

# AREA LEARNING MODEL OF CONECTIVISM BASED IN FINE ART AND **CRAFT LEARNING TO IMPROVE SOCIAL, METACOGNITIVE SKILLS** IN ELEMENTARY SCHOOL STUDENTS

#### Tri Linggo Wati\*, Mustaji, Andi Mariono

Educational Technology, Universitas Negeri Surabaya, East Java, Indonesia Email: tri.19002@mhs.unesa.ac.id\*, mustaji@unesa.ac.id, andimariono@unesa.ac.id

# INTRODUCTION

Empirical studies mention that teaching and learning have been going on for centuries, especially in the last few decades, more and more scientific literature has investigated how teaching and the effects of various teaching practices in the learning process will have an influence on student learning. As educators, teachers are asked to use learning practices that are able to lead their students to process a material through their cognition and also teach the process of interaction with their social environment. After that, they should understand how the brain works and how the brain is affected by social interactions with parents, peers and teachers. Then, they learn how to deal with such barrier factors in the environment as poverty or trauma. Lastly, they inform the teacher pedagogical practice. Therefore, teachers can provide adaptations to learn, not only in the form of knowledge but also motivation in adjusting the ability level of students. Thus, the teacher is obliged to help students in their learning process by designing and compiling lessons to enable students to learn something in depth, and not just learn on the surface (Sonia, 2017).

In providing learning facilities, teacher as a facilitator. It states in the role of educational technology in facilitating the improvement of the quality of education which is very large. Referring to the official definition



of AECT in 2004 that "Educational technology means study and ethical practice of facilitating learning and improving performance by creating, using, and managing technological processes and appropriate resources" (Jonassen et al., 2008).

The challenge of teaching in the twenty first century is not a learning that must be learned by teachers, certain trends are likely to be continued, and some aspects of education and teaching will remain the same, while others may change dramatically (Arends, 2012). In the other hand, major changes that have taken place in the way information is stored and accessed with computers and digital technology have the potential to change many aspects of education. The internet has demonstrated its potential to connect students with a variety of resources that were not previously available and with other people around the world. Many people believe that the internet as the primary media for information and substantially change other forms of mass media and visual publication. Some commentators, such as Friedman (2005), Gore (2007), and Tapscott (2008), inform that it is expected that the internet will replace television as the primary means of political, social information and that it will likely become "intellectual commons" as an integrated collaborative community globally. It has important implications for education and the goals of the designed curriculum. Moreover, it is likely that in the near future society will continue to ask young people to go to school because the world of education will remain committed to various goals and several new goals are constantly developing, but academic learning will remain the most important. Hence, it can be said that a school will change drastically in the foreseeable future.

The changes of the world education are developing the use of online learning and virtual schools, but if history is any guide, these changes occur slowly. Schools will most likely continue to be community-based, and teachers continue to teach groups of children in long, rectangular rooms. Contemporary reform efforts show the potential to bring about new and radical perspectives on what academic learning means and how best to achieve it. New perspectives are also emerging on what constitutes community and its relationship to mainstream schools. The nature of the student population and expectations of teachers are additional factors that are likely to change in the future.

Most of the teachers teach monotonous. It shows that when they teach material and students responding to the material (two-way communication only). Here, teacher must be able to create a varied learning atmosphere in learning interactions with students, it can also be done by implementing fun learning strategies that are able to generate interest in learning for their students. Learning is usually made in a classical manner by sitting formally and with minimal interaction between students, and the lack of flexibility in making decisions during the learning process. Based on field observations made by researchers, namely in the learning of fine arts and crafts at the second grade of elementary school. This learning is not explored by the teacher in the learning process. So, it seems that the students in less enthusiastic about participating for this learning process. There are students who disturb each other, putting their heads on the table (lack of interest in the learning process), there are about 50% who do not pay attention when the teacher is explaining. Class chairs have indeed been designed in groups, only the teacher intervenes too much when the process of working with students occurs, for example by giving an example by placing a picture book on the student's desk, even helping to illustrate when students are still in the process of overcoming difficulties on their own. It shows that students are not given confidence in planning, evaluating, and monitoring themselves.

The use of area learning models is certainly very possible for teachers to provide various activities that support the improvement of children's cognitive abilities. The number of activities provided allows children to choose the activities that children want to do. The existence of a choice of activities makes the child have to think to determine what activities he likes and wants to do. From these choices, in the end the child must try to complete the task of the activity he has chosen (Rohita et al., 2022). The area learning model is a learning model based on students' interest (Fajriah & Fitriani, 2019).

In the theory of Soto-Icaza et al. (2015) entitled Development of Social Skills in Children: Neural and Behavioral Evidence for The Elaboration of Cognitive models discusses the development of social behavior, the correlation of the development of a nerve and social skills that provide developmental changes in social skills in children with autism spectrum disorders. It is a process of social interaction that is so complicated requires a neural network to process a large amount of information originating from a sensory and motor originating from their social environment, so that they can perceive, process, remember, and be able to distinguish the information they receive, this aims to predict and ultimately be able to understand the people around them.

Learning is a process of forming a network both internally and externally, this network can be in the form of relationships with people around them, libraries, the web, books, databases, or other sources of information (Brückner, 2015).

Connectivism presents a learning model in which learning is no longer just a cognitive or individualistic activity in the learning process but scientific collaboration that is not subject to space or time but transacts through space and time — regardless of distance, place or time, learning can be done anywhere and anytime. Finally, connectivism provides new learning strategies and skills that students need to thrive in the digital age. As knowledge continues to grow and develop, access to what is needed is more important than what learners currently have (Hendricks, 2019).

Social skills are very important learning objectives to be achieved by every student. Social skills are one of the abilities to create harmonious social relations and satisfy various parties, in the form of adjusting to the social environment and solving social problems (Setyosari et al., 2020). The formation of social skills in a child cannot be done quickly, but requires a deep process of habituation to them and this is of course integrated into every learning process and sustainable in achieving goals (Irmansyah et al., 2020).

Social skills are a difficult thing that a child often faces, because this is related to mental illness such as anxiety or depression, or even if they don't have positive role models when they are young, when they grow into adults they tend to have to be able to learn how to manage their own emotions, recognize the emotions of others and manage both effectively by socializing. This requires a certain skill to get used to it (Ravenscraft, 2020).

Social skills are life skills and are therefore very important for children to learn (Unicef & UNICEF, 2012). Children who cooperate and share with others, who are helpful and empathetic, and who are able to regulate emotions in adaptive ways, generally do better in most social arenas of life, including at school (Hamre & Pianta, 2001; Zsolnai, 2002). Social skills are observable indicators of the larger construction of social competence. Social competence is a multidimensional construct, which refers to the ability to integrate cognition, affect, motivation, and behavior in order to be successful with social tasks and achieve positive developmental outcomes.

Metacognitive is defined as a person's awareness to carry out cognitive processes as well as regulation and control processes in his natural thinking. In another theory it is written that metacognitive is an activity in which there is planning, monitoring and evaluation increasing metacognitive awareness which improves the quality of the learning process (Karaoğlan Yılmaz et al., 2018). Metacognitive has 3 indicators, including: Planning, monitoring, and evaluating (Woolfolk, 2016). These indicators provide an opportunity for students to exercise control over their own way of thinking in solving the problems they face in the learning process and in their daily activities.

The metacognitive discussed in this study is the ability of students to make a plan in producing work carried out in each learning area (planning), monitoring the material prepared for work and adjusting to the characteristics of the material to be used (monitoring), whereas in evaluation students are able to review the work they have made into presentations delivered both written and oral (evaluating).

Fine Arts and Craft Learning is learning that is carried out to teach learning principles which are the initial foundation as provisions for the next level of education, in the learning process students have been prepared from the elementary school level. So far, the results of a survey of elementary school teachers show that the art of teaching at the elementary school level is carried out using a teacher-centred approach, so it is important to carry out a learning renewal process. This is of course driven by the existence of a new national curriculum (Vahter, 2012).

Fine Art and Craft, in its application, use the disciplines of art together and by using various approaches in teaching. And the things that form the basis of learning fine arts and crafts that are taught in primary and secondary schools, must have characteristics and aim to develop the senses, the power of expression and creativity. To achieve this, curriculum and content become very important. In this case, what is expected of an elementary school teacher must have competence in the field of arts and crafts, in addition to the special fields determined by the Ministry of National Education to create a learning environment where he can make his students understand fine arts and crafts with the help of the competencies obtained in teaching art and craft (Tanir et al., 2012)

Based on the facts in the field, an idea emerged from the researcher to carry out a learning process that was different from the habits carried out by the teacher, namely by applying a learning model. The learning model used is a model that provides a different learning experience for students, in order to provide a pleasant learning experience, from what is usually done by the teacher.

The learning model applied to the research conducted is the are model learning of connectivism based. This learning model is a learning model that is carried out in groups, by providing three learning areas, namely the drawing learning area, the shaping area, and the craft area. This learning area can be freely chosen by students through forms that are shared on links that can be accessed by students via their laptops or cellphones. In this activity there is the role of technology used to carry out the learning process (connectivism). Moreover, this research aims to test area learning model of connectivism based in art and craft learning to improve social and metacognitive skills in second grade of elementary school students

## METHODS

#### **Type and Sample**

This research is an experimental research with a one group pre test post test research design. The number of research subjects used was 24 students consisting of 12 female students and 12 male students, at the 2nd grade level of elementary school. This research was conducted at an elementary school in Sidoarjo.

To get data on social skills, the researcher conducted a checklist on the observation sheet for each student. The indicators used as a reference for making observations are (Peer Relations, Self Management, Academic Ability, Complience, Assertation), whereas to obtain metacognitive data, the researcher conducts written interviews given to students, this is because their school level is still in grade 2. Basis so that the interview was conducted in a written way. The indicators used in the metacognitive aspect are planning, monitoring, evaluating.

#### Procedures



Figure 1. Connectivism Area based Learning syntax in a chart

#### Statistic

Data calculations were carried out to obtain an increase in scores on aspects of social and metacognitive skills carried out using the N-Gain Score (Hake, 1998). That is by calculating the difference from the pre-test and post-test learning processes. Data analysis was carried out to calculate data resulting from improvements in social, metacognitive, and creative skills after the implementation of the connectivism-based learning area model of the research model, a descriptive quantitative data analysis technique used calculation and description for the results of the scores obtained by students in each of these learning areas.

## RESULTS

#### Area Learning to Improve Social Skill and Metacognitive

Art learning activities in the second grade of elementary school start activities by: 1) reading the material on the google form, after they have read and understood the material, students are welcome to choose which learning area they are interested in which the learning process will be carried out the next day, 2) organizing students in explaining the learning activities they do, 3) entering gthe students to the learning area that they have gone through the google form. The activities in the drawing area are (drawing, mosaics, coloring), in the shaping area, the activities of students are (shaping pastisin/natural materials, compiling sheets of paper, leaves, the resulting work is 3 dimensional bias sculptures, masks), while in the craft area activities carried out by students are (cutting, pasting, the resulting work is craft), 4) doing appreciation activities, appreciation here is by providing input on the work produced by the theme, 5) sharing their learning experience from each area group. According to the syntax of the connectivism-based area learning model, the learning activities for art materials and crafts through experiments are shown in Figure 2.



Figure 2. The results of data retrieval of the Connectivism based learning process area model

From the learning activities carried out, data are collected on social skills during the learning process by making observations that refer to indicators of social skills (Peer Relations, Self Management, Academic Ability, Complience, Assertation). Furthermore, from these learning activities, an observation checklist was carried out to see social skills data, the data obtained is shown in Table 1.

Tabel 1. Social Skills Pretest-Posttest Data						
Learning Area	Social Skills Indicator	Pre Test Score	Post Test Score	Metacognitive Indicator		
	Peer Relation, Self			Peer Relation, Self		
	Management, Academic Skills,			Management, Academic Skills,		
	Complience, Assertation			Complience, Assertation		
	QFH	1	5	QFH		
	KRZ	1	5	KRZ		
	MTZ	2	5	MTZ		
	AKZ	2	5	AKZ		
	MGAP	1	5	MGAP		
Drawing	AFH	2	5	AFH		
	MZH	2	5	MZH		
	ASA	1	5	ASA		
	FAS	1	5	FAS		
	AFR	1	5	AFR		
	NKAF	2	5	NKAF		
	JTU	1	5	JTU		
Forming	MGKR	1	5	MGKR		
	ERT	2	5	ERT		
	DAP	2	5	DAP		
	VAA	2	3	VAA		
	KHE	1	5	KHE		
	RAK	1	5	RAK		
	CASA	1	5	CASA		
	MN	1	5	MN		
Crafting	DAA	1	5	DAA		
	MRAAP	1	5	MRAAP		
	RFA	1	5	RFA		
	CYS	2	5	CYS		
	Average	1.4	4.9			

The data obtained in the first test on the social skills aspect of 24 students was carried out by carrying out a checklist on the observation sheet obtained at the pretest result score of 1.4%, while in the post test social skills test the data obtained was 4.9%. From these data it appears that there is an increase in the score between learning activities before being given learning activities by applying a connectivism-based learning model.

Learning Area	Metakognitive Indicator	Pre Test Score	Post Test Score	Metacognitive Indicator
	Planning, monitoring,			Planning, monitoring,
	evaluating			evaluating
	QFH	0	3	QFH
	KRZ	1	3	KRZ
	MTZ	2	3	MTZ
	AKZ	0	3	AKZ
	MGAP	1	3	MGAP
Drawing	AFH	2	3	AFH
	MZH	2	3	MZH
	ASA	1	3	ASA
	FAS	1	3	FAS
	AFR	1	3	AFR
	NKAF	2	3	NKAF
	JTU	0	3	JTU

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Learning Area	Metakognitive Indicator	Pre Test Score	Post Test Score	Metacognitive Indicator
	Planning, monitoring, evaluating			Planning, monitoring, evaluating
Forming	MGKR	1	3	MGKR
	ERT	2	3	ERT
	DAP	2	3	DAP
	VAA	2	3	VAA
	KHE	1	3	KHE
	RAK	0	3	RAK
	CASA	1	3	CASA
	MN	1	3	MN
Crafting	DAA	1	3	DAA
	MRAAP	1	3	MRAAP
	RFA	1	3	RFA
	CYS	2	3	CYS
	Average	1.2	3	

The data obtained in test 1 on metacognitive aspects of 24 students which was conducted by conducting written interviews obtained a pretest score of 1.2%, while in the post-test metacognitive test obtained data of 3%. From these data it appears that there is an increase in the score between learning activities before being given learning activities by applying a connectivism-based learning model.

From the pre-test and post-test data of test 1 metacognitive and social skills, a calculation is then carried out using the N-Gain score, this is done to measure the improvement in aspects of students' social and metacognitive skills while participating in the learning process in the learning area they have chosen according to their interests. The results of these calculations appear in Table 3.

Learning	Students	Soci	al Skills	Metac	ognitive
Area		n-Gain	Category	n-Gain	Category
	QFH	0.80	High	0.70	High
	KRZ	0.63	Medium	0.63	Medium
	MTZ	0.80	High	0.70	High
Drawing	AKZ	0.80	High	0.80	High
	MGAP	0.75	High	0.67	Medium
	AFH	0.85	High	0.80	High
	MZH	0.75	High	0.75	High
	ASA	0.80	High	0.80	High
	FAS	0.75	High	0.75	High
	AFR	0.80	High	0.80	High
	NKAF	0.75	High	0.75	High
	JTU	0.80	High	0.80	High
Forming	MGKR	0.80	High	0.70	High
	ERT	0.80	High	0.80	High
	DAP	0.80	High	0.80	High
	VAA	0.65	Medium	0.60	Medium
	KHE	0.82	High	0.80	High
	RAK	0.80	High	0.80	High
	CASA	0.75	High	0.75	High
Crafting	MN	0.88	High	0.70	High
	DAA	0.80	High	0.80	High
	MRAAP	0.70	High	0.70	High
	RFA	0.85	High	0.74	High
	CYS	0.80	High	0.80	High

#### Tabel 3. Calculation of N-Gain Score Test 1 Social and Metacognitive Skills

From the N-Gain table in test 1 on the aspect of social skills, in the drawing area 1 students improve their social skills moderately with a score of 0.63 (N-Gain score 0.3 < N-gain < 0.7, included in the medium category), while 8 others in the social skill category had a high increase with an N-Gain score > 0.7 (High category). In the area of forming scores on the aspect of social skills, it was obtained that 1 student received a moderate increase with a score of 0.65, while the other 6 were included in the high improvement category with an N-Gain score > 0.7 (High category), while in the craft area an increase was obtained. high scores of all 8 students.

While in the metacognitive aspect in test 1 data obtained: in the drawing area 2 students got a moderate increase, while 7 others got a high score increase, in the forming area a moderate increase was obtained by 1 student, while in the high increase there were 6 students. In the craft area, all height increase data were obtained, namely as many as 8 students.

Because this research has the specificity of learning that is carried out in the area, the researcher needs to do a test 2. This is done to see whether the learning interest is still carried out in the same area for each student, or is there a different interest in learning from the first lesson. As for the results of observations on the pretest-posttest data on aspects of social skills obtained data in Table 4.

Learning Area	Social Skill Indicator	Pre Test score	Post Test score	Metacognitive Indicator
	Peer Relation, Self Management, Academic Skills, Complience, Assertation			Peer Relation, Self Management, Academic Skills Complience, Assertation
	AFR	1	5	AFR
	AFH	2	5	AFH
	QFH	1	5	QFH
Drawing	ĀKZ	2	5	ĀKZ
	MGAP	1	5	MGAP
	MTZ	2	5	MTZ
	MZH	2	5	MZH
	JTU	1	5	JTU
	CASA	1	5	CASA
	FRA	1	5	RFA
Forming	KRZ	1	3	KRZ
	ASA	1	3	ASA
	FAS	1	3	FAS
	KHE	1	3	KHE
	MRAAP	1	5	MRAAP
	MGKR	1	5	MGKR
	VAA	2	4	VAA
	CYS	2	5	CYS
Crafting	RAK	1	5	RAK
	DAP	2	5	DAP
	DAA	1	5	DAA
	ERT	2	5	ERT
	MN	3	5	MN
	NKAF	2	5	NKAF
	Average	1.4	4.6	

The data obtained in test 2 on the aspect of social skills on 24 students which was carried out by checking the observation sheet on the observation sheet obtained a pretest score of 1.4%, while in the post test social skills test obtained data of 4.6%. From these data it appears that there is an increase in the score between learning activities before being given learning activities by applying a connectivism-based learning model.

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Learning Area	Metacognitive Indicator	Pre Test Score	Post Test Score	Metacognitive Indicator
	Planning, monitoring,			Planning, monitoring,
	evaluating			evaluating
	AFR	1	3	AFR
	AFH	2	3	AFH
	QFH	0	3	QFH
Drawing	AKZ	0	3	AKZ
	MGAP	1	3	MGAP
	MTZ	2	3	MTZ
	MZH	2	3	MZH
	JTU	0	3	JTU
	CASA	1	3	CASA
	RFA	0	3	RFA
Forming	KRZ	1	3	KRZ
	ASA	1	3	ASA
	FAS	1	3	FAS
	KHE	1	3	KHE
	MRAAP	1	3	MRAAP
	MGKR	1	3	MGKR
	VAA	2	3	VAA
	CYS	2	3	CYS
	RAK	0	3	RAK
Crafting	DAP	2	3	DAP
-	DAA	1	3	DAA
	ERT	2	3	ERT
	MN	1	3	MN
	NKAF	2	3	NKAF
	Total	1.2	3	

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The data obtained in test 2 on the aspect of social skills on 24 students which was carried out by conducting written interviews obtained a pretest score of 1.2%, while in the social skills test the post test obtained data of 3%. From these data it shows that there is an increase in the score between learning activities before being given learning activities by applying the connectivism-based learning area model.

Learning	Students	Social Skills		Metacognitive		
Area		n-Gain	Category	n-Gain	Category	
	AFR	0.80	high	0.80	high	
	AFH	0.75	high	0.75	high	
	QFH	0.80	high	0.80	high	
Drawing	AKZ	0.80	high	0.70	high	
	MGAP	0.75	high	0.70	high	
	MTZ	0.85	high	0.80	high	
	MZH	0.80	high	0.80	high	
	JTU	0.75	high	0.75	high	
	CASA	0.80	high	0.80	high	
Forming	AAD	0.80	high	0.70	high	
	KRZ	0.80	high	0.80	high	
	ASA	0.90	high	0.70	high	
	FAS	0.85	high	0.74	high	
	KHE	0.80	high	0.80	high	
	MRAAP	0.80	high	0.70	high	
	MGKR	0.70	high	0.70	medium	
	VAA	0.80	high	0.70	high	
Crafting	CYS	0.80	high	0.80	high	
	RAK	0.75	high	0.67	medium	
	DAP	0.85	high	0.80	high	

Learning	Students	Social Skills n-Gain Category		Metacognitive	
Area				n-Gain	Category
	DAA	0.80	high	0.70	high
	ERT	0.70	high	0.68	medium
	MN	0.80	high	0.70	high

From the N-Gain table in test 2 on the social skills aspect, in the drawing area all 6 students entered the social skill category with a high increase with the acquisition of an N-Gain score > 0.7 (High category). In the area of forming scores on the aspect of social skills, data were obtained in the height improvement category for all 8 students with an N-Gain score > 0.7 (High category), while in the craft area, all 10 students obtained an increase in high scores. Even in the metacognitive aspect in test 2 the data were obtained: in the drawing area all scores increased high, namely 8 students, in the forming area all high increases were obtained, namely 6 students. In the craft area, 3 moderate improvement data were obtained, while in the high increase all were 7 students.

## DISCUSSION

From the results obtained based on tests 1 and 2 on the social skills variable, the combined pretestposttest score data was included in the high criterion of 22 while the moderate increase was 2 students, while the metacognitive data obtained test data 1 and test 2 on pre-test scores and the post test score for the moderate increase was 3, while in the high improvement category it was 21 students.

From test data 1 and 2 it appears that there were also some students who changed their interest in learning so that there was a transfer in the learning area, this can be seen in tables 5 and 6 with the following analysis; The Drawing Area at meeting 1 and meeting 2 of the students remains, QFH, MTZ, AKZ, MGAP, AFH, while the Drawing area moves to the skills area: KRZ, MZH, ASA, FAS, In the Forming Area meeting 1, what remains are: JTU, while NKAF, MGKR, ERT, DAP, VAA moved to Crafts, while meeting 1 and 2 the data that remained and moved were: in the Permanent Crafts area: RAK, MN, DAA, MRAAP, CYS, Moved: KHE moved to form , CASA moved to form, from these data it appears that students want different learning that they want to learn according to what they are interested in.

## CONCLUSION

This research concludes that the development of area learning model can improve social and metacognitive skills for second grades of elementary school students, this is evidenced by the increase in the results of the pretest and posttest tests given to them, this is based on tests 1 and 2 on the variable social skills obtained data combining the pretest-posttest score included in the high criteria 22 while in the moderate increase as many as 2 students, while in the metacognitive data obtained test 1 and test 2 data on pre-test scores and post-test scores on a moderate increase of 3, while in the high improvement category of 21 students

From the results of the data acquisition, it is consistent with the purpose of implementing a connectivism-based area learning model, where in area learning students are given the freedom to choose the learning areas they are interested in (Rohita: 2022), while the concept of connectivism corresponds to the main principles of connectivism, namely: 1) learning and knowledge lies in the diversity of opinions, 2) learning is a process of connecting, 3) learning can exist in non-human equipment, 4) learning is more important than knowing, 5) maintaining and maintaining connections necessary for continuous learning, 6) ability to see the relationship between fields, ideas, and concepts is a core skill, 7) accurate, up-to-date knowledge is the goal of all connectivist learning, 8) decision making is a learning process. What we know today may change tomorrow. Although there is an answer that is right now, it may be wrong tomorrow because of the everchanging information climate.

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