The Implementation of Cooperative Learning Model Based ACSI (Action Cards Speak Independent) to Improving Learning Outcomes and Students’ Motivation in the School Chemistry 1 Subject of Chemistry Education Study Program FKIP ULM

Almubarak*

University of Lambung Mangkurat, South Kalimantan, Indonesia

Abstract

This study aims at improving learning outcomes and student motivation of Chemistry Education FKIP ULM through Cooperative Learning Model-based ACSI (Action Cards Speak Independent). This study used experimental research with one-group pretest-posttest design. The population was the student of chemistry education FKIP ULM, and sampling technique is purposive sampling. Data Collection Technique used pretest and post-test paper, motivation questioner, and unstructured interview. Data analysis techniques used N-gain test and motivation analysis criteria. The finding showed that there was improvement in the learning outcomes with good enough category analyzed by N-gain test whose score was 0,64 and motivation questioner which resulted score 84,5% showed this study aroused the very good students’ motivation.

Keywords: Action Cards Speak Independent, Cooperative

Introduction

Science education is one of the educational process oriented to national education goals. This time, science education focuses on the ability of students to be active and explore their potential for learning. Learn to organize, construct knowledge, solve problems, discipline in doing the task and responsibility are the condition of education today. Chemistry is a difficult material according to the student, abstract and difficult to learn. Difficult concept and formula are a strong stimulation of why students assume that elusive chemistry. It has an impact on learning, thinking and motivation. The assumption described above is a challenge for teachers how to make learning concept chemicals that can change the perception of students about the chemistry and they are not pressured to study chemistry.

This wrong perspective about the chemical could be an idea for the teacher to develop a concept of good learning, motivating, and easy to understand chemistry. Implementation of cooperative learning model with media technology is something that will make the learning process more impressive in the classroom. Dewey (1916) in his book "Democracy and Education" explaining that the class is a mirror of society and serves as a laboratory for learning about real life. Chemistry is a science of evidence in real life and a lot of things that can be applied because the chemical science concepts discussed almost every aspect of human life and nature, where the impact of chemical concept can influence the development of science.

Observations and interviews conducted have shown that the lecturers are still difficulties to equip students to be active and participate. This is due to low quality and quantity of cooperation so that the interaction of students in the class did not exist. The impact of this can be seen from the lack of the ability of students to understand the concepts and they do not recognize their own learning environment. This process is not in accordance with the curriculum content KKNI imposed in universities at this time. KKNI curriculum is centered curriculum students or students already need to know what they should do. Erikson in Seifert (1991) have alternatives in creating a good learning. First, a teacher giving tasks, activities and everything that can be done by the students. The second is a teacher can strengthen students’ effort and perseverance. Competition can be done in two ways, (1) students have the motivation...
and skills provision balanced, and (2) the results of competition need not be taken seriously. Good cooperation in the learning process is very essential include things that can affect them.

Cooperative learning model seems to be the answer in respect of issues that have been raised. Cooperative learning is a working group that is managed and organized, so that students are able to work together in small groups to achieve academic goals, motivate students to be active in learning, self-confident, independent, dare argue, effective and sociable. The integration of media technology in practice be a good companion to implement cooperative learning in the classroom. The implementation of cooperative learning model could become a factor in improving the learning process, a bridge for students to develop their potential, and return the wrong perspective was about chemistry. chemistry is very close to human life and contains the values that can be applied in life.

Problem Identification Research:

How big increase student learning outcomes chemistry education courses through the implementation of Cooperative Learning Model-based ACSI (Action Cards Speak Independent) assisted Media Technology Prezi, b) How motivated student of chemistry education through the implementation of Cooperative Learning Model-based ACSI (Action Cards Speak Independent) assisted Media Technology Prezi.

Objective of the Study

The current study aimed a) to find out how big the learning outcome students of chemical education through the implementation of Cooperative Learning Model-based ACSI (Action Cards Speak Independent) assisted Media Technology Prezi, and b) to find out how motivated student of chemistry education through the implementation of Cooperative Learning Model-based ACSI (Action Cards Speak Independent) assisted Media Technology Prezi.

Outcomes of the Study

The outcome of this study are a) through the implementation of Cooperative Learning Model Based ACSI (Action Cards Speak Independent) students are expected to have the motivation to develop their potential, so that students can become an independent person, intellectuals, moral, creative and resilient to achieve national education goals, and b) Integration of media technology through the application of Cooperative Learning Model Based ACSI (Action Cards Speak Independent), students are expected to have extensive knowledge of the technology, especially the use of media in learning. Knowledge regarding this technology can equip students to become future teachers disciplined, creative, have good character and high competitiveness.

Literature Review

Cooperative Learning Model:

Cooperative learning is an instructional model that promotes collaboration between learners in the learning process to achieve the goal.

The characteristics of cooperative learning model

The Characteristics of the Cooperative (Lie, 2004):

- To complete the learning materials, students learn in a group is working together
- The group was formed from students who have the capability of high, medium and low.
- If in a class there are students who heterogeneous characteristic, tribe, culture, and gender, it is necessary that there are groups such heterogeneity.
- Preferably Choice on group work rather than individual

The Purpose of Cooperative Learning:

The purpose of the cooperative learning (Lie, 2004):

- Results of academic learning, which is to improve the performance of students in academic tasks. Learning this model is considered superior in helping students understand difficult concepts
- Acceptance of diversity, namely that students receive other students who have a variety of backgrounds.
- Development of social skills, which is to develop students' social skills such as: sharing tasks, actively ask, respect the opinions of others, motivate friends to actively express their ideas and work in groups.
Table

Syntax Cooperative Learning Model In general, (Sanjaya, 2006)  

<table>
<thead>
<tr>
<th>Phase</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Achieving the goals and prepare students to learn</td>
</tr>
<tr>
<td>2.</td>
<td>Present an information</td>
</tr>
<tr>
<td>3.</td>
<td>Organize students into learning teams</td>
</tr>
<tr>
<td>4.</td>
<td>Helps teamwork and learning</td>
</tr>
<tr>
<td>5.</td>
<td>Evaluate</td>
</tr>
<tr>
<td>6.</td>
<td>Give recognition or awards</td>
</tr>
</tbody>
</table>

Conventional teaching or direct instruction have backrest psychological theory Behavioristic and social learning theory, while cooperative learning model has a base on the theory of cognitive psychology and social learning theory (Arends, 1997). The focus of cooperative learning is not only concentrated on what was done by the students but on what he thinks the students during learning activities take place. Information presented in the curriculum is not transferred away from the teacher to the students, but the students are facilitated and motivated to interact in a class with other students in the group, with their teachers and with teaching materials optimally to be able to construct their own knowledge.

The process of learning through socialization among students or cooperate in the learning process will make students more easily understand the concept of matter (Dewey, 1916: 10-15). It is understood that the teacher is no longer the center of science as is the case in conventional learning. The learning process with the cooperative model, teachers as facilitators, providers of learning resources, coaching in groups so that students have the attitudes and skills in addition to cognitive.

Skinner says that the motivation and lectures are not enough in a learning process. The learning process needs to be a strengthening through programmed learning. Programmed learning is a design in which a teacher specifies that learning will maximize students' potential. Learning is effective if (1) the information presented is complete and clear, and (2) their feedback on the accuracy of learning (they know what they have learned rightly or wrongly) (Hergenhahn & Matthew, 2008).

Tolman & Gestalt’s theory said the formation of the group in the study intended that each student has the opportunity to show their potential and ideas. It also gives students the opportunity to analyze a hypothetical fatherly/strategy in solving the problem. The analysis process makes students able to sort the information obtained so that students can discern, accept or reject the information (Hergenhahn & Matthew, 2008).

ACSIs’ Learning Strategy:

Words action, cards, speak and independent is the basis or foundation in the implementation of cooperative learning model. As for the supporters of the theory related to it are:

**Action (Action / Behaviour) in the Learning Process**

Below is a supporter of the theory of how the importance of the behaviour of students in learning.

**Gadner:**

In the book “Methods of Teaching Multiple Intelligences” that the appointment of a behavior or motion in the study, indicating that students had to express himself as a form of response to what is given. This statement is in line with the theory put forward by Gadner of multiple intelligences or, more specifically, is a kinesthetic intelligence (Julia, 2012: 25-26). The ability of students to understand and make himself turned to a given stimulus or motivation is a form of sensitivity, this sensitivity that affect students perform gestures so that it is considered responses effectiveness (Baum & Viens, 2005).

Kinesthetic intelligence is the intelligence of someone who prefers a movement that shows a form of performance against other individuals about what is remembered, understood and learned. This expression is marked as an involvement of students in learning. This intelligence is able to equip students to be active and motivated to develop (Julia, 2012).

**Woolfols’ Psychology Theory:**

Woolfolk (1995) asserts that the discipline of educational psychology concerned with teaching and learning processes, Applies the methods and theories of psychology and has its own as well. Teaching and learning process is
the educative process involving teachers and students as major actors in the discipline of learning. Teachers as facilitators that affect the development of the students in the process of interaction. In this context, teachers have the opportunity to choose the model, method, and device appropriate learning and according to the needs of students. This is done in order to know an effective and efficient learning in the classroom without forgetting the main thing which is learning goals.

Psychology explain the link between behavior with the workings of the brain called the neurobiological approach. This approach explains that human behavior is basically controlled by the activity of the brain and nervous system. Neurobiological approach apparent attempt to associate the behavior with electrical and chemical impulses that occur in the body, as well as specify the neurobiological processes that underlie human behavior and mental processes. The behavior in question are purely comes from within the student through the response of the environment (Koch, 2004: 87-90).

Hinkle & Talcott Parsons:

Fundamental assumptions about the action / behavior is also expressed by the following Hinkle,

1. The man emerged from his own consciousness as the subject and the external situation in the position of an object
2. As a human subject, act or behave in order to achieve certain goals. Thus, human action is not without purpose
3. In the act, people use a method, techniques, procedures, methods and devices are expected to work well to achieve a goal
4. Continuity of human action is limited only by conditions that can not be changed by itself (Ritzer, 2003: 46).

Talcott Parsons enhance this theory with the concept of voluntarism, which is the ability of individuals to take action in terms of establishing the way and an alternative means available in order to achieve its objectives. The concept of voluntarism, Talcott has set into action theory paradigm of social definition. Actors or students according to the concept of voluntarism is active actors, creative, and has the ability to assess and able to choose from a variety of alternative actions. students do not have total freedom, but he has a free will choose among alternative actions. Destinations are within easy reach, the conditions and norms, and other important situations, all of which limit the freedom of students but other than that students are human beings who are active, creative and evaluative (Hanum, 2011: 12-15).

The main conclusion from the above theory that social action is a process in which a student is involved in making subjective decisions, regarding the means and ways to achieve certain goals that have been selected. It has an indication for restricted possibilities by cultural systems in the form of norms, ideas and social values. In solving the problem or face certain conditions, students have something in him that is free will (Hanum, 2011: 12-15).

Explanation Hinkle & Talcott Parsons that the behavior of the students are from what they thought of before, and then they coordinate to the brain. Action in this theory gives meaning that learners already have some knowledge that is capable of directing himself fatherly participate in learning. This participation shows the attitude is able to blend with the other students, raised his hand and explained what had been envisaged before the action was taken (Ritzer, 2003: 46, hanum, 2011: 12-15).

These theories are in tune with the concept of the other theory, suggesting that the focus on the behavior / behavior of students is an important component that must be observed. The theory is like.

Piaget's Theory:

Piaget had a pack every child has the curiosity drove him to interact with the environment, both physical and social environment. Piaget believes that the experience physically and manipulation of the environment will develop his abilities. He also believes that the social interaction among fellow students, such as ideas and discussions will help clarify their ideas and make the results of such thinking more logically (Slavin, 2000). the impact of the process that the students thought that something would change subjective to be objective thinking. The student activities are organized in a structure of cognitive (mental) called the “scheme” or mindset (patterns of behavior or thinking).

Piaget said The first experience of the child will be determined by this schema. in other words, the events that occurred on this schemata that could Responed by children and this will limit the child's experience. But this initial schemata will change through the provision of experience. a unique and memorable experience that is given requires them to accommodate their cognitive structures (student). The process of interaction with the environment, participate in learning, action with a comfortable environment are a process that will change the student's cognitive structure. it can also enable the development of students who constantly through the experience (mindset and the way of looking at a problem) (Hergenhahn & Matthew, 2008)
Student in learning process is strongly influenced his thinking maturity. Increasing number of interactions and activities in learning, the more mature pattern of thought. Maturity think learning is the impact of the stimulus which is good, so teachers are prohibited from limiting the space and the creativity of students. It is capable of killing the creativity of students who are the source of intelligence (Reynolds et al, 2008: 23).

Vygotsky's Theory:

Lev-Semionovich Vygotsky, a Russian psychologist have in common with Piaget (psychologist and biologist from Switzerland) in looking at the cognitive development of children (students). Vygotsky considers that the acquisition "signaling system" occurs in sequence step which invariant for each student as presented by Piaget. However, Vygotsky had different opinion about "triggers" the cognitive development of students. He believes that the cognitive development of children associated very strongly with input from others. Response and mentoring by teachers or peers can influence the development of the student, either behavioral or cognitive.

Vygotsky has two main idea of basing his work. First, intellectual development can be understood only when viewed from a historical and cultural context of the child's experience. Second, the child's development relies on systems of gesture (sign system) where the child grows. This refers to the signaling system of symbols created by culture to help people think, communicate and solve problems. Vygotsky's theory above has two major implications in learning, namely the need for learning management cooperatively with student groupings are heterogeneous in terms of academic ability, and secondly that the learning approach that emphasizes the importance of scaffolding, and the importance of student responsibility in the task of learning (Slavin, 2000).

Vygotsky emphasized that the importance of the cultural environment and social interaction in the development of nature and human kind. According to Vygotsky, students learn through interaction with adults and peers who are more capable. Social interaction can trigger the emergence of new ideas and enrich the intellectual development of students. In a cooperative setting, students are exposed to the thought process of their peers. Tutorial by a friend who is more competent to be very effective in promoting growth in the area of proximal development (Zone of Proximal Development) children (Slavin, 2000).

Vygotsky argued that learning objectives will be achieved if children learn to complete tasks that have not been studied, but these tasks are still in their developmental areas. Regional development is the level of development closest slightly above the level of development of the people today. Zone of Proximal Development (ZPD) is the distance between the actual developmental level, which is determined through problem solving independently with the level of potential development of children, which is determined through problem solving with guidance (scaffolding) adults or peers. According to Vygotsky, as students work in the area of development of their closest, the difficult task they complete their own, they will be able to accomplish with the guidance (scaffolding) adults or peers.

Behaviourism:

Behaviouristik theory says that learning is a change in behaviour. Changes in behaviour are the main outcome of a learning process. A person is considered to have learned something if the person is able to demonstrate a change in behaviour. These changes arise as a result of the stimulation and the influence of the learning environment (Reynolds, et al, 2008: 20), it makes the other students into learning, inspiration from this process gives a lot of impact, such as triggering other students kinesthetic intelligence, that will trigger the behaviour of both students in learning. This process will make the students motivated to participate in learning and they feel valued presence in the classroom (Julia, 2012: 25).

Hilgarde & Bower

Hilgade & Bower (1981) suggested that learning related to changes in behavior of someone against something. The changes are a particular situation caused by repeated experiences, where changes in behavior that can not be explained (Thursan, 2000: 1). Hilgade and Atkinson (1975) in the book introdution of Psychology suggests that learning associated with changes in a person's behavior to the situation caused by the environment, an environment that is able to make them respond to the circumstances that occur and affect their learning. Prose learning expressed by Skinner (1985) that learning is "Learning is a process of progressive behavior adaption", this meant that learning is a process of interaction and behavioral adaptations and progressiveness.

Behavior or action dimnia important in motivating students to be active and engaged in the learning process. This involvement is considered to have an important role and greatly assist students, especially students who have a habit of silence in the classroom and they tend not to participate in the learning process. Based on this explanation, why the role of the action said to be very important in the learning process.
Speak (Talk / Speak) in the Learning Process:

Learning is based on the cognitive theory is a change in perception and understanding, this is not always in the form of a behavior or action. The ability to speak assessed and interpreted as a process of learning (Robert, 2009). Another theory explains that the language factor in student learning process is an important thing.

Behaviourism:

Behaviouristik theory of learning, that learning is emphasized as an activity "mimetic" which requires students to restate the knowledge they have learned (Merriam, 2001: 4-5). students express their opinion or argument is a form of their involvement in the classroom. Speaking is a form of language or expression that represents the thoughts of students, it is based on the knowledge that people have. Intonation, pronunciation and expression when speaking is the determining factor in speech. Things discussed having a target/destination where other students to listen and pay attention what teacher talking about, the other students were able to understand the purpose of what we are talking about. It was concluded that the students thought content must be relevant to what is disclosed through the process of talking (Robert, 2009).

Vygotsky's Theory, Ramsden and-Von Tetzchner & Siegel:

Vygotsky emphasized how mental developmental processes such as memory, attention, and reasoning capable of learning involved. this is done by using the findings of the public such as language, mathematical systems, and tools memory, each phase in the process of development, linguistic interaction between children and parents and others, basically follow a certain principle (Ramsden, 1992). The development of language comprehension in students not only influenced by their biological conditions, but the language environment around the students, the development from an early age are much more important and assessed a foundation in developing their potential (Von-Tetzchner & Siegel, 1989). Speaking understood an important factor in the development of students, so that the linguistic interaction in learning together will bring students gain a memorable learning experience (Conti-Ramsden & Botting, 2008).

Based on the above explanation that in the development of students, teachers are expected to provide conditions that will make the students involved in the learning process. Through attention and memory, students will easily interact with other students, so it increased the factor of linguistic / language learning (Ramsden, 1992, Von-Tetzchner & Siegel, 1989, Conti-Ramsden & Botting, 2008).

Roberts' Psychology Theory:

In his book "Cognitive Psychology" reveals that the man knows a lot of words around 60,000 words, and the words are different words stored in the dictionary of human verbal called leksison; lexicon. But other words unable to understand if there is a new word is generated. Every year Webster Dictionary adds the latest word as a development language, the word can be used as a means of communication between individuals and groups (Robert, 2009).

Cognitive Psychology revealed that talking is a communication system that represents the human mind. the results of these thoughts then transferred (transmitted) through the style of language or means of symbols (Robert, 2009). speaking activities are things that need attention, especially in learning. some people consider this issue lightly, but in the context of psycholinguistics, speaking a simple presentation that is capable of representing a study or object.

The theory postulates that teachers must ensure all students have the opportunity to develop and advance. The development of students not only from within himself, but need encouragement and guidance of teachers to be motivated in their learning, confident expression, and they are involved in every interaction in learning (Robert, 2009).

Gardner:

Speaking style or language is an essential element necessary attention in the school environment, This has a relationship with instructional process and development of students. Points that need attention at school, especially in the classroom, some people think there is a class of homogeneous and heterogeneous, so that in practice the students distinguished by the level of intelligence. Logically, Gardner says that Logically, every human being is born to bring their own intelligence.

Gardner said that there are nine intelligences in every individual and they bring the intelligence existed since they were born. One intelligence is the "Linguistics" or speaking style (Juila, 2012). Linguistic intelligence is the ability or intelligence-speaking students to express their opinions or their mind through verbal and non-verbal language. Agree with (Robert) cognitive psychology experts who explained that linguistics has been linked to
psychology. Thus, there arose theories about Psycholinguistics namely the development of a person through the way a person speaking (Robert, 2009).

Gadner insists that teachers must believe in the existence of students and believe in their pure intelligence and need guidance. The influence of the environment is a major factor affecting their intelligence. Therefore, a teacher has the complex task of providing services for students both service material and moral services. For students, they still need a good figure, able to motivate and change the mindset of students to a good purpose (Julia, 2012).

Sudarwan & Khairil and Meyer:

The learning process is said to be effective when all students participate in learning. Students tend to prefer learning system in which they are involved in the material being taught, this will lead to motivation of the student (Meyer, 2011: 1-8). This is consistent with active learning style, active learners tend to prefer learning activities that engage students in personally, especially material that is considered able to be implemented in the life of students (Sudarwan & Khairil, 2011: 114-115).

The ability of the student's argument is highly expected to occur in the learning process. It aims to foster motivation, active participation and dare to speak in class. Facts on the ground show that many students who have the potential to grow but was blocked on the psychology student. Psychology here that students do not realize that by participating in the learning process, the students will create a potential more focused and their attitude for the better (Meyer, 2011: 1-8, Sudarwan & Khairil, 2011: 114-115, Julia, 2012).

Overall, it can be concluded that speak a form of social interaction. Social interaction skills of these students were able to facilitate the process of discussion going on in the classroom, so that the learning process will be more active, enjoyable and memorable for learners.

Self-Regulated/Independence in Learning Process:

Said independent according to the Indonesian big dictionary is a condition in which a person can be free and independent. This explains the theories about the importance of learning independence as the theory Konstruktivistik, John & Baldwin, Terman & Odenk, Abdullah, Haris & Sudarman, Knowles, and Heimstra. The explanation of this theory are:

Constructivist:

Constructivist judging an effort to develop the potential of the necessary sensitivity, independent, responsible, able to educate themselves. With it, someone will be able to solve the problem through a learning experience builds curiosity so that they become easily accessible. Constructivist explained that the study is an attempt by the students giving meaning to their experiences through assimilation and accommodation. Then, they will lead to the formation of the cognitive structure and how they perceive things. Giving meaning when students learn to influence the development of students, either behavioral or cognitive (Setiyono, et al, 2012: 47).

Basically, learning is able to contribute and good character development process for students optimally (potential and independence). This theory provides an understanding that the development of students (independence) cannot be formed in an instant. That is, the need to analyze the factors involved in the development of students as the establishment of a model, giving problems in learning, assignments, pay attention to behavior and learning styles of students in the classroom (Setiyono, et al, 2012: 47).

Tolman & Honzik (1930) Appointment of behavior conducted by previous students will make others learn what happened. This process will make the students learn a way, process, and presentation occurring continue, so this gives strength against other students. The impact is that students will be significantly will behave as good and as strong as the previous group. Group presentations, assignments, and interaction in class is something that gives a strengthening of the students in order to become a superior person, respectable and growing (Hergenhahn & Matthew, 2008).

John and Baldwin:

John in his book “Psychological Foundations of Learning and Teaching” that independence in learning is a person's ability to explore the talents and wishes of those who are always trying new things and it makes them more knowledge. In the same book Baldwin, et al (1945) explains that the independence in learning is when students will always show their intelligence (IQ), naturalness, and all the emotions of students to something that maybe they did not find at home (John, 1974: 254-255).
The above theory asserts that every student is able to change every day, teachers should interpret that by giving them a challenge, with the challenges the students will be more interested in learning. The process itself will make students become courageous and motivated to develop their potential. Independence is considered as a designation of intelligence of students so that they become good human beings, mentally strong and tough stance on their own solve the problem (John, 1974 and Baldwin, 1945).

Terman & Odenk:

Terman and Odenk's Book "Gifted Grows Up" (1959) explains that, someone who has a life and background without pressure, they usually have a decent life and quiet. They will be difficult to share and contribute their potential because their capabilities only for its own sake (Bell, 1996: 255). These explanations assume that if we are in an environment which has pressure, these conditions will motivate the students to complete the task on their own. Then it makes the students look for a lot of learning resources or literature (Bell, F, 1996: 255, Hiemstra, 1994). Students will adapt in such an environment so that their abilities will be more visible and honored. The impact, these conditions lead to student learning independence and self-reliance will continue to build until the students understand its potential. In lessons, that previous sentence about "the challenge is a motivation", will add value to the lives of students and the development of their thinking would be better slowly.

Learning independence referred to above are independent in thinking (mindset), has a mental illness, have the ability to analyze high, self-regulating, so independence is not interpreted as a bad connotation. Students with such independence means being able to solve their own problems (Hiemstra, 1994).

Abdullah Theory, Haris & Sudarwan:

Below is an understanding of self-learning proposed by (Abdullah, 2001: 1-6):

1. Learn to independently assess students as leaders and owners responsibility of the learning process. Self-learning is an integration of self-management (management context, determining an arrangement, resources and action) with self-monitoring (student monitor, evaluate and adjust their learning strategies
2. The desire and motivation to learn independently are important in initiating and maintaining the hard work of students. Motivation is a guide in making decisions, and the willingness of students, so that students are able to complete the task that has been given
3. In the process of self-learning, control gradually shifts from the teacher to the student. students have more freedom to decide what lessons and what goals will be achieved and have benefits for them
4. Self-learning "ironically" it is considered very collaborative. Students work closely with teachers and other students. this is a good cooperation, but remains at the sole purpose of learning objectives
5. Self-learning is a process of developing more specific knowledge such as the ability to transfer a conceptual knowledge to new situations. it aims to eliminate the gap between knowledge at school with the problems of everyday life in the real world. learn.

Independent learning process in the classroom is an active learning activities, which is driven by the intention or motive to master a competency, it is intended to resolve a problem, students have the spirit of competition, and they have strong confidence (Harris, 2006: 1). This relates to the active student / learner active, active students are students who tend to be actively trying to maintain what they understand and do their best independently (Sudarwan, 2011: 114).

In connection with those described above, it was concluded that the students' independent learning is able to face and solve a problem in their own way. It also makes students become a better person. Basically, Independence in learning is the responsibility for the students, so that students will be more mature in any problems encountered.

Knowles:

Theories about learning independence briefly expressed by Knowles below:

1. The ability to ask questions, find and solve the problem.
2. The ability to be open to others, such as the idea or concept
3. The ability to make sense of the need for learning to be a goal, a plan, and activities.
4. The ability to establish a strong commitment to learning, it is that the goals are achieved.
5. The ability to maintain a continuous self-motivation (Knowles in Merriam, 2001: 4-5):

Self-reliance is able to prepare you mentally and motivation for students. Changes in the process of independence in learning is the motivation to make students more active, confident, disciplined, strong and consistent in developing potential. On the other hand, the teacher is able to innovate and a creation in the learning process
(planning, process, and evaluation) based on the objectives to be achieved and have benefits for students in the future (Merriam, 2001: 4-5, Sudarwan, 2011).

Heimstra:

Independence in learning more detail was also stated by Hiemstra (1994: 1) as:

1. Independence in learning does not mean separating yourself with others.
2. With the independence of learning, students can transfer their learning outcomes (knowledge and skills) to in other situations.
3. Students who have to implement independence in learning, they can involve a variety of resources and activities, such as reading itself, study groups, practice alone, electronic dialogue and correspondence activities.
4. The effectiveness of the teacher in the process of independence have an important role, such as dialogue with students, sourcing, evaluation of learning outcomes, and provide creative ideas. That is, the independence of student learning will be seen from their ability to master a wide range of conditions (Harris, 2006).

Independence in learning is needed to improve the quality of learning in the classroom. This can be judged from the result of the assignment that has been given to the students and how they resolve the problem in the discussion. Thus, this implementation through the model applied would be very good for the students.

ACSl’s’ Crads:

Words Card in the learning model used is based on the idea that students will be more interactive and more motivated in the discussions through the media card. The media is one that could attract the attention of students in learning through interaction. Media in communication comes from the word “mediation”, because they are present in the audience and the environment. The term is often used to describe the mass media. Thus, the intended use of the cards in this study is as a medium of communication or mouthpiece among students one with the other students in communication or interaction while learning.

The card is used by students as a medium called ACSI card. The ACSI card consists of two types of cards that can be used in the learning process, namely Fighting Card (Resistance) and Depenses Card (defense). FC or Fighting Card is a card that can be used by students as if the media in learning, students have a problem with the material presented or disagree with the presenters. Fighting occurred between students because basically all involved (students) have a foundation of knowledge and they have the right to maintain their understanding. This will trigger them to submit opinions and interact with each other through communication in the current study.

Fighting Card or FC will adversely affect the beginning. That is, students who belong to more actively be involved in the interaction or students who have a tendency to love the process of learning by discussion. It is difficult for students who do not belong to that type, but on the other hand, with the condition that students can organize themselves and be more active. implementation of this model leads to leveling the intelligence of all students when learning occurs and teachers already have to eliminate the idea of their level of intelligence. Teachers have a role to provide the situation as has been described, the teacher gives a comfortable condition, fun and motivated.

FC has discussed the impact and function as a medium. The next explanation is DC cards used in the discussion. Defense Card or DC who also serve as media card and is used by students as the use of FC earlier. DC is a card that students use if the student wants to defend or to give another opinion based on the material being discussed. It can be said DC is a helper for presenters so that questions have been asked by the students can be answered and resolved. The impact is a lot of interaction in the learning process, memorable, and students are more motivated, but the discussion is still running according to expectations. The experience gained will be embedded values in students (socially minded, creative, mutual cooperation, affection and moral).

Based on the above, the card ACSI provides an overview of the implementation of the learning process in the classroom. The term of "transfer of knowledge" should not be a main thing in teaching. Instead, the teacher provides science with a value or a "transfer of value" makes the students more developed human being. Overall, the process of action learning, talking, self-regulated learning, and the card is the foundation in the learning process with cooperative learning model.
**Syntax Cooperative Learning Model Based ACSI (Action Cards Speak Independent)**

### Types of Research:

This study was an experimental study design with one-group pretest-posttest (Sugiyono, 2013). Designs in this study had one group learning course or its implementation in the classroom, where the same class are given a pre-test and post-test were designed previously.

### Location:

The location of research conducted on Chemistry Education Study Program FKIP Lambung Mangkurat University, Banjarmasin. The study was conducted over five months since the preparation until reporting research results.

### Population and Sample:

The population was taken from the students of Chemistry Education Study Program FKIP Lambung Mangkurat University with a selected sample that students of chemical education class of 2015, students who are programmed school chemistry 1 subject in smester 2015/2016 (even). The samples were taken through purposive sampling technique.

### Research Procedure:

The procedure will be carried out research which is as follows:

1. Take care of permit research to be carried out
2. Develop instruments to be used in research
3. Conducting the process of validation of research instruments by experts
4. The implementation process models planned learning in the classroom is a model

   Based learning Cooperative ACSI (Action Cards Speak Independent) Media assisted with the aim to improve learning outcomes and student motivation

1. Spread the research instruments
2. Analyze the research data
3. The process of preparing the report.
Variables:

This study used two kinds of variables, independent variable and the dependent variable. The independent variables is a cooperative learning model based ACSI (Action Cards Speak Independent), then the dependent variable is the result of learning and motivation of students in the learning process. The dependent variable in this study were analysed based on the results of a test that has been given beginning and end of learning through computation.

Data Collecting Techniques:

Data collected with unstructured interviews, observations, analysing student learning outcomes through tests are given, and motivation questionnaire at the end of the meeting.

Instruments:

The research instrument was made that initial tests (pretest), which aims to determine the initial ability of students regarding the subject matter. Final test (posttest) aims to determine the impact of the implementation of the learning model used. Descriptive quantitative research through the calculation methods N-Gain test, which the study with N-Gain method that aims to find out how big increase student learning outcomes through the implementation of cooperative learning models based ACSI (Action Cards Speak Independent) media-assisted technology. This research will also examine as to how about students’ motivation at the implementation of cooperative learning model (Meltzer, 2001)

Data Analysis Techniques:

The data analysis will be done in the research is

Analysis of the Student’s Motivation Questionnaire Data

Data on student motivation questionnaire on learning motivation questionnaire obtained from students through learning activities and analyzed based on the data. This activity is conducted to analyze the motivation of students through the steps as follows:

1. Count the number of students who give a positive response in accordance with aspects of being asked, then calculate the percentage.
2. Specify the category for students with a positive response by matching the percentage based on defined criteria.
3. Specifying the revision if the results show that the student has not been a positive response, then the revision of the learning activities

Analysis to calculate the percentage as follows:

\[ PRS = \frac{\sum A}{\sum B} \times 100\% \]  
(Trianto, 2009: 243)

An information:

- \( \sum A \) = Many percentage of students who responded positively to the category in question.
- \( \sum B \) = the number of students who are the subject test.

Assessment criteria:

- \( 80\% \leq x \leq 100\% \) Strongly Agree (SS)
- \( 60\% \leq x < 81\% \) Agree (S)
- \( 40\% \leq x < 60\% \) Neutral
- \( 20\% \leq x < 40\% \) Disagree (TS)
- \( x < 20\% \) Strongly Disagree (STS) (Riduwan, 2008)
Analysis of Student Learning Outcomes:

Analysis of data from study aims to determine the increase in student learning outcomes through through cooperative learning model based ACSI by using the formula (N-gain). It is to see how big the learning outcome once taught using cooperative learning model based ACSI as follows:

\[ g = \frac{S_{post} - S_{pre}}{S_{maks} - S_{pre}} \]  

(Richard dalam Meltzer, 2001: 3)

Keterangan:

- \( S_{pre} \) = Pretest Total Score
- \( S_{post} \) = Final-Test Total Score
- \( S_{maks} \) = Maximum possible score is achieved

By using the formula N-Gain, it can be known how much improving student learning outcomes individually and overall. With N-Gain level criteria are as follows.

<table>
<thead>
<tr>
<th>Limitation</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>( g &gt; 0.7 )</td>
<td>High</td>
</tr>
<tr>
<td>( 0.3 \leq g \leq 0.7 )</td>
<td>Medium</td>
</tr>
<tr>
<td>( g &lt; 0.3 )</td>
<td>Low</td>
</tr>
</tbody>
</table>

(Meltzer, 2001: 3)

Affective and Skill Assessment Criteria

<table>
<thead>
<tr>
<th>A Criteria</th>
<th>An Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very Often</td>
</tr>
<tr>
<td>2</td>
<td>Often</td>
</tr>
<tr>
<td>3</td>
<td>Sometimes</td>
</tr>
<tr>
<td>4</td>
<td>Rarely</td>
</tr>
<tr>
<td>5</td>
<td>Never</td>
</tr>
</tbody>
</table>

An Information:

A. Very Good : 91-100
B. Good : 76-90
C. Enough : 61-75
D. Medium : 51-60
E. Not Good : 50-to bottom (Hamzah & Satria, 2014)

Data Analysis

Student’s Motivation Questionnaire:

Student motivation derived from the analysis that the response of students to assess how implementasi ACSI cooperative learning model based on mastery of the material, the spirit of learning, motivation, and their participation in the study. Based on the data of student motivation questionnaire showed that students of chemical education in general, they are very motivated by the implementation of the model-based cooperative pembelajaran ACSI in learning
chemistry. Overall based on data analysis that 84.5% of students give a positive statement on the cooperative learning model based ACSI. Below are the results of an analysis of the percentage of student responses.

Table 4
Student Motivation Questionnaire Results (Positive Statement)

<table>
<thead>
<tr>
<th>Category</th>
<th>Student</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>28</td>
<td>90.32</td>
</tr>
<tr>
<td>Agree</td>
<td>3</td>
<td>9.67</td>
</tr>
<tr>
<td>Neutral</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

In the table above, it appears that the average percentage of students' response to the learning process has a value of 90.32% the number of students who answered strongly agreed, 9.67% who answered agree, and 0% answer on other criteria. It can be concluded that the students' response to the cooperative model-based learning ACSI give a positive response.

Table 5
Student Motivation Questionnaire Results (Negative Statement)

<table>
<thead>
<tr>
<th>Category</th>
<th>Student</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Agree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Neutral</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Disagree</td>
<td>4</td>
<td>12.9</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>27</td>
<td>87.09</td>
</tr>
</tbody>
</table>

Based on the table above shows that 87.09% of students have a response strongly disagree with the negative statement on the questionnaire, 12.9% responded disagreed with the statement. Based on the above, it is concluded that the students strongly disagree with the negative statements about implementasi device refers to a model-based cooperative pembelajaran ACSI. in other words, students are highly motivated and enjoy learning with cooperative learning model based ACSI.

Analysis of N-Gain Test Results:

Analysis of N-Gain was to understand improving student learning outcomes that occur before and after the implementation of cooperative learning model based ACSI.

Table 6
N-Gain Test Results

<table>
<thead>
<tr>
<th>N-Gain Category</th>
<th>Student Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>14</td>
<td>45</td>
</tr>
<tr>
<td>Medium</td>
<td>16</td>
<td>51</td>
</tr>
<tr>
<td>Low</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

Results table above, the data showed 51% of students has increased with the medium category, 45% of students has increased to the high category and 4% of students has increased with the low category. N-Gain value as a whole is 0.6 (medium category). In general, it can be concluded that the implementation of cooperative learning model based ACSI (chemistry learning) can improve student learning outcomes in subjects (chemistry school 1).

Affective Assessment:

Table 7
Affective Assessment

<table>
<thead>
<tr>
<th>No</th>
<th>Group</th>
<th>Point</th>
<th>An Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I</td>
<td>69</td>
<td>Enough</td>
</tr>
<tr>
<td>2.</td>
<td>II</td>
<td>74</td>
<td>Enough</td>
</tr>
<tr>
<td>3.</td>
<td>III</td>
<td>89</td>
<td>Good</td>
</tr>
<tr>
<td>4.</td>
<td>IV</td>
<td>97</td>
<td>Very Good</td>
</tr>
<tr>
<td>5.</td>
<td>V</td>
<td>99</td>
<td>Very Good</td>
</tr>
</tbody>
</table>
Skill and Psychomotor Assessment

Table 8

<table>
<thead>
<tr>
<th>No</th>
<th>Group</th>
<th>Point</th>
<th>An Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I</td>
<td>64</td>
<td>Enough</td>
</tr>
<tr>
<td>2.</td>
<td>II</td>
<td>72</td>
<td>Enough</td>
</tr>
<tr>
<td>3.</td>
<td>III</td>
<td>80</td>
<td>Good</td>
</tr>
<tr>
<td>4.</td>
<td>IV</td>
<td>92</td>
<td>Very Good</td>
</tr>
<tr>
<td>5.</td>
<td>V</td>
<td>94</td>
<td>Very Good</td>
</tr>
</tbody>
</table>

Discussion

Students' Motivation:

Student motivation questionnaire is given so that students can assess the learning process experienced. The assessment included responses regarding the implementation of the model, motiviasi students, and mastery of the material that is perceived through ASIC-based implementation of the cooperative model. This assessment is based on student respondents' sheet given to the learning process. The response given from students towards learning model is responding category (84.5%). By empirical means, in general, students are able to accept the existence of the implementation of cooperative learning model based ACSI. In addition, the results of this analysis also state that students have increased motivation in learning and participation of students during the learning process is considered very good.

These percentages show that students are very pleased with the implementation of cooperative learning model based ACSI. This implementation is reflected in the learning device RPKPS. Students become more confident, motivated in learning so that every meeting, all students either change significantly (intelligence and personality). This implementation can improve student learning outcomes in the material, so many things that give a good impact for students in learning through the implementation of learning model. Based on the previous description, it can be concluded that the results of the implementation of cooperative learning model based ASIC have met the criteria for the effectiveness of the model can improve learning outcomes, learning conditions, and the students become actively participate in class.

Learning Outcomes

The Result of Tests:

The test for learning outcomes that are given to know the ability of students to the material. Effectiveness criteria is appropriate if the results of the study, students meet minimum completeness 77 with high category. High effectiveness is a depiction of the student understands the material, the material that has been studied so that it can be concluded that the quality of student learning for the better through the implementation of cooperative learning model berbasi ASIC.

Tests were given the pretest, the granting of these tests are carried out before the study began and posttest after learning begins. Where, post-test was the result after the implementation of cooperative learning-based ASIC. Data analysis showed that the ability of the student prior to the implementation of cooperative learning model based ACSI very low, seen from the values obtained (yield pretest students). Meanwhile, after the implementation showed that the ability of students in the chemical material increases and it is rated as a good change. Related to it, to determine the increase students' ability to study chemistry in quality then using test analysis of N-Gain, increase the ability of students can be seen.

Results from N-Gain test, Value has shown overall score of 0.6 with the category of medium and N-Gain test score indicates a good value. Despite this increase there is in medium category, but of post-test have shown a lot of students who have met completeness. Empirically it can be concluded that the overall quality of students has increased learning through the implementation of cooperative learning model based ASIC. Thus, the results of the analysis of N-Gain test showed the effectiveness of the learning process with the criteria of the medium. The conclusion is this implementation very effective in learning chemistry because it can improve learning outcomes in chemistry.

Affective Assessment Result:

The Learning Outcome from assessment aspect based on the data that attitude, the attitude of the students during the learning process increased significantly. It can be seen from the results of data analysis, where the group I
and II obtained 69 and 74 votes (category enough), Group III 89 (good) and group IV and V obtained 97 and 99 (the very good category). This analysis process occurs every meeting in the classroom, each group obtained the task to be presented through the media. The results of this analysis showed an increase which was considered very good, so it indicates that the presentation made earlier group effect. The influence and supplemented by teacher referrals, then the student is triggered to display better than previous groups. This improvement can also be concluded that the implementation of cooperative learning model based ACSI has made a positive impact on the process of learning in students. Curiosity, independence, motivation, and active is the description that the implementation of successful and able to give the students a good value, a value that can be applied to students' lives. Students will also gain experience memorable, intelligent but they still have a good character to become future teachers.

**Skill Assessment Result:**

The Learning Outcome from skill assessment aspect based on data that, the skills of students during the learning process increased significantly. it can be seen from the results of data analysis, where the group I and II obtained 64 and 72 votes (category enough), Group III 80 (good) and group IV and V obtained 92 and 94 (the very good category). The analysis process is also happening as the previous assessment that offers this assessment during the learning process in the classroom. Each group obtained the task to be presented through the media. This assessment aims to assess students' skills to design, create, and develop a concept of media that is able to visualize the chemical material during the discussion. Based on the improvement shown above data, it can be concluded that the implementation of cooperative learning model based on ACSI a positive impact on students. in addition to intelligence, these skills will equip students to become powerful personal, know the development of science and ready to compete. This impact is also beneficial for lecturers to rethink the design of better learning so that students can develop much more of their potential.

**Conclusion**

The Implementation of Cooperative Learning Model Based ACSI (Action Cards Speak Independent) improve student learning outcomes Education Program Chemistry FKIP ULM to obtain 0.6 (medium category) based on test results. The increase also occurred in affective students, which increased from groups I-V of 69 (Enough Category) - 99 (Very Good) and an increase in skills assessment of 64 (Enough Category) - 94 (Very Good).

The Implementation of Cooperative Learning Model Based ACSI (Action Cards Speak Independent) significantly increase the motivation of students to obtain a percentage of 84.5%.

**References**


