Improving Study Skills Through CREAM Strategy in Papuan Students

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ABSTRACT

This study was driven by low study skills of students in their early semester. Based on the preliminary survey through an observation sheet, it was found that only 8% of the students had good time management, 19% had good concentration, 11% had good note taking skill, 17% had good intensive reading skill, and 14% had exam preparation skill. The purpose of this study was to improve students' study skills through the implementation of CREAM strategy. A total of 36 first semester students studied at STKIP Kristen Wamena, Jayawijaya, Papua, served as research subjects. This study was a classroom action research which was conducted in two cycles. The data were collected by administering Contrell Study Skill questionnaire that had been modified into a rating scale form. The data were analyzed using a descriptive analysis technique by finding the study skill improvement percentage which was categorized into less, good enough, good, and very good. Overall, the average percentage of study skills of students in the first cycle in good and very good categorieswas 35%. Meanwhile, in the second cycle, the average percentage of studentsstudy skills in good and very good categories was 56 %.

Keywords: Study skills, CREAM strategy, STKIP Kristen Wamena, Papuan students.

1. INTRODUCTION

A skill is a learned activity that individuals develop through practices and reflections[1]. Activities that are carried out consistently and continuously will form skills. Study skills are also formed through continuous and consistent practices. Study skills are not taught to students from the elementary school level until they attend higher education as stated [2] "It is ironic that one thing that is almost never taught in schools is how to learn effectively". Study skills are critical to the success of students in undergoing and completing educational process. Therefore, not a few world-renowned universities are concerned about student study skills. Professor Michael Mingos, FRS Principal of the University of Oxford explains that the Study Skills Guide has been written to help smooth the school-to-university transition by providing helpful general advice that applies to all subjects, as well as some subject-specific advice [3]. In addition, the University of Copenhagen also provides a Study Skills guide book, aimed at international students studying in Denmark for the first time [4].This shows that study skills are important aspects to consider from the early year of their college lives so that students succeed in their education.

A preliminary test was given to first semester students of English department of STKIP Kristen Wamena Papua. The daily test results showed that out of 36 students only 5 people got good grades, 8 people got good enough scores, and 23 people got bad grades. By using the Study Skills questionnaire [5], it was obtained thatonly 8% of students could manage their time effectively, 19% had good concentration, 11% could take notes from what had been learned, 17% had a good intensive reading skill, and 14% could prepare themselves for exams. Based on these results, it can be inferred that the low daily quiz scores may be associated with students' low study skills.

Many factors may cause students' low study skills. Learning experiences and educational process certainly contribute to instilling and fostering study skills in every student. The Baseline Study for Rural and Remote Education Initiative for Papuan Provinces explains how the quality and quantity of learning, attendance or learning interest of students, low teaching responsibility of teachers and parents' care for education affect students' study skills[6]. These findings are in line with the results of research studying the complexity of education in Papua (Check & Report, 2015).The results of these two studies illustrate the condition of education in the central region of the Jayawijaya mountains where the studies

wereconducted. Efforts are needed to improve student study skills, as they are determining aspects for students to be successful in taking and completing their education in tertiary institutions. This success will also affect the academic competences of human resources as the outputs of higher education.

Conttrell in [7] states "No matter how you study, it is possible to develop study skills ". Conttrell introduces CREAM strategy which comprised of five dimensions to empower students with important study skills, namely C-Creative (students apply imagination in learning to improve their confidence in using self-learning strategies and styles); R-Reflective (students learn to relate on what they learn with their own experiences, analyze and evaluate own performance, and draw lessons from oneself); E-Effective: (students learn how to be effective in organizing space, time, priorities, state of mind and resources that best suit their way of learning); A-Active: (in order to understand what is learned, students actively engage in the lesson by doing something, physically and mentally, to comprehend what has been learned); and M-Motivated: (students are aware of their realistic and achievable goals within certain set time limits)[1]. Based on a research result[8], the most important determining factors in the implementation of CREAM strategy are showing empathy and tolerance, because studentsare human beings who can learn from their mistakes.

Based on the background, the research problems formulated in this study are (1) How to apply CREAM Strategy in improvingthe study skills of early semester students at STKIP Kristen Wamena Papua?; (2) How are the improvement of students' study skills through the application of the CREAM strategy? This research aims to improve study skills through the application of CREAM strategy in early semester students at the STKIP Kristen WamenaJayawijaya, Papua, Indonesia.

1.1. Theoretical Framework

1.1.1 .Study Skills

Skills come from two words, namely skills and learning. [9] proposes that "…… skill is one of those social science words in common parlance with many meanings, numerous synonyms such as "ability", "competence", "knack", "aptitude" and "talent", and various imprecise translations in other languages. Learning is a relatively permanent change in behavior or potential behavior as a result of experience or reinforced training. Learning occurs as a consequence of the interaction between stimulus and response. Individuals are considered to have learned something if they can show a change in their behavior. Skills are competencies to perform certain task which are obtained by continuous practice, because skills are not acquired automatically, they are programmed deliberately through sustainable practices. If the

definition of skills is related to the meaning of learning it can be inferred that study skills are abilitieswhich are acquired by an individual through a continuous training process and include aspects of optimizing learning methods in the cognitive, affective or psychomotor domains [10]. Furthermore, study skills are the abilities to focus and be directed in developing a frame of mind, attitudes and competency to carry out an activity process [11]. Study skills may also be defined as a technique used to acquire, maintain, and express knowledge and are a way to solve problems [12]. Based on these definitions, the researcher summarizes that study skills are individuals' ability to hone themselvesin order to be able to apply certain methods or strategies in obtaining and achieving predetermined learning goals. "Study Smarter, Not Harder!" (University of Saskatchewanrary, n.d.) might be one of the slogans that can represent the definition of study skills.

The aspects of study skills are: (1) personal management strategies; (2) time and stress management; (3) listening skills in lectures; (4) note-taking; (5) reading more efficiently; (6) library research skills; (7) writing essays; (8) revision skills; (9) dealing with academic and exam anxiety; (10) preparing for specific exams; (11) responding effectively in exams [13]. Meanwhile, the University of Oxford Study Skills Guide outlines aspects of study skills which include: (1) time management; (2) making the best use of tutorials; (3) active learning; (4) taking notes; (5) planning and content of essays; (6) revising for exams; and (7) plagiarism [3]. However, the study skills in the present study are limited to the most fundamental skills that have be developed and improved by college students, namely: a) time management, skill in applying time management principles in academic situations and skills in prioritizing time for highly demanding courses. b) concentration, the ability to direct and maintain attention to academic tasks and also to overcome the effects of negative stimuli in achieving educational goals in tertiary institutions. c) listening & note taking, writing in learning processhelps the students to realize one of the learning objectives, namely students' understanding of what is being learned. d) reading, applying reading techniques in accordance with their goals for more effective results, through normal reading and intensive reading. e) exam preparation, skill of self-preparation for tests and using various strategies in running the test.

1.1.2. CREAM Strategy

CREAM is the abbreviation of creative, reflective, effective, active and motivational. The CREAM strategy is formulated by Stella Conttrell. C-Creative: having the confidence to use oneself strategies and styles, by applying imagination in learning; R-Reflective: able to sit with own experiences, analyze and evaluate own performance, and draw lessons from oneself; E-Effective: organize space, time, priorities,

state of mind and resources (including Information Technology, IT), to get maximum benefit; A-Active: engaging what is learned personally and by doing something, physically and mentally, to understand what has been learned; and M-Motivated: be mindful of the desired results; keep oneself on track using both short and long term goals[1]. The implementation of CREAM strategy:

Creative Learning
Learning creatively by involving learning styles.
1) Students with a visual learning style learn by making concept maps or mind maps of learning outcomes or creating imaginative images that represent information or material so that they are easy to remember.
2) Students with an audio learning style can learn through discussions in groups, arguing, explaining while recording one's own voice about the lessons that are understood / remembered, listening to recordings, turning important information into songs.
3) Students with kinesthetic learning styles may learn by mentioning or reviewing learning while carrying out activities, putting into practice knowledge that can be applied directly.

Reflective Learning
1) Finding and realizing personal weaknesses / problems that may be the cause of student failure. Reflection questions: (1) How do you feel about the lecturer, the subjects studied, classmates and the latest developments you feel. (2) Finding personal difficulties / weaknesses.
2) Finding solutions to yourself by turning weaknesses into challenges, changing attitudes, managing strategies

Effective Learning
Determining the best time and place to study, determining the priority scale of activities, courses, or assignments that must be completed.

Active Learning
Involving in the learning process and applying it, looking for connections between differences, finding the meaning of what is learned, connecting prior knowledge with the knowledge that has just been acquired, doing assignments as a project.

Motivated Learning
Determining the highest target achievement.

2. METHOD

2.1. Research Design

This type of research is classroom action research usingKammis&Tegard Model. The classroom action research was conducted in 2 cycles. Each cycle included preparation, implementation, observation and reflection. The application of CREAM strategy in the classroom research is described in Table 1.

Table 1. Implementation of CAR of CREAM Strategy

CAR		Activities
Planning		• Identifying student learning styles • Grouping students based on learning styles
Implementation	C	Providing freedom for students to study according to their own learning methods, ideas, and creativity.
	R	Providing a reflection sheet as a guide for students to find weaknesses and solutions in overcoming personal weaknesses concerning the material that has been studied.
	E	Assigning students to make schedules and priority scales.
	A	Providing assistance and guidance so that students can learn actively.
	M	Informing what materials must be mastered and the points to be obtained from each material.
Obs.		Quiz Tabulating Data
Reflection		• Providing an evaluation questionnaire of study skills • Reflecting student study skills. • Action improvements • Cycle II

2.2. Research Location

The research was conducted at STKIP Kristen Wamena, Jayawijaya, Papua.

2.3. Research Subjects

The research subjects were 36 students in the first semester of English Department, consisting of 19 boys and 17 girls. The focus of this research is study skills, which consist of aspects of time management, concentrating, taking notes on what they hear, reading and preparing for exams.

2.4. Data Collection and Analysis

The data were collected using the Study Skills Achievement Evaluation Sheet which was modified into a check list [1] with a rating scale. This aims to see an improvement in student study skills. Self-evaluation sheets are filled in periodically, namely at the end of cycle I and the end of cycle II by the students themselves. Furthermore, the data obtained from filling out the student's self-evaluation sheet was verified based on the student's assignment portfolio. This research was integrated with the Indonesian language course. Indonesian language materials were used as learning resources in implementing the CREAM strategy. The research data were analyzed using statistical-descriptive analysis techniques, by finding the average percentage using the following formula.

$$P = \frac{F}{N} \times 100$$

Keterangan:
P = Percentage
F = Frequency
N = Amount of respondents

The assessment criteria used are the Mean Ideal formula (Sujana, Nana. 2014) which is categorized into 4 criteria, namely:

1. Very High   = X>Mi + 1.5 SDi
2. High   = Mi + 1,5SDi>X≥Mi
3. Low   = Mi> X≥Mi-1,5SDi
4. Very Low   = X <Mi-1,5SDi

Mi= 0,5 X (highest score + lowest score)
SDi= 1/6 X (highest score + lowest score)

These categories are used to classify the results of improving student study skills.

3. RESULT AND DISCUSSION

A skill is an ability that can be learned and developed through practices and reflections. Skills can be adjusted, including study skills, like a runner perfecting his motion, breathing and steps or jumps.

Fine tuning a skill indirectly develops personal qualities as well (Cottrell, 2008). Tabulation of Study Skills Data described in Table 2.

Time management

Figure 1 shows the improvement of time management skills before and after implementing the CREAM strategy. Only 8% (3 persons) of students did good time management before the implementation of CREAM strategy. There was an increase, as many as 9 people or 25% of the total number of students categorized as having good time management skills at the end of cycle I. At the end of cycle II, 44% (16 people) of students had good time management skills. Although there are still 19% (7 people) of students whose time management skills are in the not good category.

Table 2. Tabulation of Study Skills Data

No	Assessment criteria	Aspects of study skills														
		Time management			Concentration			Take notes			Read			Exam preparation		
		BtC	C-1	C-2	BtC	C-1	C-2	BtC	C-1	C-2	BtC	C-1	C-2	BtC	C-1	C-2
1.	Not good	19	13	7	5	3	3	24	18	9	18	14	6	25	13	10
	Percentage	53	36	19	14	8	8	67	50	25	50	39	17	69	36	28
2.	Good enough	14	14	13	24	6	3	8	9	11	12	10	9	6	12	7
	Percentage	39	39	36	67	17	8	22	25	31	33	28	25	17	33	19
3.	Good	3	9	16	7	21	18	4	6	12	6	5	13	5	8	9
	Percentage	8	25	44	19	58	50	11	17	33	17	14	36	14	22	25
4.	Very good	0	0	0	0	6	12	0	3	4	0	7	8	0	3	10
	Percentage	0	0	0	0	17	33	0	8	11	0	19	22	0	8	28
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

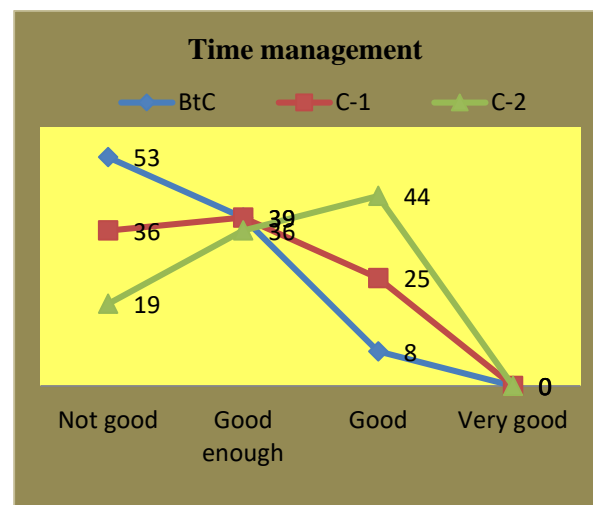Ket: BtC= Before the Circle   C-1= First Circle   C-2= Second Circle

Figure 1. Diagram of Time Management Skills Improvement

Students' study skills in the dimension of time management increased to 36% (from 3 to 13 people).

Time management skills were measured by how students recognize things or activities are very important, important and not important, then write them down in an organized schedule, and comply with them. Most students felt all activities / things were important, for example, between going to worship, playing football with friends, and preparing for exams. Initially, students had difficulty determining priorities. However, by understanding the consequences of a decision to determine priorities, students became wiser in managing their time. Time management skills can be trained to each student, depending on the student's willingness. There were still 19% (7 people) students whose time management skills were in low level. Intensive guidance is needed in providing students' understanding about how to make schedules, determine priorities and set boundaries so that what has been scheduled is carried out properly.

Concentration

Figure 2 illustrates the increase of student concentration before and after implementing the CREAM strategy. At the end of the second cycle, only 8% (3 people) of students had low concentration, 50% (18 people) of students had good concentration; even 33% (12 people) of students had very good concentration. When compared to the first cycle, there was no significant increase in student concentration.
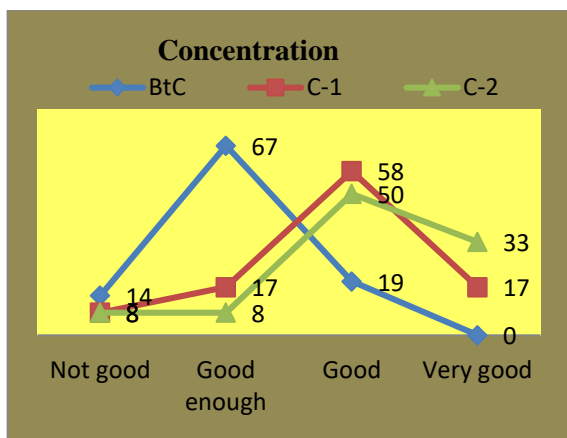

Figure 2. Diagram of Concentration Skills Improvement

There was a significant progress in the improvement of students' concentration from the pre cycle to the first cycle. The pre-cycle concentration test was carried out through the activity of mentioning the colliding colors (the names of the colors). Only 9% (7 people) of students were focused and able to say the color of the writing, the majority of the other students said or read the names of the colors. This activity was repeated to test the student's concentration. There was an increase to 56% (from 7 to 27 people), which is very significant. At the end of the second cycle, the students' concentration was assessed through the game "Pengecoh Lyrics". All short song lyrics (chorus part) were converted into other words. Students who were not concentrating

would sing the lyrics that had been replaced by mistake. The results of the observations during the activity showed that only 3 people made recurring mistakes, and 3 different people mispronounced one or two times. This data shows that the concentration of early semester students is very good. The explanations given by researchers were often interpreted incorrectly by students. So it is necessary to confirm what they understand. Often at the end of the lesson, when researchers asked about the material that had been discussed, students were just silent, unable to answer or explain. Researchers' mistaken thinking was that students have low concentration. In fact, students had very good concentration. The problem was the difference in language structure resulting in difficulty for students to understand and vice versa.

Note-Taking

Figure 3 shows note-taking skills. From pre-cycle until the end of the second cycle there was no significant increase. Good note-taking skills at the end of the first cycle amounted to 17% (6 people) and increased at the end of the second cycle to 22% (8 students). Only 11% (4 students) of students were already very good at taking notes at the end of the first cycle and the second cycle. There were still 24% (15 people) who were not skilled in taking notes.
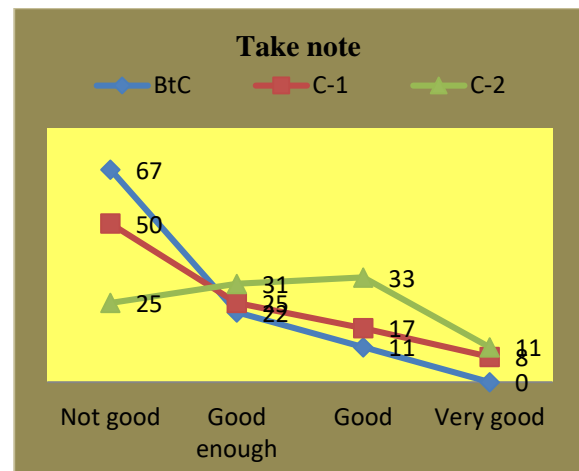

Figure 3. Diagram of Note-Taking Skills Improvement

Note-taking skills have improved although not significant. In the pre-cycle, only 11% (4 people) were good at keeping records, at the end of the first cycle it increased to 25% (9 people), and at the end of the second cycle it increased to 44% (16 people). The improved note-taking skills are the result of the information absorbed by students, discussing this information in study groups, then, taking notes in the form of summaries, concept maps or mind maps about what they understand. Student notebooks with good writing skills look very different from their appearance and content. Students used symbols to represent one word or meaning, applying various lines as markers or emphasis on their notebooks or dictates.

Reading

Figure 4 shows the students' reading skills. There were 36% (13 students) of students had good reading skills, and 22% (8 people) of students had excellent reading skills at the end of the second cycle. There were still 17% (6 people) of students with low reading skills at the end of the second cycle. However, this number is relatively higher than that in pre-cycle showing 16 students (10%) who had low reading skills.
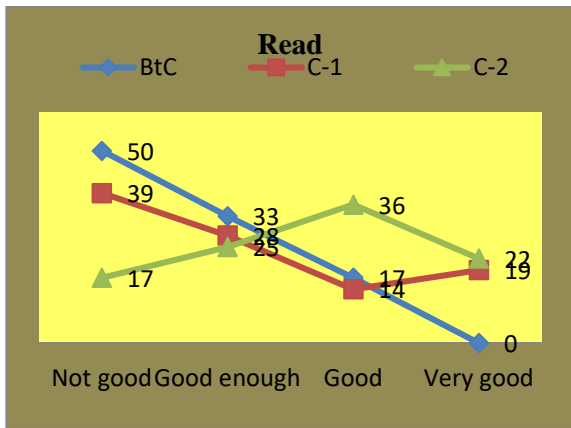

Figure 4. Diagram of Reading Skills Improvement

Exam preparation

Figure 5 demonstrates an increase in students'study skills in preparing for exams. It shows that 25% (9 people) of students were able to prepare themselves for the exam at the end of the second cycle. There was an increase of 3% (one person) from the previous cycle, where 22% or 8 people were able to prepare themselves well for the exam. In addition, there was a very significant increase from 8% (3 persons) of students who were able to prepare themselves for exams, to 28% (10 students) in the very good category in their exam preparation.
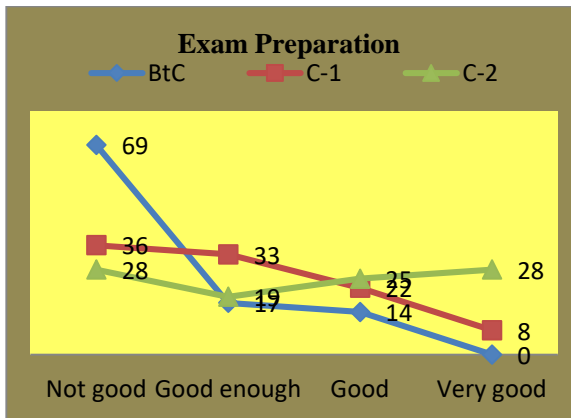

Figure 5. Diagram of Exam Preparation Skills Improvement

The improvement of study skills of early semester students at STKIP Kristen Wamenafrom pre cycle to second cycle, with good andvery good categories in

the dimension of time management, concentration, note taking, reading and preparing for exams, can be seen in Figure 6.
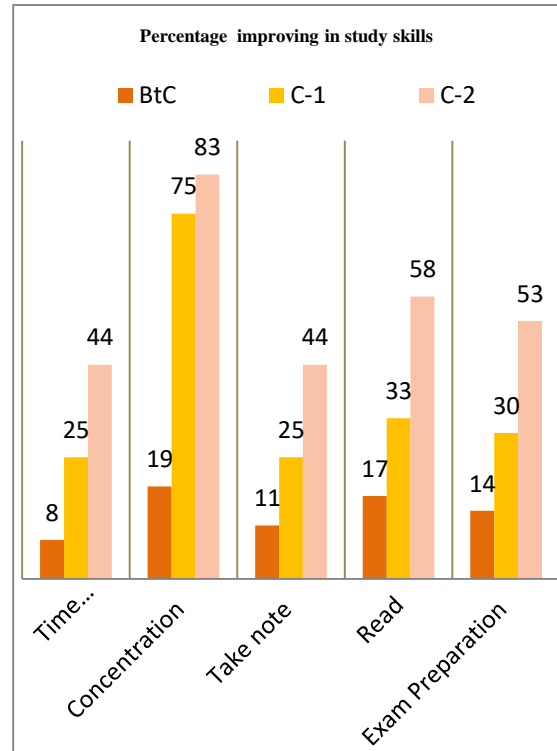

Figure 6. Percentages of Students' Study Skills Improvement

The application of the CREAM strategy in improving the study skills of early semester students started from identifying and grouping students based on their learning styles. One way to improve learning methods / techniques is to join study groups, which will provide opportunities to observe various learning methods and incorporate them into self-programs, facilitating learning particularlyin regard with the academic knowledge [14]. The conclusion of the research results [14]   that learning styles work simultaneously with creativity, there is a positive relationship between students' creativity and learning styles. Students can be more creative if they are in a group or community that has the same or even different learning styles.

Students will be more creative if they are put in a study group or community of which the members have similar learning style. In this study students were assigned to find creative strategies to remember punctuation marks and their applications.

Reflective learning was emphasized at the end of the lecture. Students were directly invited to find their weaknesses, problems or materials that were difficult to beunderstood and figure out the solutions. Basically, students in Papua are open minded individuals. This enables researchers to guide them to find learning difficulties and solutions they think are appropriate to try.

Effective learning is associated with student's ability to manage the time, to determine the scale of the project or course that should get more attention and more hard work. Effective learning dimension in this study was applied by students bydetermining priorities to masterthe exam question hints. The researcher who also served as a lecturer in the Indonesian language course compiled ten questions to measure students' competence in knowing the history of Indonesian language and its development, types of punctuation, and how to apply punctuation marks (capital letters, periods (.), Commas (,), italics, colon (:), and exclamation point (!)) according to the function. In this case, the researcher determined and communicated the maximum value that could be obtained from each answer given by students, ranging from 3 points to 20 points, depending on the difficulty level of the question. Students were expected to be able to determine the questions that had to be mastered in order to get the desired scores. This conditionwas a result of reflection in the first cycle, where based on the daily test scores, only 30% (11 people) were able to prepare themselves well or very well for the exam. Student test scores describe their ability to prepare themselves for the exam.

Active learning is related to creative learning. Students' creativity in learning can be observed when students learn actively. A group of students with an audio learning style composed a song about the types of punctuation marks and their uses. On the other hand, students with a visual learning style were more interested in seeing examples of using punctuation marks in the reference books provided.

Motivation is built by self-drive to achieve success. The condition to communicate the maximum points in each answer encouraged students to prioritize the questions they had to master in order to achieve the expected scores. In applying the CREAM strategy, students must understand what they want to achieve, how to achieve it, and how big the chances of the success are. This will build students' motivation, internally and externally.

4. CONCLUSION

The implementation of the CREAM strategy in improving the study skills of early semester students at STKIP Kristen Wamena requires special assistance and treatment from researchers. Students were not able to apply the CREAM strategy directly. In order for the CREAM strategy to be applied outside of class hours, students joined study groups according to their learning styles. In order to be able to apply the Reflective strategy, students are assisted by guiding questions. In order to be able to learn effectively, students must be guided intensively in determining priorities, by providing views of the causes and consequences of the priorities set. Students learn actively because they are involved in groups with similar learning style. In order to be able to motivate

themselves, for example in exam preparation, students must know what material must be studied and the score of each material is. Thus, students will be motivated.

Improvement of study skills with good and excellent criteria for early semester students at STKIP Kristen Wamena in terms of time management skills increased by 36%, 64% concentration aspect, 33% note-taking skill aspect, 41% reading aspect, 39% exam preparation aspect. Therefore, the average increase in student study skills through the application of the CREAM strategy is 43%. Overall, the average percentage of study skills of students in the first cycle in good and very good categories was 35%. Meanwhile, in the second cycle, the average percentage of students' study skills in good and very good categories was 56 %.

AUTHORS' CONTRIBUTIONS

This research was initiated by Meta Br Ginting in order to figure out solutions and efforts to improve students' skills in learning, more specifically those who are in the first semester studying in STKIP Kristen Wamena. The researcher reviewed some literatures related to how to improve students' skills in learning as a preliminary research of the investigation. The research was assisted by Cornelia Amanda Naitili who gave assistance in guiding and mentoring students living in dorms where at the same time she lives with the students. Furthermore, NuritaAngestiRahayu took part in research observation in classroom and collected data on components of students' learning skills.

REFERENCES

[1] S. Cottrell, The study skills handbook, Third., China: Palgrave Macmillan, 2008.

[2] J. K. Turkel, 13 Step to better study skills, pp. 1–27.

[3] S. E. Hall, Study skills, *nurse educ. Today*, vol. 4, no. 5, pp. 115–116, doi: 10.1016/S0260-6917(84)80029-5. 2008.

[4] T. M. Von R. Harboe, For international students, *Provider*, pp. 2016–2017, 2007.

[5] Educationcorner.com, Study skills checklist, pp. 11–13.

[6] M. Nielsen, Baseline study for rural and remote education initiative for Papuan Provinces report of Findings," *Unicef*.

[7] M. Zaheer, Get empowered by CREAM," *Clear. Conf. Proc.*, no. October, 2016.

[8] M. Milad, Applying the CREAM strategy for coaching teaching practices, *IAFOR J. Educ.*, vol. 5, no. 1, pp. 65–82, doi: 10.22492/ije.5.1.04. 2017.

[9] F. Green, What is skill ? an inter-disciplinary synthesis no. January 2011, 2015.

[10] L. Budiarjo, Keterampilan belajar. Yogyakarta: Andi, 2007.

[11] N. Aidi, "Upaya Meningkatkan Kreativitas dan Keterampilan Belajar Siswa Melalui Model Pembelajaran Work Based Learning pada Pembelajaran Praktik Pemesinan Frais Dasar Bagi Siswa Kelas Xc Jurusan Teknik Pemesinan SMK Warga Surakarta Semester Genap Tahun Ajaran 2016," *Semin. Nas. Pendidik. Vokasi ke-2*, 2017, pp. 313–319.

[12] R. F. U. Jambi, "Keterampilan Belajar," pp. 7–29, 2020.

[13] F. Orr, "STUDY SKILLS For Successful Students," pp. 1–137, doi: 10.1016/j.paid.2017.09.035. 1992.

[14] E. Hammar Chiriac, "Group work as an incentive for learning â€" studentsâ€™ experiences of group work," *Front. Psychol.*, vol. 5, 2014, pp. 1–10, doi: 10.3389/fpsyg.2014.00558.