machine

Picture: 2
Work practice
Source: Team Pengabdian Kepada Masyarakat 2022

Coloring process

Assembling process

Picture: 3
Work practice
Source: Team Pengabdian Kepada Masyarakat 2022

Happy to see a bench that is almost finished

Final coloring process

Picture: 4
The bench is finished
Source: Team Pengabdian Kepada Masyarakat 2022

CONCLUSION

After doing community service at SLB Paedagogia Surabaya, it can be concluded as follows:

1. A simple production process approach can help people with disabilities understand the aims and objectives of the training.
2. The initial design in the form of clear pictures or other media will make it easier for SLB students to see the production stages they are working on.
3. Identification of SLB students who have talents and abilities to assist them in the process of understanding a training.
4. Pedagogic abilities are needed by coaches to understand the character of SLB students so that learning can run smoothly and knowledge transfer becomes easy to understand.
5. Patience when training SLB students is needed so that students become comfortable, in the end the training objectives can be achieved.

Suggestion

1. There needs to be regular follow-up training so that students understand more about woodworking techniques with the lamination process.
2. The success of SLB students who have been trained needs to be informed to other students so that there is a process of transferring knowledge to other students.
3. It is necessary to provide information to students' parents about the new abilities possessed by their children so that parental support gives good hope for students.

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