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Elementary School Student Creativity in Solving Geometry Contextual Problems based on Adversity Quotient

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ABSTRACT

Creativity is an ability that is needed in solving a problem. A person's creativity in solving problems can be assessed using three components namely fluency, flexibility, and novelty. Someone in solving problems can be influenced by the adversity quotient they have. There are three categories of adversity quotient namely quitter, camper, and climber. This type of research is a qualitative research method descriptive. This study aims to describe the creativity of elementary school students in solving contextual geometry problems based on adversity quotient. The subjects in this study were three people consisting of quitter subjects, camper subjects, and climber subjects. Data is collected through adversity Response Profile (ARP) tests, Problem Solving Tests (PST) and interviews. The results showed that the creativity of subjects with the quitter category in solving contextual geometry problems was not able to achieve fluency, flexibility, and novelty. The creativity of subjects with camper categories in solving contextual geometry problems only achieves fluency and flexibility. Whereas the creativity of subjects with climber types in solving contextual geometry problems is able to achieve fluency, flexibility, and novelty.

Keywords: Creativity, Contextual Problems, Geometry, Adversity Quotient

ABSTRAK

Kreativitas adalah kemampuan yang dibutuhkan dalam menyelesaikan suatu masalah. Kreativitas seseorang dalam memecahkan masalah dapat dinilai menggunakan tiga komponen yaitu kelancaran, fleksibilitas, dan kebaruan. Seseorang dalam memecahkan masalah dapat dipengaruhi oleh hasil bagi kesulitan yang mereka miliki. Ada tiga kategori tingkat kesulitan yaitu quitter, camper, dan climber. Jenis penelitian ini adalah metode penelitian kualitatif deskriptif. Penelitian ini bertujuan untuk mendeskripsikan kreativitas siswa sekolah dasar dalam menyelesaikan masalah geometri kontekstual berdasarkan adversity quotient. Subjek dalam penelitian ini adalah tiga orang yang terdiri dari subjek quitter, subjek kemping, dan subjek pendaki. Data dikumpulkan melalui tes Adversity Response Profile (ARP), Problem Solving Tests (PST) dan wawancara. Hasil penelitian menunjukkan bahwa kreativitas subjek dengan kategori quitter dalam menyelesaikan masalah geometri kontekstual tidak mampu mencapai kelancaran, fleksibilitas, dan kebaruan. Kreativitas subyek dengan kategori kemping dalam memecahkan masalah geometri kontekstual hanya mencapai kelancaran dan fleksibilitas. Sedangkan kreativitas subjek dengan tipe pendaki dalam menyelesaikan masalah geometri kontekstual mampu mencapai kelancaran, fleksibilitas, dan kebaruan.

Keywords: Kreativitas, Masalah Kontekstual, Geometri, Adversity Quotient

INTRODUCTION

Thinking is one of the essential activities in human life. In general thinking is defined as a mental process that produces knowledge. Thinking consists of four levels proposed by Krulik & Rudnick (Siswono, 2018) namely recall, basic thinking, critical thinking, and creative thinking. It can be seen that of the four levels, creative thinking is the highest level of thinking. Creative thinking is inseparable from the term creativity where creativity is the product or result of creative thinking. Creative thinking is a mental activity carried out by someone in creating a new idea or concept to solve a problem by connecting the new idea or concept with previous ideas. Understanding creative thinking according to Gie (2003) is a variety of actions taken by someone using his mind to create something new from a collection of memories that contain ideas, information, concepts, experiences, and knowledge in his mind. In addition, the notion of creative thinking was also put forward by Weisberg (2006) that creative thinking refers to the processes to produce a creative product that is a new (innovative) work that is obtained from an activity that is directed according to its purpose. Based on the explanation of creative thinking and creativity above, it can be said that creativity and creative thinking are two different things but are interconnected conceptually. Through the process of creative thinking, a person will have the ability to create creative things so that he is considered to have creativity.

Creativity is one of the abilities needed by every individual today to face a challenge, given the development of science and technology that is increasingly advanced and has a significant impact, especially in the world of education. Giyono (2019) mentioned a number of unique skills that must be possessed by productive forces living in the 21st century, known as 21st Century Skills, one of which is creativity. This is also in accordance with the opinion of Akgul & Kahveci (2016) which states that *"creativity is an invaluable skill for the new century"* means that creativity is a very valuable skill in this century. In addition, according to Jagom (2015), creativity or the ability to think creatively is needed so that students can have the ability to obtain, manage and utilize information to survive in the present, which is always changing, uncertain, and competitive. For that, education is one of ways to make it happen because education has a very important role in meeting the needs of students in the future, in this case provision of life skills and thinking skills.

A person's creativity can be assessed at a level. To assess one's creativity, one can use three key components expressed by Silver (Siswono, 2018) namely fluency, flexibility, and novelty. The explanation can be seen in Table 1.

Table 1. Components of Creativity

Components of Creativity	Definition
Fluency	Fluency refers to the ability to generate various ideas or ideas when responding to something
Flexibility	Flexibility refers to the ability to use different methods or strategies when responding to something.
Novelty	Novelty is the ability to generate new or unusual ideas that are created when responding to commands

Silver (1997)

One of the lessons that has an important role in developing student creativity is mathematics. In accordance with the opinion of Siswono (2004), that some abilities can be developed through mathematics education, one of which is creativity. While the others are the ability to think critically, systematically, logically, and the ability to work together. This is because mathematics has an important role in everyday life, so mathematics needs to be taught at all levels of formal education, from elementary schools to universities to equip students with the ability to think logically, analytically, systematically, critically, and creatively, as well as the ability good cooperation (Jagom, 2015).

Creativity in all fields is needed. However, creativity is one of the ability to think that until now is still not given maximum attention in mathematics learning where the teacher does not explore student creativity in solving problems. This is seen from the problems given by the teacher that only has one right answer. The teacher is also not accustomed to teaching mathematical problems that have more than one correct answer or method. Nakin (2003) in her thesis also stated that creativity is one of the abilities that is neglected in the classroom. Another problem with creativity was conveyed by Putri et al (2019) through the results of her research that students with high Adversity Quotient (AQ) and AQ were having moderate creative thinking skills, while students with low AQ had low creative thinking skills. Students did not achieve high creative thinking skills because they did not achieve a score of ≥ 66.8.

Contextual problems are believed to be used to foster or develop student creativity. This is in accordance with the opinion of Lutfianto et al (2013), problem solving using context is one of the ways that students can have the skills needed to live in the 21st century. Therefore, through contextual problem solving, students can develop their creativity. Problem solving in question is problem solving whose steps are described sequentially so that it can be clearly understood (Lakapu, 2018), while contextual problems are problems that use an environment that is close to student life (Soedjadi, 2007).

One of the materials that must be mastered by Elementary School students is geometry material. According to Susanah & Hartono (2004), geometry is a branch of mathematics that does not prioritize relationships between numbers, although using numbers but geometry studies the relationships between points, lines, angles, fields, and flat shapes and spaces. The purpose of teaching geometry in elementary schools refers to the structuring of reason and the formation of attitudes, also on the application and skills of geometry. In other words, the purpose of teaching geometry is to develop five basic abilities, namely visual, verbal, drawing, logic, and application (Mursalin, 2016). Wale et al (2013) revealed the importance of studying geometry because geometry is very closely related to our daily lives, geometry can develop problem solving skills, geometry plays an important role in learning other branches of mathematics, geometry can be used in everyday life and studying geometry very nice. Therefore, to develop student creativity in solving problems can use contextual geometry problems.

Each student must have their own abilities in dealing with obstacles and challenges or problems. The different abilities of each student can influence their creativity. This ability is called Adversity Quotient (AQ). Adversity Quotient is the ability possessed by individuals to be able to

survive in facing all problems or difficulties of life (Mulyadi & Mufita, 2006). Further said by Stoltz (2000) in his book that Adversity Quotient tells about how far a person is able to survive facing difficulties and able to overcome them, predict who is able to overcome difficulties and who will be destroyed, who will exceed expectations of performance and who fails. , and also predicts who will surrender and who will survive. Whereas Putri et al (2019), argue that Adversity Quotient is the ability to change, process problems or difficulties and make it a challenge that must be solved. The success of students in solving problems is influenced by the way students respond to difficulties encountered when searching for solutions to these problems (Afri, 2018). Furthermore, Aminarti, Bistari & Nursangaji (2016) said that the level of adversity quotient greatly influenced students' answers in solving mathematical problems. Stoltz grouped people based on the level of AQ into three groups namely *quitter* (low AQ), *camper* (medium AQ), and *climber* (high AQ).

Quitter types tend to stop when competitors continue to fight non-stop, avoid obligations, and back down. While the *camper* type is satisfied being or has reached a certain target, even though the goal to be achieved is still far, the reason is because they are bored choosing to stop, while the *climber* type will continue to fight, never give up in facing obstacles as challenges that must be solved. So this explanation shows that each person has a different level of AQ in solving problems.

Based on the description that has been described above, the researcher will conduct research with the aim to describe the creativity of elementary school students in solving contextual geometry problems based on Adversity Quotient.

RESEARCH METHOD

This type of research is a qualitative research with descriptive research methods. The goal is to describe the creativity of elementary school students in solving mathematical problems based on Adversity Quotient.

Subjects in this study were taken from 23 fourth grade students of Nunbaun Delha Inpres Elementary School, Kupang City, East Nusa Tenggara Province. Determination of the subject was carried out using an Adversity Response Profile (ARP) questionnaire consisting of 30 questions to group students into three categories of Adversity Quotient (AQ) namely *quitter*, *camper*, and *climber*. Determination of the research subject was also based on several criteria, namely willing to be the subject of research , can communicate both verbally and in writing, and on the consideration of the class teacher. Accordingly, one student from each group of AQ categories was chosen according to the criteria set to be the subject of the study. So the subjects in this study were one *quitter* student, one *camper* student, and one *climber* student. *Quitter* students who are selected as research subjects are students who have low academic achievement and are also quiet students. In classroom learning, the *quitter* subject is known as a student who has no curiosity. When there is something he does not understand, the subject of the *quitter* does not ask the teacher or his friends. In completing a given task, the *quitter* subject is often not responsible; *Camper* students who become research subjects are students who have moderate academic grades in class in semester 1 and 2. In learning activities, *camper* subjects are known as children who have little motivation and responsibility in completing assigned tasks. But the *camper* subject is slow in

thinking so when he feels bored, the *camper* subject decides to give up; while the *climber* students who are the subject of research are students who have high academic grades in the class. *Climber* subjects are known as students who have a strong curiosity, are quick to understand each teacher's explanation, and are highly motivated and responsible for the tasks given.

The instruments in this study were the main instruments and supporting instruments. The main instrument is the researcher himself because the researcher designs the research, collects data, analyzes data, and reports the results. Whereas supporting instruments, including Adversity Response Profile (ARP), are used to group research subjects into three categories namely *quitter*, *camper*, and *climber*; Problem Solving Test (PST) which is a matter of solving mathematical problems related to geometry; interview guidelines; and recording devices. To collect research data, several techniques are used, namely the Adversity Response Profile (ARP) test, the Problem Solving Test (PST), and the interview. Based on the collected data, the subject of *quitter*, *camper* and *climber* creativity will be seen in accordance with the components of creativity namely fluency, flexibility and novelty. Fluency can be achieved if the subject gives a variety of answers or more than one correct answer. Flexibility can be achieved if the subject can solve a given problem by using various ways of working or solving different from the way used in problem a and has true value. While novelty can be achieved if in solving a problem can provide at least one problem solving in a new or original way of his own idea, not imitating others, and not following the pattern or rules given by the teacher. Then the data validity is checked by using triangulation. Triangulation used is technical triangulation in which at this stage the data obtained is obtained through the Problem Solving Test (PST), interviews, and documentation. After the data is declared valid, it is continued by analyzing the data through several stages, namely organizing and preparing data, reading the entire data, analyzing more details by coding data, applying data coding processes, presenting data in narrative form, and interpreting data.

RESULTS AND DISCUSSION

Result

The results of this study indicate the creativity of *quitter*, *camper*, and *climber* subjects in solving geometrical contextual problems. Sourced from the analysis of data obtained from the three research subjects, the results show that the creativity of each subject is different. The subject of the *climber* can achieve all three indicators of creativity namely fluency, flexibility, and novelty. The *camper* subject achieves indicators of fluency and flexibility. Whereas the subject of the *quitter* does not reach all components of creativity.

1. The creativity of the *quitter* subject in solving contextual geometry problems

Quitter subject creativity can be assessed using the components of creativity namely fluency, flexibility, and novelty. The *quitter* subject in solving contextual geometry problems is unable to achieve fluency. The results of the work of the subject *quitter* on problem a show that the subject of the *quitter* understands the problem given so it makes the shape of the garden. The *quitter* subject drew three garden shapes namely rectangular, triangular and

square but did not calculate the area of the garden shape drawn (a). Based on the results of the interview, the *quitter* subject did not know how to calculate area.

The work of the *quitter* subject to problem b shows that the *quitter* subject is not able to achieve flexibility. Based on the results of his work, the *quitter* subject did not use a different way of working from the answer a (a). The *quitter* subject only chooses the garden shape he made in answer a, which is rectangular shape without showing a different way of working (b). Based on the results of the interview, the *quitter* subject did not understand the problem. In answer a, the *quitter* subject draws first then plans to calculate the area but is unable to calculate it, whereas in answer b the *quitter* subject does the same thing so it does not show a different way of working.

The work of the subject *quitter* on problem c shows that the subject of the *quitter* is not able to achieve novelty. Based on his work, the *quitter* subject understands the problem so that he draws a garden shape according to his own opinion, does not imitate another subject, and is not the same as what the teacher has taught. The shape of the garden is made in the form of two isosceles triangles whose sides are joined together (c). From the shape of the garden that has been made the subject of the *quitter*, then the area will be calculated, but in its work the subject of the *quitter* is unable to calculate it. Based on the results of the interview, the *quitter* subject did not know how to count them.

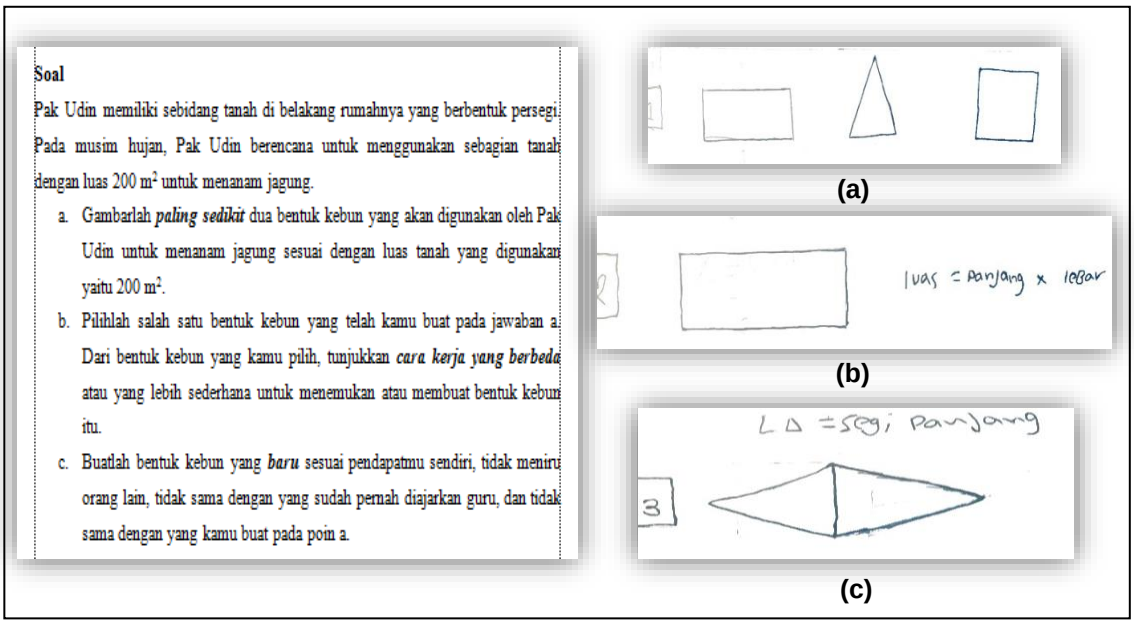

Figure 1. Questions and Work Results of *Quitter* Subject Troubleshooting Tests

2. The *camper* subject's creativity in solving contextual geometry problems

Camper subject creativity can be assessed using the components of creativity namely fluency, flexibility, and novelty. The *camper* subject in solving geometrical contextual problems is able to achieve fluency. The *camper* subject's work on problem a (a) shows that the *camper* subject understands the problem. The problem given is that subjects were asked to draw at least two forms of garden with an area of 200 m^2. In accordance with the results of their work, the *camper* subject first drew two different garden shapes namely rectangular shape and

isosceles triangle shape. After drawing the shape, the *camper* subject calculates the area using the rectangular area formula and the triangle area formula. In the rectangular shape, the long side is given a size of 100 m and the wide side is 2 m so that the area of the rectangular garden is 200 m^2. While in the triangle shape, the base side is given a size of 10 m and a height of 40 m, so the area of the triangle-shaped garden is 200 m^2.

The work of the *camper* subject on problem b (b) shows that the *camper* subject is able to achieve flexibility. The problem given to see the flexibility of research subjects is the subject asked to choose one of the forms of gardens that have been made in the answer a then show different ways of working to find a garden area of 200 m^2 from the answer to the problem a. Based on the results of his work, the *camper* subject uses a different way of working than the answer a. The *camper* subject chooses the shape of the garden he made in answer a, which is a triangle and then shows a different way of working. The answer to problem a, the *camper* subject makes the shape of the garden first and then calculates the area (a). While the answer to problem b, the subject calculates the area first and then makes the shape of the garden (b). The length of the base and the height of the garden shape are the same as the size in the answer a, that is 10 m and 40 m so that the area of the garden shape made is 200 m^2.

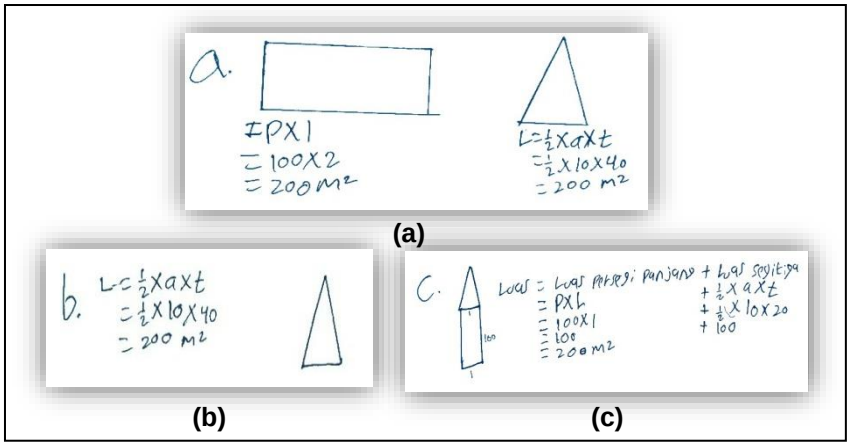

Figure 2. Work Results of *Camper* Subject Troubleshooting Tests

The work of the *camper* subject on problem c (c) shows that the *camper* subject is unable to achieve novelty. The problem given is asking students to create a new form of garden according to their own opinion, not imitating others, not the same as what the teacher has taught, and not the same as what was created in point a. Based on the work of the *camper* subject on problem c (c), it shows that the *camper* subject can make a new form of garden according to his own opinion, does not imitate other subjects, and is not the same as that which has been taught by the teacher. The shape of the garden is a rectangular shape that is joined by an isosceles triangle. The shape of the garden is then calculated using the formula for the area of a rectangle and the area of a triangle. But in calculating the area, the *camper* subject is not able to determine the exact size of the side to find the area of the shape of the garden which is 200 m^2. The length of the rectangular side is given 100 m and the width is 1 m while in

the triangle, the base side is given 10 m so that the size is not the same as the width of the specified rectangle that is 1 m then the height of the triangle is given 20 m.

3. The creativity of subject *climber* in solving contextual geometry problems

Climber subject in solving contextual geometry problems, able to achieve the components of fluency, flexibility, and novelty. The results of the *climber*'s work on problem a (a), shows that the *climber*'s subject is able to answer correctly as requested. The subject of the *climber* drew 2 different shapes of the garden, rectangular and triangular. The rectangular shape on the long side is given the size of 10 m and the wide side is given 20 m, after that it is calculated using the rectangular area formula. While the triangular shape, on the base side is given a size of 40 m and the height is given 10 m then then calculated using the triangle area formula.

The subject of *climber* in solving problems is able to achieve flexibility. Based on his work, the subject of the *climber* shows a different way of working with the answer to the problem a in making the garden shape. The subject *climber* chooses one of the garden shapes created in answer a, which is rectangle and then does it in a different way. The answer to problem a, the *climber* subject first makes the shape of the garden and then calculates the area (a). While the answer to problem b, students calculate the area first and then make a garden shape (b). The *climber* subject calculates the area of the garden shape using the rectangular area formula. The length and width of the garden shape is the same as the answer in answer a, i.e. 10 m and 20 m so that the area of the garden shape is 200 m^2.

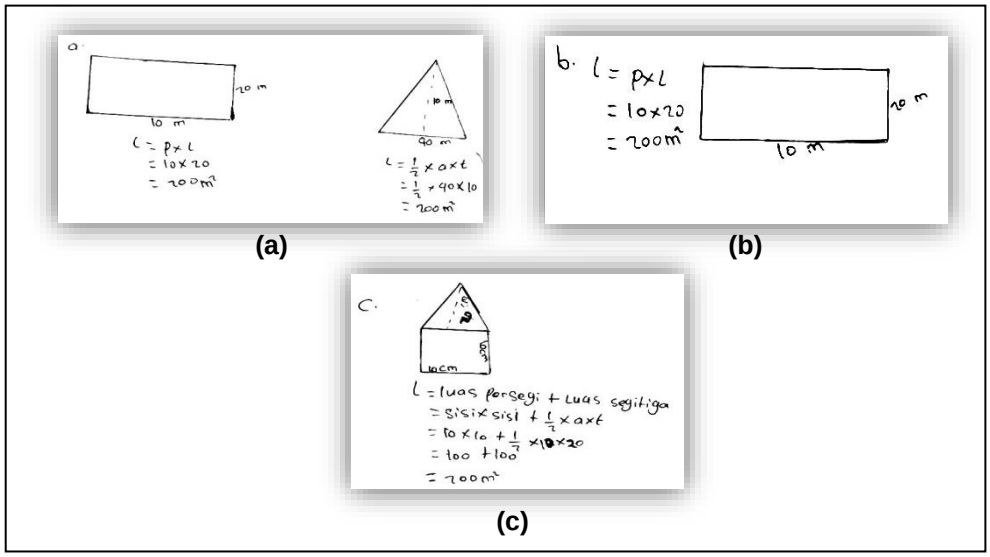

Figure 3. Work Results of *Climber* Subject Troubleshooting Tests

Novelty can be achieved if the subject can provide at least one solution to the problem in a new or original way of his own idea, not imitate others, and not follow the pattern or rules given by the teacher. The subject of climber in solving contextual geometry problems is able to achieve novelty. Based on the work of the subject climber on problem c (c), shows that the climber subject can create a new form of garden in accordance with his own opinion, does not

imitate other subjects, and is not the same as what has been taught by the teacher. The shape of the garden created is a combination of a square and isosceles triangle. The shape of the garden is then calculated by using the area of the square area and the triangle area formula. Each side of the square is 10 cm so that the base of the triangle is 10 cm, while the height of the triangle is 40 cm. After the climber subject has determined its size, then the climber subject adds the area of the square and rectangle so that it gets the area of the shape that is made of 200 m^2.

Discussion

Silver (1997) suggests three key components in assessing the creativity of children and adults, namely fluency, flexibility and novelty. In the eloquence component, the *quitter* subject gives a variety of ideas in solving problems, but the ideas given are not right or not yet true. In the flexibility component, the subject of the *quitter* does not provide a way or strategy that is different from the method used previously to solve the problem, in this case the subject of the *quitter* re-uses the method used previously so that no visible difference in the method or strategy used. This is in line with the opinion of Dina, et al (2018) who revealed that *quitter* students use a strategy in problem solving and have difficulty in solving it. In the novelty component, the *quitter* subject generates new or unusual ideas that are made and are his own ideas when solving problems. The *quitter* subject also produces ideas that do not follow the pattern or rules given. But the idea he gave was not right. Therefore, the *quitter* subject is not able to produce something new in solving problems. This is because someone with a *quitter* type in dealing with problems is easier to stop (Stoltz, 2000). Furthermore Putri, et al (2019) revealed that students with low AQ have low creative thinking skills. Therefore, in solving geometrical contextual problems, the *quitter* subject cannot reach the three components of creativity. The results of this study are also supported by the opinion of Benu, et al (2019) who revealed that the *quitter* subject was not able to plan new solutions in solving the given problem.

The *camper* subject in the fluency component provides a variety of ideas in solving problems and the ideas they provide are of true value. In the flexibility component, the subject of the *camper* provides a way or strategy that is different from the way used before to solve the problem. In the novelty component, the *camper* subject generates new or unusual ideas that are made and are their own ideas when solving problems. The *camper* subject also produces ideas that do not follow the pattern or rules given. But the idea he gave was not right. This is because someone with the *camper* type is someone who has tried to face challenges to a certain degree and they choose to stop to enjoy the results (Stoltz, 2000). In addition, the work of *camper* subjects is influenced by the AQ they have. High or low adversity quotient of students greatly affect students' answers in solving mathematical problems (Aminarti, Bistari & Nursangaji, 2016).

In the eloquency component, the *climber* subject in solving contextual geometry problems can produce a variety of ideas and the resulting ideas are true. In the flexibility component, the *climber* subject provides a way or strategy that is different from the way previously used to solve the problem. In the novelty component, the subject *climber* generates new or unusual ideas that

are made and are their own ideas when solving contextual geometry problems. *Climber* subjects also produce ideas that do not follow the pattern or rules given. The idea given is of true value. This is due to the high or low AQ of a person will greatly affect students' answers in solving mathematical problems (Aminarti, Bistari & Nursangaji, 2016). Therefore it can be said that the *climber* subject has a high AQ so that it can reach all components of creativity namely fluency, flexibility, and novelty.

CONCLUSION

Based on the results of the research that has been described, it can be concluded that the creativity of the *quitter* subject in solving contextual geometry problems does not show fluency, flexibility, and novelty. The creativity of subject *climber* in solving contextual geometry problems is only able to show fluency and flexibility. Whereas the creativity of subject *climber* in solving contextual geometry problems can demonstrate fluency, flexibility, and novelty. Based on the results of this study, some things the researchers suggested are (1) in giving problems to students to be solved, teachers should provide problems that have multiple answers or have multiple solutions so that students with the type of *quitter*, *camper*, and *climber* can develop their creativity, (2) when students are faced with a problem, the teacher should give more motivation and attention to students with the *quitter* type compared to students with the *camper* and *climber* types, (3) for the next researcher is expected to pay attention to the weaknesses in this study so as to minimize weaknesses in his research.

REFERENCES

Afri, L. D. (2018). Hubungan AQ dengan Kemampuan Pemecahan Masalah Siswa SMP pada Pembelajaran Matematika. *Jurnal Pendidikan & Matematika, VII*(2) 47-53.

Akgul & Kahveci. (2016). A Study on the Development of a Mathematics Creativity Scale. *Eurasian Journal of Educational Research*, *62,* 57-76.

Aminarti, D., Bistari & Nursangaji, A. (2017). Kemampuan Pemecahan Masalah Matematika Ditinjau dari Adversity Quotient pada Materi Bangun Datar di SMP. *Jurnal Pendidikan dan Pembelajaran Khatulistiwa, 6*(2), 1-12.

Ayllon & Ballesta-Claver. (2016). Mathematical Thinking and Creativity through Matheatical Problem Posing and Solving. *Propósitos y Representaciones*, 169-218.

Edgar et al,. (2008). Creative Thinking: Opening Up a World of Thought. *Diakses tanggal 30 November 2019 dari https://www.researchgate.net/publication/242314209CreativeThinkingOpening_UpaWorldofThought* .

Gie. (2003). *Teknik Berpikir Kreatif.* Yogyakarta: Sabda Persada Yogyakarta.

Giyono. (2019). *Model Pembelajaran Identification of Problems, Collecting Data, Analyze Problems Solving, Reflection and Follow-up (ICAR) untuk Membelajarkan Kemampuan Pemecahan Masalah Fisika SMA.* (Disertasi tidak dipublikasikan). Universitas Negeri Surabaya, Surabaya.

Jagom. (2015). Kreativitas Siswa SMP dalam Menyelesaikan Masalah Geometri berdasarkan Gaya Belajar Visual-Spatial dan Auditory-Sequential. *Math Didactic: Jurnal Pendidikan Matematika*, *1*(3), 179-190.

Karkockiene. (2005). Creativity: Can it be Trained? A Scientific Educology of Creativity. *cd-International Journal of Educology*, 51-58.

Lakapu. (2018). Kemampuan Berpikir Kritis Mahasiswa dalam Pemecahan Masalah Matematika pada Materi Trigonometri. *Seminar Nasional Matematika*. Bandung: Fakultas Teknologi Informasi dan Sains, Universitas Parahyangan Bandung. (pp. 12-18).

Lutfianto et al. (2013). Unfinished Student Answer In Pisa Mathematics Contextual Problem. *Indonesian Mathematical Society Journal on Mathematics Education, 4*(2), 188-193.

Mulyadi & Mufita. (2006). Pengaruh AQ dan EQ terhadap Kecemasan Persaingan Kerja. *Jurnal Psikologi dan Keislaman*, *3*(1).
Mursalin. (2016). Pembelajaran Geometri Bidang Datar di Sekolah Dasar Berorientasi Teori Belajar Piaget. Jurnal Dikma, *4*(2), 250-258.
Nakin. (2003). *Creativity and Divergent Thinking in Geometry Education .* Africa: Disertasi doktoral, University of South Africa. Diperoleh dari https://core.ac.uk/download/pdf/43164736.pdf.
Plucker et al. (2004). Why Isn't Creativity More Important to Educational Psychologists? Potentials, Pitfalls, and Future Directions in Creativity Research. *Educational Psychologist*, *39*(2), 83-96.
Putri et al. (2019). Creative Thinking Skill with Adversity Quotient Based on Lesson Study for Learning Community. *Journal of Physics: Conference Series*, *1211,* 012110.
Siswono. (2004). Mendorong Berpikir Kreatif Siswa melalui Pengajuan Masalah (Problem Posing). *Konferensi Nasional Matematika XII.* Bali: Universitas Udayana. 74-87.
Siswono. (2018). Pembelajaran Matematika Berbasis Pengajuan dan Pemecahan Masalah. Bandung: PT Remaja Rosdakarya.
Soedjadi. (2007). *Masalah Kontekstual sebagai Batu Sendi Matematika Sekolah.* Surabaya: Pusat Sains dan Matematika Sekolah Unesa.
Stoltz. (2000). *Adversity Quotient: Mengubah Hambatan Menjadi Peluang.* Jakarta: PT Grasindo.
Susanah & Hartono. (2004). *Geometri.* Surabaya: Unesa University Press.
Wale et al,. (2013). *Elementary and Middle School Mathematics:Teaching Developmentally.* USA: Pearson Education, Inc.
Wallace. (1986). Creativity: Some Definitions: The Creative Personality; The Creative Process; The Creative Classroom. *Gifted Education International*, *4*(2), 68-73.
Weisberg. (2006). *Expertise and Reason in Creative Thinking: Evidence from Case Studies and the Laboratory. In Kaufman, J.C. and Baer, J. (Eds). Creativity and Reason in Cognitive Development.* Cambridge: Cambridge University Press.