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## **EXPERIMENTAL CLASSES WITH AN ANDRAGOGY APPROACH TO MAKE THE LEARNING ATMOSPHERE FUN AND VIBRANT (CASE STUDY AT THE BSSN TRAINING CENTER)**

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### **Abstract**

*Andragogy as an adult learning need a lot of innovation to maintain "transfer of knowledge" process with a comfortable atmosphere in the classroom. Prerequisite knowledge as matriculation need to be learned first before class start, then they will comfy to interact on the learning process. take a long learning hour with aged participant can causes physical problems and it will affect on the achievement of learning goals, this effect continue to double with boredom and low motivation and the result was demotivation and uncomfortable class atmosphere. In this paper wrier take observations of training participant and conducts experimental classes as a teacher to find the best method to overcome the problems mentioned before. Taking observation on 3 examples of role model instructors with different, unique and efficient learning methods. Calibrate the result with interviews of fellow instructors and direct question on training participants. Then the results*

*of observations, experiments and interviews were compared with literature studies. Conclusion to this studies is combining 2 or more teaching methods in teaching action produced a pleasant classroom atmosphere and made the training participants enthusiastic in achieving maximum learning outcomes, and define the relation of the learning method, the learning material, Participants Chraacter and Time of implementation.*

### **Keywords**

Adult Learning, Fun Learning, Learning Method, Role Model of Teaching

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## **1. Introduction**

Adult learning system or better known as andragogy in its implementation requires a lot of innovation in achieving its goal to make the classroom atmosphere comfortable so that it supports the process of "transfer of knowledge". Obstacles often arise when trainees feel the learning material is too heavy with the reason of lack of knowledge, boredom or never getting to know the related material. Not to mention the time for the implementation of the education and training program which is relatively long and the age of trainees who are often no longer young causes physical problems that interfere with the achievement of learning goals. This is coupled with low motivation and "needs of knowledge" factors. All of these factors lead to uncomfortable demotivation and class atmosphere because they affect all trainees.

The same obstacle also occurs in the Education and Training Center for National Cyber and Crypto Agencies (BSSN), where the main training that is often carried out is Information Security Basic Training (DSD).

## **2. Objective**

The research objective is to get the ideal teaching style model to teach in an adult class that is able to make the learning atmosphere fun so that it helps trainees stay motivated in the process of achieving learning goals.

Seeing some problems in the background can be drawn several problems, among others:

- How to keep trainees excited in participating in class learning?
- What learning methods can be applied to make this happen?
- What kind of teaching style is needed to make the learning atmosphere fun and vibrant?

From the identification of the problem the writer is interested in conducting research on the most effective teaching methods and styles to solve the problem. A series of research and observations were conducted in the Education and Training Center for BSSN classes and environments.

### **3. Research Method**

The author conducts classroom observations both as trainees and as instructors to find the best teaching methods to overcome the above problems. We took 3 examples of teaching role models with different, unique and efficient styles during the observation process in several training classes followed by the author throughout 2017. Then the experiment was carried out by using the teaching method by using it directly when the author taught to observe the impact on trainees and class situation. The classes used for the experiment were the DSD of 207, 208 and 209 in 2018. Observations were reinforced by interviews with fellow instructors and trainees. The results of observations and interviews were compared with literature studies.

### **4. Result and Discussion**

#### **4.1. Information Security Basic Training**

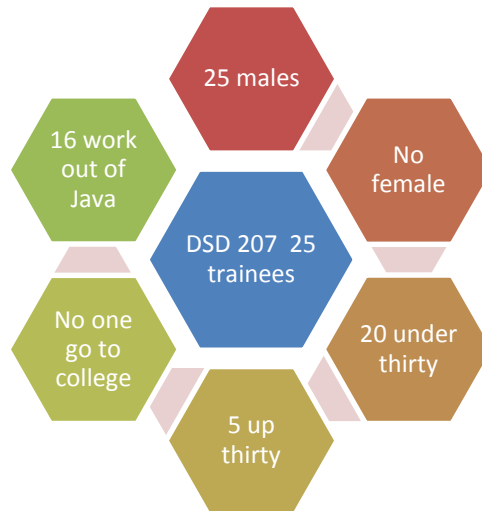
Information Security Basic Training (DSD) in Education and Training Center for National Crypto Agency (Lemsaneg) which changes its names to National Cyber and Cryptography Agency (BSSN) is based on the Regulation of the Head of the State Code Institution (Lemsaneg) Number 2 of 2017 on Guidelines for Information Security Basic Training (Lemsaneg, 2017).

This training and training program is included in the formation of functional positions where the knowledge, skills and behaviors obtained from this training will be used by trainees as a condition to occupy that position. The number of trainees each generation is a maximum of 25 people, who come from government agencies both central and regional, army and police. The time to carry out the training was relatively long, which was around 8 weeks where all trainees stayed at dormitory of the Education and Training Center for BSSN. Trainees are bound by strict schedules and rules that apply in a dormitory environment. Permission to leave the dormitory is only given on weekends and must be returned to the dorm on Sunday night every week. Within 2 months the trainees will study 11 materials consisting of knowledge, skills and attitude coaching material.

In 2018 the first semester carried out 3 DSD classes namely DSD 207, DSD 208 and DSD 209.

#### **4.1.1. DSD 207**

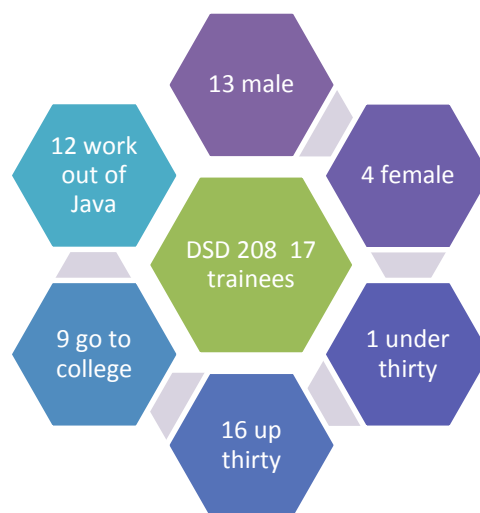
DSD trainees of 207, totaling 25 people, all from National Army of Indonesia who served in several regions in Indonesia with an average age were still relatively young. Training in May to July 2018.



**Figure 1: Profile of DSD 207**

#### **4.1.2. DSD 208**

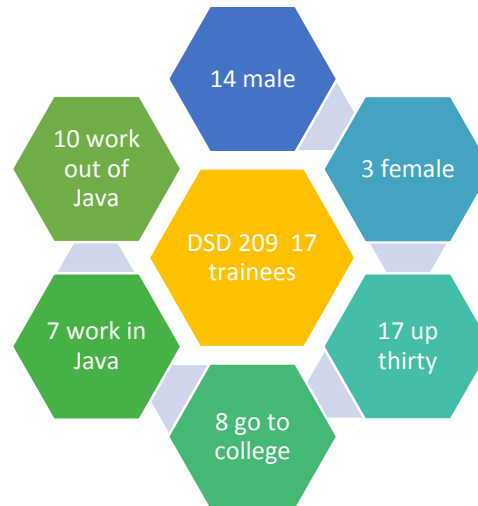
Trainee of DSD 208 numbered 17 Local Government in Indonesian from both central and regional levels in Java and outside Java with almost all of them aged over 30 years. This training held at the end of June to September.



**Figure 2: Profile of DSD 208**

### 4.1.3. DSD 209

Trainees of DSD 209 numbered 17 Local Government in Indonesian from both central and regional levels in Java and outside Java with an average age of over 30 years. The training held in the same time with DSD 208 is the end of June to September.



**Figure 3:** *Profile of DSD 209*

## 4.2. Role Model

### 4.2.2. Role Model 1 with Rapport Method

The teacher who was used as the first role model (RM1) is the instructor of the Action Plan Preparation material when the writer follows the Training Officer Course (TOC). This training is intended to provide knowledge and skills for organizers in order to carry out training properly and correctly. RM01 put forward rapport from the beginning of opening classes and teaching the material.

Rapport forms the basis of meaningful, close and harmonious relationships between people. It's the sense of connection when you meet someone you like and trust, and whose point of view you understand. It's the bond that forms when you discover one another's values and priorities in life. According to researchers (Linda Tickle, 1990), when you have a rapport with someone, you share:

- **Mutual Attentiveness:** You're both focused on, and interested in, what the other person is saying or doing.
- **Positivity:** You're both friendly and happy, and you show care and concern for one another.
- **Coordination:** You feel "in sync" with one another, so that you share a common understanding. Your energy levels, tone and body language are also similar.

This connection can appear instantly – when you "click" with someone – or develop slowly, over time. It can grow naturally, without intent, or you can deliberately set out to build it.

Rapport isn't just a tool for building relationships, though; it's often the foundation of success. When you have a rapport with someone, you're better placed to influence, learn and teach, particularly as the trust that you've built up means other people are more likely to accept your ideas, to share information, and to create opportunities together. Rapport with students can help them feel more comfortable to speak out in class and asking questions to the teacher both inside and outside class (Keith, 2011).

With this teaching method, trainees feel comfortable from the start, so the atmosphere is conducive when RM01 opens discussions and questions and answers throughout the learning process. Trainees feel free to express their opinions and are not reluctant to ask questions about problems in preparing an action plan. Thus the learning material was delivered successfully and more deeply explored with the exchange of opinions from RM01 and trainees so that the results of the action plan were clear and applicable later.

#### **4.2.3. Role Model 2 with Storytelling and Energizer Method**

The teacher who was used as the second role model (RM2) was the instructor of the Training Curriculum Development material when the writer participated in the Training of Trainers (TOT). This training is intended to provide knowledge and skills for prospective teachers to be able to teach properly and correctly.

RM2 in bringing the material brings more storytelling about issues related to the curriculum, how to overcome it and how the process develops to obtain a curriculum that meets the needs of education and training. Interspersed also with questions and answers and storytelling sessions from trainees to continue with problem-solving discussions. According to Juangsih (Juangsih, 2012), storytelling can familiarize students, expressing what is read and understood by their own language.

Storytelling describes the social and cultural activity of sharing stories, sometimes with improvisation, theatrics, or embellishment. Every culture has its own stories or narratives, which are shared as a means of entertainment, education, cultural preservation or instilling moral values. The term "storytelling" can refer in a narrow sense specifically to oral storytelling and also in a looser sense to techniques used in other media to unfold or disclose the narrative of a story (Beyond Intractability, 2003).

During this session there are times when trainees feel bored hearing the experience of the instructor or from other trainees, then RM2 will present an energizer activity session to avoid trainees getting sleepy and out of focus and returning the spirit of the class again.

An energizer is a brief activity that is intended to increase energy in a group by engaging them in physical activity, laughter, or in ways that engage the members cognitively (problem-solving). They can be used with any group, including during training. During training workshops, training events and talks, your audience will not always be attentive. When energy is low you can use Neuro Energisers or Physical Energisers to wake up their brains. Do tell them what you are doing - audiences are fascinated as to the latest brain research. If you don't tell them what you're doing, the pragmatic ones will think they are just playing games and you'll get a smelly mark on your happy sheet (The Training World, 2017).

Thus the concentration and enthusiasm of the trainees are maintained until the end of the material session from RM2.

#### **4.2.4. Role Model 3 with Mnemonic Method**

The teacher who was made the third role model (RM3) was the instructor of the TNA Basic Concept material when the writer followed the Training Needs Analysis (TNA). This training is intended to provide knowledge and skills in identifying employee problems in the workplace and determining appropriate recommendations or training to overcome these problems.

In transferring knowledge about the basic concept of TNA, RM3 often uses mnemonic techniques to make it easier for trainees to memorize material that has a lot of theory.

This mnemonic strategy is a technique that can help memory. Mnemonic is used on different learning tasks and is a process or technique for developing memory. From many studies proven that this mnemonic strategy can clearly improve memory.

According to the theory of Eric Jensen mnemonic is a method to help remember large amounts of information involving three elements, namely: coding, maintenance, and recall. By applying several mnemonic techniques to remember something information. The memory process will be easier, because mnemonics always use the association principle with something else (Karen Markowitz, 2002).

For example to explain the guidelines for training / training which consists of five phases, namely, Analyze, Design, Develop, Implement, and Evaluate, then RM3 does not only use the ADDIE abbreviation but also associates the letters in the abbreviation with memorable hand movements. With this technique trainees understand and memorize faster with this material.

### 4.3. Experiment

#### 4.3.1. Material of Learning

The application of learning methods derived from role models is carried out in 3 DSD classes in 2018. Learning materials taught in 3 classes, in accordance with the task instructions received by the author, are Introduction to the Code which contains material on the development of cryptology from the classical to the modern world when this is complete with historical stories related to the world of coding and intelligence that occur in Indonesia and the world. The time for submission of this material is 12 hour material (12 JP) or equivalent to 9 hours, including the quiz execution time at the end of the learning session.

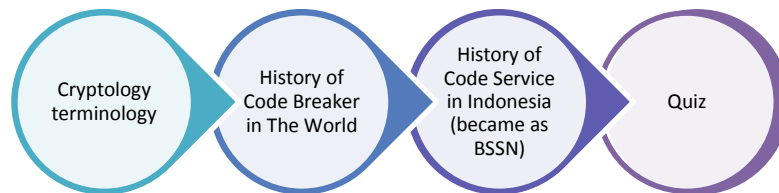


Figure 4: Learning Material

#### 4.3.2. DSD Classes

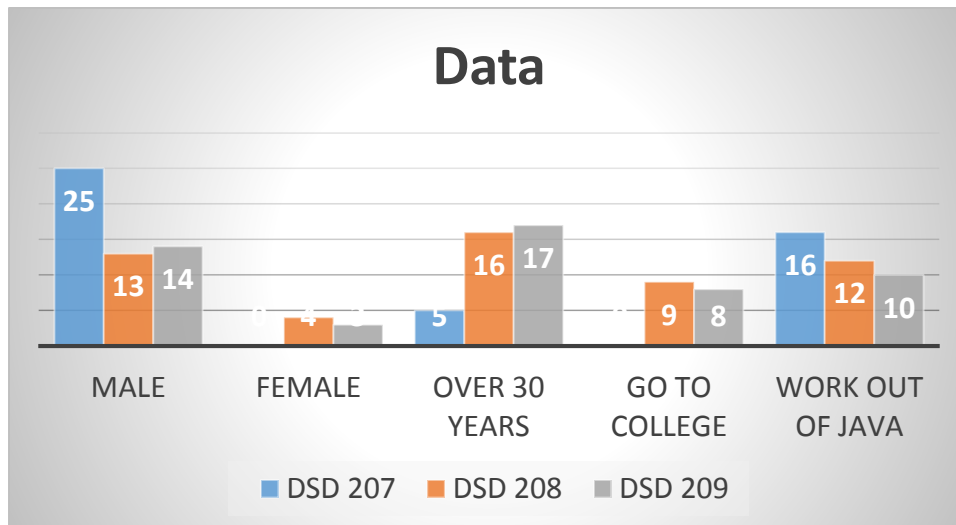


Figure 5: Data of DSD



From the data trainees in the 3 DSD classes it can be concluded that most trainees are men over the age of 30 years, only a small percentage continue their education after the senior high school level and work outside Java.

The age factor above 30 years, which can be said to be no longer young, causes trainees to often encounter obstacles in concentrating and learning new things. Plus the habit of lack of physical activity or exercise causes them to tend to be more easily sleepy in class. Not to mention some of them have had several internal diseases related to age, causing physical disruption during learning.

The level of education of trainees who mostly did not continue their education to college also caused limited knowledge. In addition, on average, they have held steady and comfortable positions. This causes the factor of needs of knowledge to be relatively low. They also often feel the learning material is too heavy with the reason of lack of knowledge or never know the material related to previous learning.

The implementation of the training, which in total requires 2 (two) months indirectly also creates boredom for trainees. Not to mention the majority of trainees on duty and domiciled outside Java. This caused them difficulty in returning home often to families, and some even survived until the end of the training and returned home due to transportation costs.

There were some of the trainees who took part in the training only because of a warrant without prior interest in studying. This coupled with the things mentioned above often lead to decreased motivation and enthusiasm to learn trainees.

From the data above, the results of observations and interviews were concluded that most of the trainees encountered several obstacles in participating in the DSD training, so efforts were needed to keep trainees focused and enthusiastic in taking part in the Introduction to Encryption.

- **DSD 207 Class**

Introduction to Encryption Material in DSD 207 class is presented by displaying methods from RM2 and RM 3, namely storytelling with energizer and mnemonic.

The results obtained were trainees eager at the beginning of learning but during the storytelling session they were still embarrassed and hesitant about sharing real stories of experiences and coding conditions in their respective institutions. Trainees listen more so there are some who are sleepy. The class atmosphere revived every pause of the energizer appearance. Trainees find it easy to understand and memorize terms that are introduced in the world of cryptology with

mnemonic techniques. Eventhough in some part the method has to combine with another method to make it more effesien to aceive (Campos, González, & Amor, 2010).

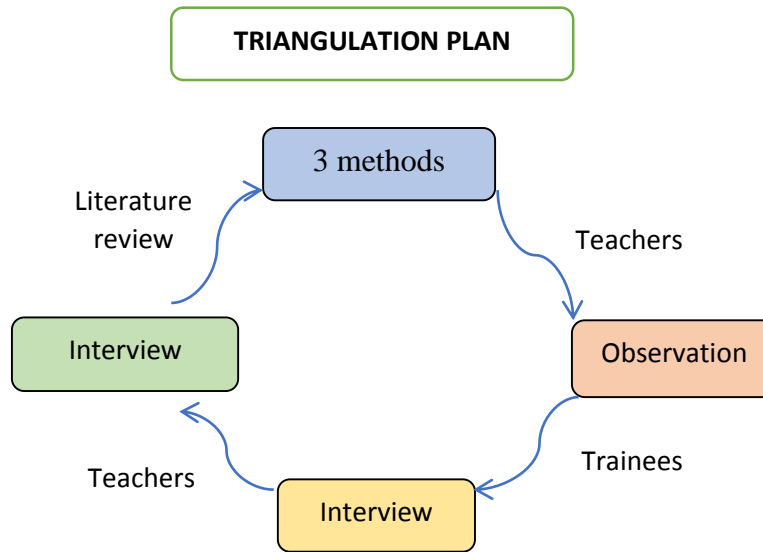
- **DSD 208 Class**

Introduction to coding material in the DSD 208 class is presented by displaying a method of RM1 and RM 2, namely rapport and energizing storytelling. The results obtained are trainees look more relaxed in communicating with the teacher, and more freely expressing opinions and sharing stories about the conditions of coding in their respective institutions during the storytelling session. This greatly helps the development of insights among fellow trainees. The energizer session helps trainees stay motivated and focus on learning. But there are some trainees who are a bit older who are starting to find it difficult to understand and memorize things related to cryptological terminology.

- **DSD 209 Class**

The introductory coding material in DSD 209 class was presented by displaying a combination of all methods from RM1, RM2 and RM 3 namely rapport, storytelling with energizer and mnemonic, considering that many of these classes are over 30 or 40 years old, and some are sick who need treatment routine. The results obtained by trainees look comfortable starting learning with the rapport method at the beginning of learning. Although the achievement of learning goals is slower than the other 2 classes, the spirit of learning and the pleasant atmosphere in the classroom can last until the end of learning, interspersed with energizers that are adjusted to the trainee's age level. Sharing sessions in storytelling show a lot of valuable experience gained during service in their respective agencies related to coding.

#### 4.4. Triangulation Method



**Figure 6:** *Triangulation Plan*

##### 4.4.1. Observation

Observations are carried out before and during the experiment process. Observations before the experiment were conducted by the author to observe the condition of the class and trainees when receiving material from several teachers so that the facts were explained in section 4.3.2. DSD Classes.

Observations during the experiment were carried out with the help of a team of teachers who observed the classroom situation and trainee behavior as long as the authors applied several teaching methods that had been determined in 3 DSD classes.

##### 4.4.2. Interview

Interviews were conducted with several trainee representatives from 3 randomly selected DSD classes. Interviews are carried out before and after the experimental activities are carried out. Interviews were also conducted with the teacher team involved in the observation process of the experimental process.

#### 5. Conclusion

From the results of research conducted, it is proven that combining 2 or more methods in teaching produces a pleasant classroom atmosphere and makes trainees excited about achieving maximum learning outcomes. The choice of learning method must be adjusted to the learning

material, trainees and time of implementation. Teachers are required to be able to map the skills of trainees and classroom situations so that they are able to apply the best teaching style in learning. For further reaserch we like to find the method of handling trainee relationship on a teamwork. This research is limited to the Information Security Basic Training (DSD) class in BSSN.

## **6. Acknowledgement**

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