ELEMENTARY *Islamic Teacher Journal*
E-ISSN : 2503-0256 / ISSN : 2355-0155
Volume 10 Number 1 January - June 2022 (PP. 81-104)
http://dx.doi.org/10.21043/elementary.v10i1.14536
Diakses di : http://journal.iainkudus.ac.id/index.php/elementary

Improving Students' Creative Thinking Skills through Mind Map Integration in Akidah Akhlak Subject

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Abstract

The purpose of this study is to find apply *mind map* strategies on creativity thinking skills in akidah akhlak. The use of *mind* maps is done by recording creatively about key materials that can make it easier for students to remember a lot of information, students to perform improvisation in akidah akhlak activities. This research using quantitative methods. The sample used was a number of 30 students of MI Negeri Cirebon with data collection techniques using questionnaires and documentation. While the data analysis statistics technique is carried out by means of SPSS-assisted analytical statistics through *the paired samples t-test*. The results is *Mind Map* learning strategies can increase students' learning creativity in akidah akhlak because they are fun, immersive and bring out unlimited creativity, provide flexible thoughts, can focus

more attention, and increase the understanding of the object to which it is intended because it is filled with images with interesting branches made by students themselves. Based on paired samples t-test test obtained a significance value (2-tailed) of 0.000 < 0.05, so the results of this study showed that there was an influence on the application of mind map learning strategies on learning creativity in akidah akhlak subjects

Keywords: Creativity*; Mind Map; Akidah Akhlak*

Abstrak

Tujuan dari penelitian ini adalah untuk menemukan penerapa strategi mind map pada keterampilan berpikir kreativitas dalam akidah akhlak. Penggunaan mind map dilakukan dengan merekam secara kreatif tentang materi-materi penting yang dapat memudahkan siswa untuk mengingat banyak informasi, mahasiswa melakukan improvisasi dalam kegiatan akidah akhlak. Penelitian ini menggunakan metode kuantitatif. Sampel yang digunakan adalah sejumlah 30 siswa MI Negeri Cirebon dengan teknik pengumpulan data menggunakan kuesioner dan dokumentasi. Sedangkan teknik analisis data dilakukan dengan menggunakan teknik statistik analitik berbantuan SPSS melalui uji-t sampel berpasangan. Hasilnya adalah strategi pembelajaran Mind Map dapat meningkatkan kreativitas belajar siswa pada materi akidah akhlak karena menyenangkan, imersif dan memunculkan kreativitas tanpa batas, memberikan pemikiran yang fleksibel, dapat lebih memusatkan perhatian, dan meningkatkan pemahaman tentang objek yang dimaksudkan karena dipenuhi dengan gambar dengan cabang-cabang menarik yang dibuat oleh siswa sendiri. Berdasarkan uji t-paired sampel diperoleh nilai signifikansi (2-tailed) sebesar 0,000 < 0,05, sehingga hasil penelitian ini menunjukkan bahwa terdapat pengaruh terhadap kreativitas anak dalam penerapan strategi pembelajaran mind map pada mata pelajaran akidah akhlak.

Kata kunci: *Kreativitas; Mind Map; Akidah Akhlak*

INTRODUCTION

Islamic religious education is an integral part of the education system in Indonesia, as stated in Law number 20 of 2003 concerning the National Education System article 12 paragraph 1 point a Every student in each unit of education is entitled to religious education in accordance with the religion he espouses and taught by religious educators.

Mulyasa explained that "the learning process is essentially to develop students' activities and creativity through various interactions and learning experiences" (Mulyasa, 2003). But without realizing it, in its implementation, often learning activities actually hinder student activities and creativity. The learning process in

the classroom generally emphasizes more on the cognitive aspect only, where the mental abilities learned are mostly centered on understanding knowledge materials and memories. Students are required to accept anything that the teacher considers important and memorize it. This is what causes the activities and creativity of students to be hampered or unable to develop optimally. Not only in general subjects, the activities and creativity of students are also needed to improve learning achievement in akidah akhlak subjects.

Silberman expressed the opinion of a Chinese philosopher Confucius that, "What I heard, I forgot", "What I saw, I remember", "What I did, I understood" (Silberman *et al.,* 2015). According to some opinions of educational experts, that this corresponds to the percentage of activeness of the five senses of capturing the information learned by students, among others: by reading (10%), seeing (30%), seeing and hearing (50%), saying (70%), saying and doing (90%).

Mind Map is one of the recording techniques developed by Tony (Buzan, 2006) in the 1970s based on research on how the brain works. With the main topic in the middle of the sub topic with its details laid out the technique of recording a map of the mind designed based on how the brain processes information. The brain takes information from various signs, be it images, sounds, smells, thoughts, or feelings. When remembering information, the brain usually does it in the form of colorful images, symbols, sounds, feelings and others. The mind map mimics how the brain works. The mind map records all information through symbols, images, lines, words, and colors. The resulting note describes the pattern of interrelated ideas on its branches. Therefore, notes in the form of mind maps allow the brain to re-understand ideas in discourse completely and thoroughly.

This concept is based on the way our brains store information, the results of research show that our brain does not store information in neatly lined nerve cell boxes but collected on branched nerve cells that when seen at a glance will be displayed like tree branches (Buzan, 2006).

Mind *map* learning strategies are the ways educators use to help optimize the abilities of both brains by conceptualizing or mapping ideas or thoughts from the core of the lesson with a combination of colors, images and curved branches. Buzan says that, "*Mind Mapping* uses the brain's ability to visual recognition to get the greatest

possible results. With a combination of colors, images and curved branches".

Creativity is the ability to interact between individuals and their environment. A person influences and is influenced by the environment in which he is located, thus changes in the individual as well as in the environment can support or can hinder creative efforts (Hidayati *et al.,* 2019; Rosba *et al.,* 2021).

One of the most important concepts in the field of creativity is the relationship between creativity and self-actualization. According to humanistic psychologist Abraham Maslow and Carl Rogers (Slife, 2012) Maslow stated that a person is said to actualize himself when a person uses all his talents and talents to become what he is capable of actualizing, or realizing his potential. According to maslow self-actualization is a fundamental characteristic, a potentiality that exists in all humans at birth, but is often lost, inhibited or pent up in the process of culture. The source of creativity is the tendency to self-actualize, realize potential, the urge to develop and mature.

Learning creativity is the ability of students to think openly, broadly and develop their imagination optimally so as to be able to produce new ideas or new solutions to old problems that students often experience during the learning process (Munandar, 1987; Rennie & Morrison, 2013).

The low conditions of creativity and motivation to learn need to find a solution. A learning in general will be more effective can be organized through learning strategies that affect the creativity and motivation of students' learning.(Allodi, 2007; Awartani *et al.,* 2008; Kimber & Wyatt-Smith, 2010) Mind map learning strategy, which can "familiarize students to practice their creative activities so that students can create a creative product that can benefit themselves and their environment."(Dhindsa & Anderson, 2011) Another thing related to the limbic system is its role as a regulator of emotions such as anger, pleasure, hunger, thirst and so on. Emotions are indispensable for creating high learning motivation (Arabski & Wojtaszek, 2010; Raichle & Mintun, 2006; Ventura *et al.,* 2011).

Based on the background description above, this study intends to reveal the influence of mind map learning strategies can significantly increase the creativity and motivation of students' learning in akidah akhlak subjects in Madrasah Ibtidaiyah Negeri 1 Cirebon.

This is in line with the search results through the Vos Viewer application to see research gaps and also find novelty in this study as follows:

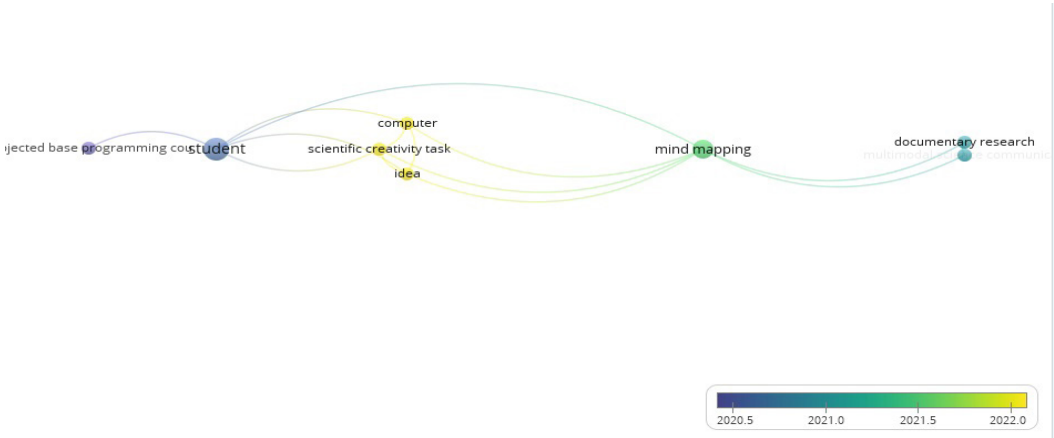

Figure 1. Data Source From App Vos Viewer

From the some data and the results of some theories above, and the results of the visualization of the vos viewer, it was concluded that the results of previous studies with the 2018-2022 search period have not been found research related to mind maps that integrate with moral aqidah subjects so we conduct further studies on the focus of this study, and this is precisely the attraction in this study.

METHODS

The approach in this research is the quantitative approach. The sampling technique used in this study is Purposive Sampling. According to Sugiyono, Purposive Sampling is a data source sampling technique with certain considerations (Sugiyono, 2017).

The reason for using Purposive Sampling technique is because not all samples have criteria that are in accordance with the phenomenon studied, namely students who have had problems with BK (Counseling Guidance) teachers, lazy in learning, less active in learning, and lack of enthusiasm in learning. In this study, the sample that matched the criteria, namely 4th grade students who numbered 30 students in MI Negeri 1 Cirebon.

The assessment score given by the teacher to students from questionnaires that are spread about the student's ability to think openly, broadly and develop his imagination optimally so as to be able to produce new ideas or new solutions to old problems that students often experience during the learning process. Learning creativity is usually marked with indicators: cognitive and affective aspects of the akidah akhlak lesson, this is in accordance with previous research Rouf, (2019) which has also applied the mind map to akidah akhlak

Data collection techniques are carried out through the dissemination of questionnaires with a list of questions or statements to students to obtain data on the influence of the application of mind map learning strategies on the creativity and motivation of students' learning in morals subjects. As stated by Arikunto (Suharsimi, 2013) to test validity by using the Product Moment correlation. The hypothesis testing technique using a paired t-test is one of the hypothesis testing methods where the data used is not free (paired).

RESULTS AND DISCUSSION

The results of the validity test of the student creativity and motivation test instruments conducted on 30 students in the trial class were obtained as follows :

Table 1. Creativity Test Instrument Validity Test Results

No. Item	r_{hitung}	r_{tabel}	Criterion
1	0,587	0,361	Valid
2	0,615	0,361	Valid
3	0,452	0,361	Valid
4	0,397	0,361	Valid
5	0,497	0,361	Valid
6	0,587	0,361	Valid
7	0,615	0,361	Valid
8	0,493	0,361	Valid
9	0,524	0,361	Valid
10	0,642	0,361	Valid
11	0,565	0,361	Valid

12	0,642	0,361	Valid
13	0,411	0,361	Valid
14	0,564	0,361	Valid
15	0,549	0,361	Valid
16	0,452	0,361	Valid
17	0,397	0,361	Valid
18	0,642	0,361	Valid
19	0,587	0,361	Valid
20	0,506	0,361	Valid

The results of the Creativity instrument reliability test there are 20 question items and Motivation there are 20 question items and that are done there are 30 students in the trial class obtained as follows :

Table 2. Creativity Instrument Reliability Test Results

Cronbach's Alpha	N of Items
,870	*20*

Based on calculations using SPSS version 23, the creativity criteria tested are worth 0.870, thus for the questionnaire instrument item has high reliability to use.

Creativity score data before and after the implementation of mind map learning strategies is as follows :

Table 3. Creativity Score

No. Res	Creativity Score	
	Before	After
1	*69*	*89*
2	*65*	*86*
3	*73*	*93*
4	*63*	*80*
5	*69*	*91*
6	*69*	*88*
7	*74*	*96*
8	*78*	*98*
9	*71*	*89*

10	*70*	*89*
11	*63*	*80*
12	*68*	*89*
13	*77*	*97*
14	*64*	*82*
15	*80*	*100*
16	*60*	*80*
17	*70*	*90*
18	*69*	*89*
19	*65*	*86*
20	*63*	*83*
21	*67*	*89*
22	*63*	*83*
23	*68*	*89*
24	*64*	*86*
25	*72*	*93*
26	*61*	*80*
27	*70*	*91*
28	*68*	*88*
29	*75*	*96*
30	*78*	*98*
Average	***68,87***	***88,93***
Standard deviation	***5,309***	***5,753***

Based on the table above, it can be seen that the average creativity score before the implementation of the mind map learning strategy is 68.87 and the standard deviation is 5,309. While the average creativity score after the implementation of the mind map learning strategy is 88.93 and the standard deviation is 5,753.

The results of the creativity data normality test are as follows :

Table 4. Creativity Data Normality Test Results

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PRETEST	.115	30	.200*	.960	30	.307
POSTTEST	.129	30	.200*	.947	30	.140

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on the table above, it can be seen that creativity data before the implementation of the mind map learning strategy has a significant value of 0.200. While the creativity data after the implementation of the mind map learning strategy has a significant value of 0.200. Then it can be concluded that the creativity data in this study is normal distribution. The results of Paired Samples T-test Creativity are as follows :

Table 5. Results of Creativity Paired Samples T-test

		Paired Differences					t	df	Sig. (2tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre Test - Post Test	-20.067	1.337	.244	-20.566	-19.567	-82.185	29	.000

Based on the table above, it can be concluded that the value of significance (2-tailed) of 0.000 < 0.05, it can be concluded that Ho1 is rejected and Ha1 is accepted which means that there is an influence on the application of mind map learning strategies on learning creativity in akidah akhlak subjects. This is evidenced by the significant difference in average creativity scores before and after the implementation of mind map learning strategies.

Based on paired samples t-test test obtained a significance value (2-tailed) of 0.000 < 0.05, so the results of this study showed that there was an influence on the application of mind map learning strategies on learning creativity in akidah akhlak subjects. This means that mind map learning strategies can increase students' learning creativity in akidah akhlak subjects, this is evidenced by the significant difference in average creativity scores before and after the implementation of learning strategies.

The application of mind map learning strategies affects the creativity of students' learning in akidah akhlak subjects because the mind map method is an idea or image that arises from the results of the human mind that is poured in the maps

of the mind, so that the thought map method made can provide flexible thoughts, can focus attention, increase understanding of the object being used as a goal and fun because it is filled with pictures with its interesting branches that students make.

Mind Map is a learning method designed to assist students in forming and compiling the essential cores of the learning material, as well as methods that can help students to increase students' knowledge in mastering the concept of a subject matter. The stages in the implementation of learning with this method are (1) learn the concept of a subject matter, (2) determine the main ideas, (3) create a mind map, (4) Presenting in front of the class.(Buzan, 2006)

Learning creativity is the ability of students to think openly, broadly and develop their imagination optimally so as to be able to produce new ideas or new solutions to old problems that students often experience during the learning process. (Munandar, 1987)

The implementation of learning with the Mind Map method students can develop self-study skills, students have the ability to develop their own knowledge. (Dejonckheere *et al.,* 2016; Imms *et al.,* 2017; Valanides & Angeli, 2008) The experience gained by students will be more effective if the learning process obtained is the result of his own understanding and discovery. In this context students experience and do it themselves. The learning process that takes place involves the student fully to formulate himself a concept. The involvement of the teacher is only as a facilitator, giving students the opportunity to discover or apply their own ideas. Every individual has potential that must be developed, so a suitable learning process is what explores students' motivation to always be creative and develop.

Learning with the Mind Map method emphasizes more on the activeness and creative activities of students, will increase the rote power and understanding of strong student concepts, and students become more creative. In addition to teaching and learning activities will be more interesting, students will also be more diligent in learning and facing tasks, tenacious to face difficulties, happy to find and solve problems of varied moral beliefs, able to work independently, and can maintain their opinions. This strengthens that the application of Mind Map learning strategies is a suitable learning method used in an effort to increase student creativity and motivation. So there is an allegation that moral belief learning using Mind Map learning strategies can increase students' creativity and motivation to learn.

Mind Map is one of the recording techniques developed by Tony Buzan in the 1970s based on research on how the brain works.(Buzan, 2006) With the main topic in the middle of the sub topic with its details laid out the technique of recording a map of the mind designed based on how the brain processes information. The brain takes information from various signs, be it images, sounds, smells, thoughts, or feelings. When remembering information, the brain usually does it in the form of colorful images, symbols, sounds, feelings and others. The mind map mimics how the brain works. The mind map records all information through symbols, images, lines, words, and colors. The resulting note describes the pattern of interrelated ideas on its branches. Therefore, notes in the form of mind maps allow the brain to re-understand ideas in discourse completely and thoroughly.

This concept is based on how our brain works to store information. The results showed that our brains do not store information in neatly lined nerve cell boxes but are collected on branched nerve cells that when viewed at first glance will look like tree branches (Dennis, 1995; Munakata *et al.,* 2004; Rushton *et al.,* 2010; Salmi *et al.,* 2018).

Mind Map is a creative recording method that can make it easier for us to remember a lot of information." Therefore, the mind map is a great travel map for memory, by making it easy to organize all the facts and results of thought in such a way that the natural workings of the brain will be involved from the beginning (DePorter & Hernacki, 1993).

The mind map is a very effective thinking tool because it gives us the opportunity to make an outline of various basic ideas and causes us to see clearly and quickly how the various ideas are interconnected and related (Hernowo, 2003).

Using the mind map method a long list of information can be mapped simply and interestingly because it comes with colorful ones that are organized, easy to remember and work in harmony with our brains. The principle of the mind map method is:

1) Synergistic

   Synergistic means the use of a draw, actually the brain works synergistically in a synergistic system. The whole is greater than the sum of its parts. Briefly

training one brain will improve the ability of the other brain when used in a balanced manner.

2) Repetition

Mind maps are excellent at helping students to remember and imagine, but the most important thing about the mind map method is how often a reassessment of the material we already know. Repetition formula according to Tony (Buzan, 2006) :

a) Right after first learning it,
b) One day after learning it,
c) One week after learning it,
d) One month after learning it,
e) Three to six months after learning it (Buzan, 2006).

The above opinion, shows that the mind map method can connect new and unique ideas with existing ideas, thus giving rise to specific actions taken by students. With the use of interesting colors and symbols will create a new and different mind mapping results. Mind mapping is one of the creative products produced by students in learning activities.

Creative Thinking for Improving Students Skills

Abraham Maslow and Carl Rogers stated that a person is said to actualize himself when a person uses all his talents and talents to become what he is capable of becoming, actualizing, or realizing his potential. According to Maslow self-actualization is a fundamental characteristic, a potentiality that exists in all humans at birth, but is often lost, inhibited or pent up in the process of culture. Creativity is the tendency to actualize oneself, realize potential, the urge to develop and mature (Slife, 2012).

Creativity that is the result of creative thinking is very important for human life. Utami Munandar said the reason why creativity in students needs to be developed. First, by creating, people can realize themselves (self actualization),(Awartani *et al.,* 2008; Hackney & Sanders, 2003) and it is the need of every human being to make it happen. Second, although everyone considers that creativity needs to be developed,

but attention to the development of creativity is not adequate, especially in formal education. Third, busying yourself creatively is not only useful but also provides its own satisfaction. Fourth, it is creativity that allows humans to improve their quality of life. For this, it is necessary to realize how creative predecessors have helped humans in solving various problems that squeeze humans.

Some of the above opinions, it can be concluded that creativity is an ability to create something new that is different from before, either in the form of ideas or real works by combining elements that already exist. The novelty here is something that is not yet known to the person concerned, although it is a familiar thing to others, and not only from the non-existent, but also a new combination of something that already exists.

According to Jalaluddin Rachmat (1999) the process or stage that must be passed by individuals to produce a creative work is:

a. Orientation

Problems are formulated, and aspects of the problem are identified.

b. Preparation

The mind seeks to gather as much information as possible relevant to the problem.

c. Incubation

The mind rests for a while, when various solutions are faced with a dead end. At this stage the problem-solving process continues in the subconscious psyche.

d. Illumination

The incubation period ends when the thinker acquires a kind of inspiration, a series of insights that solve problems.

e. Verification

The last stage to test critically, assessing the problem solving proposed in the fourth stage.

Akidah Akhlak Subject in Classroom

Akidah comes from Arabic: 'aqada-ya'qidu-uqdatan-wa'aqidatan, It means a bond or a covenant. That is to say, something that becomes a place for the heart and conscience is bound to him. The agreement and affirmation of the oath is also called

'aqdu, buying and selling is called 'aqdu, because there is an attachment between the seller and the buyer with a binding 'aqdu (transaction)." Including also with the term 'aqdu for both ends of the shirt, because the two are bound together also includes the term 'aqdu for the bond of the sheath cloth because it is tied steadily.

Words "akhlak" Comes from Arabic "khuluk", the plural "khuluqun", according to lughat is interpreted as ethics, temperament, behavior, or habits. Words "akhlak" This is more broadly meaningful than the morals or ethics often used in Indonesian cause. "akhlak" covers the spirit aspects of one's external and inner behavior. Words "akhlak" contains aspects of conformity with the word "khalqun" which means event as well as closely related to Khaliq which means Creator, and the meaning creature by created.

Based on the akidah akhlak learning conducted at MI Negeri 1 Cirebon, it was obtained that akidah akhlak learning carried out in the classroom has not facilitated students in increasing creativity and motivation to learn. Not facilitated by students in increasing creativity and motivation to learn can be seen from several things. First, the akidah akhlak learning carried out in the classroom does not depart from the reality of life familiar to students. Second, akidah akhlak learning tends to emphasize aspects of understanding based on memory. It is still very rare for akidah akhlak learning to be done to make students more interested in following lessons and students will more easily understand and master the material taught. Third, akidah akhlak learning tends to use lecture methods. It is still very rare to learn moral beliefs that are done to make students not only hear the teacher's description but also do other activities such as observing, doing demonstrations and other activities so that students do not get bored.

Conditions of low creativity and motivation to learn need to find a solution. A learning in general will be more effective can be organized through learning strategies that affect the creativity and motivation of students' learning. Mind map learning strategy, which can "familiarize students to practice their creative activities so that students can create a creative product that can benefit themselves and their environment". Another thing related to the limbic system is its role as a regulator of emotions such as anger, pleasure, hunger, thirst and so on. Emotions are indispensable for creating high learning motivation.

Relevance of Mind Map Learning Strategy with Creativity learning in Akidah Akhlak

Creativity is an important capital for human life. Creativity is also a matter of the life and death of a society (Suyanto, 2000). With creativity of various difficulties and problems can be found alternative solutions. For creative people there is always a way to overcome the problems faced both from the simplest problems to the more complicated things, because with the creative potential they have, he is able to provide various alternative solutions if one solution turns out not to be able to answer the problem (Tohir, 2020).

A creative thinker doesn't just use the ideas he learns from others. What works is not his memory. What works is the brain. In other words, a creative person is an independent person. Under no circumstances can he survive. An independent person is able to stand on his own ability, without relying on others.

Creative people can self-actualize, Self-actualization is when a person can use all his talents and talents to become what he is capable of becoming – actualizing or realizing his potential. Creative living means developing your talents, learning to use your own abilities optimally.

In students, there is mental power that becomes the driving force of learning. Students learn because of the drive by the mental power that drives learning. Students learn because they are driven by their mental strength. Mental power is in the form of desire, attention, or ideals. There are educational psychologists who call the mental power that encourages learning as motivation to learn (Barrie *et al.,* 2015).

Mind Map is a learning method designed to assist students in determining and compiling the important cores of the subject matter, as well as methods that can help students to increase students' knowledge in mastering the concepts of a subject matter. The stages in the implementation of learning by this method are (1) learning the concept of a subject matter, (2) determining the main ideas, (3) making a mind map, (4) presenting in front of the class.

Learning with the Mind Map method emphasizes more on the activeness and creative activities of students, will increase the rote power and understanding of

strong student concepts, and students become more creative. In addition to teaching and learning activities will be more interesting, students will also be more diligent in learning and facing tasks, tenacious in facing difficulties, happy to find and solve varied mathematical problems, able to work independently, and can maintain their opinions.

From the description above that, the application of the Mind Map method (mind map) is a suitable learning method used in an effort to increase student creativity and motivation. So there is an allegation that the learning of Akidah Akhlak with the Mind Map method can increase students' creativity and motivation to learn.

According to Buzan, the use of mind map methods in learning can help students become more creative (Buzan, 2006). Meanwhile, according to Syamsi, the advantages of using the mind map method are that they can "familiarize students to practice their creative activities so that students can create a creative product that can benefit themselves and their environment" (Syamsi *et al.,* 2020).

The influence of the application of Mind Map learning strategies on students' learning creativity in akidah akhlak subjects is also evidenced by the results of respondents' answer questionnaires that there is moral belief learning with the Mind Map strategy, 20 students (66.7%) always come up with ideas, with different answers or questions, 19 students (63.3%) could see a problem from different points of view, and 16 students (53.3%) were able to give birth to new and unique expressions. Thus, the results of this study showed the influence of the application of mind map learning strategies on learning creativity in the subjects of akidah akhlak of 4th grade students in Madrasah Ibtidaiyah Negeri 1 Cirebon.

Look for the main idea or main topic of the material. For example, material about the digestive system. Make a writing or picture in the middle about the digestive system. Create many branches that relate to the main topic. Make branches of the digestive system. Draw sub-topics from the main topic then connect with the branches. Create sub-topics of what organs are included in the digestive system. Then each sub-topic gives a branch that leads to a picture of its characteristics, functions, to structure. Use appropriate images and colors when creating mind mapping. This can help you understand the material being studied.

With mind mapping, students are helped to remember in detail better. Because

with mind mapping they learn to use the right brain which involves imagination, visualization, creativity, and direct contact with the subconscious brain so that it is easier to remember. In addition, with this learning technique, the student's mind will focus more on the main topic and then assisted by associating certain keywords of the moral code. This makes it easier for students to remember important points and deduce them into a simple concept map (Dhindsa & Anderson, 2011).

The application of *Mind Map* learning strategies affects creativity and motivation to learn in students' morals as evidenced by the increase in the average creativity score before the implementation of *the Mind Map* learning strategy by 68.87 while after the implementation of *the Mind Map* learning strategy the average creativity score became 88.93. This means that using effective *Mind Map learning strategies* can increase creativity by 20.06%.

Based on the results of this study, *Mind Map* learning strategies can increase students' creativity and motivation to learn in akidah akhlak subjects because it is fun, imagination and creativity of students are unlimited. In addition, it can also provide a flexible mind, can focus attention, increase understanding of the object being used as a destination because it is filled with pictures with interesting branches that students make.

The findings were obtained that learning with mind mapping is more fun because it involves creativity. For learning, children will quickly get bored and lose enthusiasm even more if you only read books containing writing. But, when we learn from the mind map that has been made every time we finish learning, we will definitely be more excited. Moreover, when using colors that are liked and equipped with funny images (Keles, 2012).

The steps taken during the implementation of mind mapping in the classroom are as follows:

1. Students are helped to prepare stationery, Prepare Stationery before making mind mapping is certainly very important. The equipment needed in making a mind map is rectangular drawing paper, colored markers or colored pencils, and of course books or cardboard.

2. Start from the main topic; Start working on mind mapping by writing down

the main topic in the middle of the page. Determine a big concept or theme that will be the main core of the mind map. Also find important points in each chapter and sub chapter when creating mind mapping. Place the main theme in the center of the image as the center. Starting from the middle gives the brain the freedom to be creative in describing the map of the mind. From the main theme, there will be derivative themes that are still related to the main theme. To make the map mapping more optimal, connect the main branches to the central image. Each main branch can be made branching again in accordance with the concept discussed. By connecting the branches, students will more easily understand and remember.

3. Make sure to put this big theme in the middle of the paper or blackboard; The purpose is to facilitate the writing of other branches. If the media used is vertical, then we can place the main theme at the top, so that the mind map will decrease downwards. Determine the Sub-theme After finishing determining the main theme, then students must also determine the derivative theme that will be connected with a branch line. In creating this branch of the theme, try not to make a straight line. The goal is that the designed mind map is not too rigid and easier to understand the context of its contents.

4. Find the relationship between each theme and mark it with a line, color or symbol of the image, or photo for a central idea; A picture means a thousand words and helps students imagine. A central image will be more interesting and will keep the student focused, and help activate the brain.

5. Utilizing the use of diverse colors; Color makes the mind map more vivid, adds energy to creative thinking, and is fun. The use of interesting colors is one of the tips so that the mind map can be used as much as possible.

6. Using Curved Lines; In making mind mapping make a hyphen in a curved way, not a straight line that will make the brain easily bored, curved and organ branches, such as tree branches will certainly be much more attractive and pleasant to the eye, so it does not quickly make saturated.

7. In creating Mind Mapping use one keyword for each line; Because a single keyword gives more power and flexibility to the mind map. When using a single word in mind mapping, each of these words will be freer and therefore more able to trigger new ideas and thoughts. Using a single word or phrase, it is attempted to use one word or phrase in each subtopic or derivative, this is to make it easier for students to remember. Because, if you use words that are too long or complicated, then students will be difficult to memorize.

8. Drafting the mind map on another paper before the main paper; When making mind mapping, do not immediately make it on the paper used for drawing, draft the mind map first on opaque paper. Plan where the chart-laying and branching best you can.

The benefits that can be obtained from the implementation of Mind Map in the Classroom include:

1. Train yourself to understand a variety of important information

   Mind mapping provides many benefits in the learning process because it will make students accustomed to organizing and grouping important information from the main concepts or ideas of moral belief materials. If you have become accustomed to compiling these important information, the student's concentration will automatically increase.

   In addition, important information mapped using mind mapping will also make it easier for students to make plans and build frameworks more quickly and effectively.

   Assisting students in understanding concepts and problems that are very complex. In addition, this method is also able to help students in solving these complex problems. Thus, this method will be very useful when applied to project-based learning proses.

2. Increase accuracy in compiling information

   By often making mind mapping independently, it will indirectly train students' abilities in the arrangement of the information obtained. In this case, students can group an information according to the theme category discussed. Thus students will begin to get used to compiling information neatly and organized.

3. Improve a person's ability to understand something

   Mind mapping is very useful in improving the function of the brain's work, if the student has become accustomed to making a mind map then automatically he will be faster in processing or understanding the material being studied. The use of simple keywords in mind mapping will also help in remembering important materials related to the main idea (Rosba *et al.,* 2021).

4. Increase creativity and productivity

   By using a creative mind map in presenting and processing important information from a concept. For example, using graphic forms that contain images, keywords, and important phrases indirectly will also hone students' creativity, in addition to making the mind map will also make more productive. When creating a mind map, students define branching models, choose colors, define keywords, and select important sentences. The process can then be a motivation for students to be more productive and make learning activities less boring (Widiana & Jampel, 2016).

5. Save Time

   With the creation of a neat and structured concept map, it will make it easier and save time to relearn the material that has been read before. Thus, students can use the rest of the time to learn different materials.

CONCLUSION

Mind Map affects students' learning creativity in Akidah Akhlak subjects. This is evidenced by the increase in average creativity before being given a Mind Map learning strategy of 68.87 then after being given a Mind Map learning strategy to 88.93. So that obtained results can effectively increase learning creativity by 20.06%. In addition, the application of Mind Map learning strategies affects creativity because of Akidah Akhlak with Mind Map strategy, students always produce ideas, answers or questions that vary, students can see a problem from different points of view, and students are able to give birth to new and unique expressions.

The results is *Mind Map* learning strategies can increase students' learning creativity in akidah akhlak because they are fun, immersive and bring out unlimited creativity, provide flexible thoughts, can focus more attention, and increase the understanding of the object to which it is intended because it is filled with images with interesting branches made by students themselves. Based on paired samples t-test test obtained a significance value (2-tailed) of 0.000 < 0.05, so the results of this study showed that there was an influence on the application of mind map learning strategies on learning creativity in akidah akhlak subjects. By using a creative mind map in presenting and processing important information from a concept, and the learn process can more motivate students and to be more productive, make learning activities meaningfull and Reduces boredom.

REFERENCES

Allodi, M. W. (2007). Assessing the quality of learning environments in Swedish schools: Development and analysis of a theory-based instrument. *Learning Environments Research*, *10*(3), 157–175. https://doi.org/10.1007/s10984-007-9029-9

Arabski, J., & Wojtaszek, A. (2010). Neurolinguistic and Psycholinguistic Perspectives on SLA. In *Multilingual* Matters. https://doi.org/10.1017/S0272263110000665

Awartani, M., Whitman, C. V, & ... (2008). Developing Instruments to Capture Young People's Perceptions of how School as a Learning Environment Affects their Well-Being. *European Journal of ...*. https://doi.org/10.1111/j.1465-3435.2007.00337.x

Barrie, S. C., Bucat, R. B., Buntine, M. A., Silva, K. B. da, Crisp, G. T., George, A. V, Jamie, I. M., Kable, S. H., Lim, K. F., Pyke, S. M., Read, J. R., Sharma, M. D., & Yeung, A. (2015). Development, Evaluation and Use of a Student Experience Survey in Undergraduate Science Laboratories: The Advancing Science by Enhancing Learning in the Laboratory Student Laboratory Learning Experience Survey. In *International Journal of Science Education* (Vol. 37, Issue 11, pp. 1795–1814). Routledge. https://doi.org/10.1080/09500693.2015.1052585

Buzan, T. (2006). *The Ultimate Book of Mind Maps*. HarperCollins Publishers. http://books.google.com/books?id=v4-D6Pu_9bAC&pgis=1

Dejonckheere, P. J. N., De Wit, N., Van de Keere, K., & Vervaet, S. (2016). Exploring the classroom: Teaching science in early childhood. *International Electronic Journal of Elementary Education*, *8*(4), 537–558. https://doi.org/10.12973/eu-jer.5.3.149

Dennis, D. (1995). Humanistic neuroscience, mentality, and spirituality. *Journal of Humanistic Psychology*. https://doi.org/10.1177/00221678950352003

DePorter, B., & Hernacki, M. (1993). *Quantum Learning: Unleashed The Genius Within You*.

Dhindsa, H. S., & Anderson, O. R. (2011). Constructivist-visual mind map teaching approach and the quality of students' cognitive structures. *Journal of Science Education and ...*. https://doi.org/10.1007/s10956-010-9245-4

Hackney, C. H., & Sanders, G. S. (2003). Religiosity and mental health: A meta–analysis of recent studies. *... for the Scientific Study of Religion*. https://doi.org/10.1111/1468-5906.t01-1-00160

Hidayati, N., Zubaidah, S., Suarsini, E., & Praherdhiono, H. (2019). Examining the relationship between creativity and critical thinking through integrated problem-based learning and digital mind maps. *Universal Journal of Education Research*, *7*(9A), 171–179.

Imms, W., Mahat, M., Byers, T., & Murphy, D. (2017). *Type and Use of Innovative Learning Environments in Australasian Schools ILETC Survey 1*. University of Melbourne. https://minerva-access.unimelb.edu.au/handle/11343/219467

Keles, Ö. (2012). Elementary teachers' views on mind mapping. *International Journal of Education*, *4*(1), 93.

Kimber, K., & Wyatt-Smith, C. (2010). Secondary students' online use and creation of knowledge: Refocusing priorities for quality assessment and learning. *Australasian Journal of Educational ....* https://ajet.org.au/index.php/AJET/article/view/1054

Munakata, Y., Casey, B. J., & Diamond, A. (2004). Developmental cognitive neuroscience: progress and potential. *Trends in Cognitive Sciences*, *8*(3), 122–128. https://doi.org/10.1016/j.tics.2004.01.005

Munandar, U. (1987). *Kreatifitas dan Keberbakatan; Strategi Mewujudkan Potensi Kreatif dan Bakat.* Rineka Cipta.

Raichle, M. E., & Mintun, M. A. (2006). Brain work and brain imaging. In *Annual Review of Neuroscience*. https://doi.org/10.1146/annurev.neuro.29.051605.112819

Rennie, F., & Morrison, T. (2013). *E-learning and social networking handbook: Resources for higher education*. taylorfrancis.com. https://www.taylorfrancis.com/books/mono/10.4324/9780203120279/learning-social-networking-handbook-frank-rennie-tara-morrison

Rosba, E., Zubaidah, S., & Mahanal, S. (2021). Digital Mind Map Assisted Group Investigation Learning for College Students' Creativity. *International Journal of Interactive Mobile Technologies*, *15*(5).

Rouf, A. (2019). Pengembangan Kreativitas Belajar Guru Akidah Akhlak. *Jurnal Elementary*, *Vol. 7 No.*, 3.

Rushton, S., Juola-Rushton, A., & Larkin, E. (2010). Neuroscience, play and early childhood education: Connections, implications and assessment. *Early Childhood Education Journal*. https://doi.org/10.1007/s10643-009-0359-3

Salmi, J., Nyberg, L., & Laine, M. (2018). Working memory training mostly engages general-purpose large-scale networks for learning. In *Neuroscience & Biobehavioral Reviews* (Vol. 93, pp. 108–122). Elsevier BV. https://doi.org/10.1016/j.neubiorev.2018.03.019

Silberman, M., Biech, E., & Auerbach, C. (2015). Active Training. In *Active Training*. https://doi.org/10.1002/9781119154778

Slife, B. D. (2012). Religious implications of Western personality theory. *Pastoral Psychology*. https://doi.org/10.1007/s11089-011-0363-6

Sugiyono. (2017). MetodePenelitian Kuantitatif, Kualitatif dan R&D. Bandung: PT Alfabet. In *Sugiyono. (2017). MetodePenelitian Kuantitatif, Kualitatif dan R&D. Bandung: PT Alfabet.*

Suharsimi, A. (2013). Metodologi penelitian. In *bumi aksara*.

Syamsi, A., M.S., Z., & Yufiarti, Y. (2020). Improving Students' Scientific Literacy through the Cycle-based Learning Model. *TARBIYA: Journal of Education in Muslim Society*. https://doi.org/10.15408/tjems.v7i1.16941

Tohir, M. (2020). *Buku Panduan Merdeka Belajar - Kampus Merdeka*. https://doi.org/10.31219/osf.io/ujmte

Valanides, N., & Angeli, C. (2008). Distributed cognition in a sixth-grade classroom: An attempt to overcome alternative conceptions about light and color. *Journal of Research on Technology in Education*, *40*(3), 309–336. https://doi.org/10.1080/15391523.2008.10782510

Ventura, D. F., Cruz, A. P. M., & Landeira-Fernandez, J. (2011). *Editorial Psychology and Innovation*.

Widiana, I. W., & Jampel, I. N. (2016). Improving Students' Creative Thinking and Achievement through the Implementation of Multiple Intelligence Approach with Mind Mapping. *International Journal of Evaluation and Research in Education*, *5*(3), 246–254.