



Impact of Ice Breaking Learning Activities on Children in Neuropsychological Perspective

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Abstract. The purpose of this study was to analyze the impact of *ice-breaking learning activities* on children from a neuropsychological perspective. Neuropsychological perspective in early childhood studies, where a child has a surplus of energy. This causes children to be active and energetic, so children need energy distribution. This mechanism is an ego defense, where the child's excess energy is sublimated/energy released, one of which is through *ice-breaking activities*. Ice-breaking activity is a term for activities that exist in Indonesia to break the ice, confusion, boredom, and boredom so that the atmosphere melts and can return to its original (more conducive) state. *Ice-breaking* activities through play change children's energy into positive ones. This research is a descriptive qualitative type. Research subject This is Insan Mulya Natural School Kindergarten Surabaya. Data collection techniques using interviews, observation, and documentation with data analysis using triangulation. The results of this study revealed that the *ice-breaking learning activity* changed the facial expressions of children who were sullen and still sleepy to become happy and willing to follow the learning process. This research aims to inform teachers about the importance of *ice-breaking* activities before learning activities seen from the perspective of neuropsychology.

Keywords: Impact · Ice Breaking · Neuropsychology

1 Introduction

In early childhood, according to the *National Association for Education, Young Children* are children aged 0–8 years [1]. The characteristics of children at this age are unique, namely being in the golden age, being spontaneous, tending to be careless and less calculating, selfish, having great curiosity, having an adventurous spirit, having great imagination and fantasy, and being active and energetic. Spencer supports this in his book “Principles of Psychology” that children have excessive energy, which only applies to humans and animals. With a lower level of evolution, for example, insects or frogs [2].

Energy can be like a water or gas working system that will press in all directions or like an energy explosion. This intense energy pressure requires a lot of capacity to be within its power. Energy cannot be created or destroyed but can be changed in form. Likewise, the energy that exists in children can be channeled, and one way is through play activities.

Surplus energy has an emotional effect on a child. According to Spencer, every child makes active movements because they have excess energy and will experience severe problems if their power is not channeled [4]. When the child's point is fully charged, the child will make active movements in the morning. This is often not realized and understood by parents, so when excess energy appears in children, parents cannot handle it and give inappropriate behavioral responses. Giving parental answers will affect emotional changes in children. When a child comes to school, their emotions are not good, and they cannot focus on learning activities. Teachers who need help understanding child psychology and the characteristics of learning in PAUD will cause the learning delivered not to reach the children.

One of the duties of a teacher is to condition students so that they can learn actively so that their potential (cognitive, affective, and psychomotor) can develop optimally [5]. To make this happen, teachers must know how to make students learn in a fun way. Therefore, a teacher should know the stage of child development, the step of play development, neuroscience, mastering various learning models, variations of learning media, and how to teach children.

Learning strategies are needed to achieve learning objectives. Making detailed learning steps, starting from the opening, core, and closing, will strengthen a teacher when carrying out learning. The beginning of learning activities is the key so that teaching and learning activities run smoothly according to the day's learning objectives. Opening activities for early childhood include *ice-breaking activities* and explaining the concept of the material or subject matter. *Ice-breaking activities* are needed to train children's interactions in class [6].

Ice-breaking activity is a term for activities that exist in Indonesia to break the ice, confusion, boredom, and boredom so that the atmosphere melts and can return to its original (more conducive) state [7–10]. According to Spencer in children, the definition of *ice-breaking activity* is in line with the theory of surplus energy. Namely, *ice-breaking activities* are a place to channel energy in the form of activities before learning. If the *ice-breaking activity* needs to be considered and programmed correctly, the child will return to a state of spirit, motivated and eager to learn. This condition will help teachers create conducive classroom conditions and children easily accept learning materials.

Based on the results of pre-observations that have been carried out by researchers at the Insan Mulia Surabaya Kindergarten, it is known that the school carries out routine *ice-breaking activities* before the start of the opening activities in the teaching and learning process. *Ice-breaking activities* carried out by teachers and children varied. One example of an *ice-breaking activity* at the Alam Insan Mulia Kindergarten is inviting children to line up like a train from the school gate and then get ready to go to class together. Still, before going to the course, the child has to go through several obstacles, such as walking on a catwalk. Or walk straight according to the lines in the schoolyard. Then when the child has entered the classroom, the teacher invites the child to sing one of the songs entitled "walking hop hop hop" and ends with playing a *game* for training the child's concentration.

What needs to be considered in *ice-breaking activities* for children is to avoid making excessive movements such as sports and make children tired. The principle of *ice-breaking activities* is to release energy without the child realizing it. Based on

researchers' observations, the *ice-breaking* exercise routine dramatically affects early childhood emotions or moods. This can be seen when children come to school with sullen faces or are still sleepy, then the teacher does *ice-breaking activities*, and the emotions and facial expressions of children change. Children are happy and willing to follow the learning process.

Fanani (2010) states several benefits of *ice-breaking activities*, including.

- a. Train students to think creatively and broadly.
- b. Develop and optimize the brain and creativity of students.
- c. Train students to interact in groups and work together in a team.
- d. Train systematic and creative thinking to solve problems.
- e. Increase self-confidence.
- f. Train to determine the strategy carefully.
- g. Train creativity with limited materials.
- h. Train concentration, dare to act, and not be afraid to be wrong.
- i. Strengthen tenuous interpersonal relationships.
- j. Train to respect others.
- k. Establish self-concept.
- l. Train, the spirit of leadership.
- m. Practice being scientific.
- n. Practice making decisions and actions [11].¹

Based on the above, this study examines and analyzes the impact of ice-breaking activities on early childhood learning from a neuropsychological perspective related to the process of acquiring information in the child's brain.

2 Method

The approach used in this research is qualitative research. Qualitative research produces descriptive data through the disclosure of written or spoken words from people, certain events in detail and depth, and observable behavior [12]. This type of research is a descriptive qualitative analysis study. Descriptive analysis studies were chosen because this approach allows researchers to quickly obtain integrated study and analysis results regarding the interrelation of various facts and dimensions of the descriptive analysis study [13]—data collection techniques through observation, interviews, and documentation. Interviews were conducted with teachers, and the documents analyzed were from photos, videos on YouTube, and news articles about institutions. Data analysis uses data triangulation, where the obtained data is sorted based on certain materials. The information sorted based on the fabric is then analyzed and concluded.

3 Result and Discussion

The neuropsychological perspective related to ice-breaking activities is acquiring information in the child's brain. Information processing learning activities are a learning model whose emphasis is on activities related to processing activities or information

processing to improve student capabilities through the learning process. This model is intended to focus more on the cognitive function of each student. In addition, this model is based on cognitive learning theory (Piaget). This learning activity model can be oriented to students' abilities in processing information and systems that can improve these abilities [14].

According to Hetherington & Parke (1986), information processing assumes that children's abilities are more limited and different than adults. Children are not able to absorb a lot of information and are also less systematic, do not have many strategies, and do not have much knowledge of the world needed to understand problems, so they are less able to monitor the work of their cognitive processes [15]. Furthermore, Fathurrohman (2015) said Information Processing Model is a learning model in which it is explained how individuals respond to those coming from their environment, namely by organizing data, formulating problems, building concepts, problem-solving plans, and using verbal and nonverbal symbols. [16]. More specifically, Miller (1993) says that the core of the development of the information acquisition process is the formation of an increasingly efficient system in itself to control the flow of information [17].

The stages of information processing learning activities, according to Gagne, are 8 phases of the learning process, namely:

a. Motivation Phase (Motivation Phase)

The motivational phase is the initial phase that begins learning with the encouragement (motivation) to take action in achieving specific goals. Giving explanations allows students to try to achieve the goals set. In this phase, students must be motivated to learn with the hope that by learning, they will get a reward. Prizes here can be in the form of lessons that fulfill students' curiosity about a subject.

b. Introductory Phase (Apprehending Phase)

The introduction phase is receiving and understanding the information obtained from learning. Understanding of information can be obtained through attention. In this case, students must pay attention to the parts fundamental to an instructional event. For example, students pay attention to relevant aspects of what the teacher says or about the main ideas in the book.

c. Acquisition Phase

The acquisition phase is when a person gives meaning or perceives all the information that already exists in him, so the storage process occurs in his memory. The information presented can not be directly stored in memory; the data is converted into a meaningful form, then linked to the information already in memory. News left temporarily in "short-term memory" will transform into an arrangement ready to be stored. This process is called coding.

d. Retention Phase

The retention or retention phase is when a person retains information that arrives at him, so the storage process occurs in memory. The newly acquired knowledge must be

transferred from short-term memory to long-term memory. This can happen through repetition, practice, elaboration, and so on.

e. Recall Phase

The calling phase removes or recalls information that has been stored in memory when a stimulus occurs. We may lose touch with details in long-term memory, so we must reconnect with that information. To retrieve this information, it can be done by calling the previously learned information. External stimuli can influence the process of recalling this information. For example, the teacher provides an external stimulant to students so that students can issue information stored in their memory. The trigger can be in the form of providing relevant information to the missing data.

f. Generalization Phase

The generalization phase is the phase of applying or utilizing the information that has been obtained into relevant problems in everyday life.

g. Appearance Phase (Performance Phase)

The appearance phase is the embodiment phase of a person's behavior change due to learning. Students must display an action or behavior that reflects what has been learned. For example, students can make origami after learning how to fold paper.

Feedback Phase

The feedback phase is the phase where a person gets feedback on the behavior he has done. In this case, students get feedback about their performance to know whether they have understood what is being taught. This feedback can provide reinforcement (reinforcement) on students whose performance is successful.

Further, regarding the stages of information processing, Atkinson and Shiffrin [18, 19] suggested three stages of processing and storing information, namely:

a. Sensory Memory

At this stage, sensory memory continuously receives stimulation or information from the environment (such as light, sound, smell, etc.) through the receiver or our senses (receptors). The information received will be stored in *sensory memory*, but the report only lasts for a short time (± 2 s) and is easily disturbed or changed. This stage is critical because it is a requirement to be able to process information at a later stage.

b. Short-term memory (STM)

Short-term memory or *working memory* is a memory system with a limited capacity. The duration of information stored in *short-term memory* is 15–20 s. The storage duration will increase to 20 min if the information is repeated. Information that enters the *short-term memory* gradually disappears when the data is no longer needed. However, if this information is always used, it will enter the *long-term memory stage*.

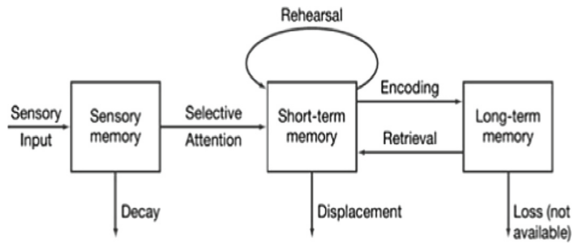


Fig. 1 .

Table 1. Differences in the three memory levels

Characteristics	Hearing registers	Memory period short	Memory long term
Enter information	Attention beginning	Need attention	Repetition exercises
Maintain information	Not possible	Attention Keep going continuous exercise repetition	Repetition organization
Information format	Copy input in a manner that exists	Semantic possible visual sound	Mostly semantic, Partly sound, and voice
Capacity	Big	Small	Not is known the limit
Lost information	thorough	Shift possibility thorough	Possibility of no lost ability access because of interference
Hose file	quarter until two second	Up to 30 s	Several minutes until several years
Call Return	Reading aloud _	Possibility of automatic details in awareness cue perverted/sound	Gesture repair possible search process

c. Long-term memory (LTM)

Long-term memory has an unlimited capacity and can store large amounts of information for long periods. The information stored in this memory will be arranged to form a schema. Scherma is a grouping of information elements according to how the information will be used later so that later access to information will be facilitated in the future when it will be used. Based on the description above, it can be presented in Fig. 1. Information processing theory is as follows:

Atkinson and Shiffrin said that the more comprehensive information is retained in short-term memory with the help of repetition, the more likely it is to enter long-term memory (Table 1).



Fig. 2 .

Based on neuropsychology, learning activities must be adjusted to the stages of the information processing process, namely (1) motivation; (2) understanding; (3) acquisition; (4) detention; (5) recall; (6) generalization; (7) treatment: and (8) *feedback*. At the beginning of learning, the teacher can provide motivation first. This can be seen in Fig. 2.

The teacher can open the lesson, condition the class, ask about students' attendance, connect the learning material with previously studied material, and then provide motivation. The motivation given can be straightforward enough but can arouse students' enthusiasm and enthusiasm to participate in learning.

Next is the understanding stage: receiving and understanding the information obtained from a lesson. Teachers can provide knowledge to children by asking questions. This question and answer are done so students can think in advance about the material they are learning. This can be seen in Fig. 3.

It's about more than just receiving information from the teacher. This is also closely related to one of the information processing strategies, namely inquiry, where students seek and find the information needed. Examples of activities that can be carried out in the strategy of providing information can be seen in Fig. 4.



Fig. 3 .



Fig. 4 .

4 Conclusion

Ice Breaking activities are essential for daily learning activities. Mainly carried out in the opening activities or before the start of core learning. *Ice-breaking* actions show a significant impact in increasing children's learning motivation.

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