

## **Practical Skill Competencies Of Vocational High School Students Based On Cooperative Learning Types Of Student Team Achievement Divisions (STAD)**

**Eni Hartati , Syamsul Bachri Thalib , Mustafa**

Program Pascasarjana, Makassar State University, Indonesia.

---

### **Abstract**

The implementation of learning that is still teacher-centered causes students to feel bored, and less involved in learning activities, so it is necessary to use an effective learning model in a lesson. The purpose of this research in literature is to see the use of the STAD learning model in improving the practical skills competence of SMK students. This research is a type of descriptive qualitative research with descriptive analysis and comparative literature from various journals and related research. The data in this study are analytic literative. Sources of data from previous studies related to research that are relevant to this research are the main key to the presentation of data analysis as a theoretical study which will be followed by further research. The main problem in this study is the results of observations from renewable research which concludes that there is learning that is still one angle, one object, namely the teacher. In fact, there is an awareness that is natural and intelligent of students that must be mixed so that they can place themselves in choosing education and understand the knowledge they are learning. The conclusion of this study is the strengthening of the STAD type cooperative learning model in improving the practical skills competence of vocational students. The implication of this research is that the STAD model treatment can encourage students to be more active in the learning process, foster student curiosity, and train students' thinking skills.

**Keywords:** vocational students' skill competence, STAD, cooperative learning.

### **INTRODUCTION**

Improving the quality of education is basically inseparable from the teaching and learning process. The teaching and learning process is essentially a communication process in which there are various activities, one of which is the delivery of subject matter (Maulida, M., Wati & An'nur, 2015; Morelent & Syofiani, 2018; Prasetyo et al., 2016). Education is a dynamic force in the life of every individual, which affects his physical development, mental power (reason, taste, and will), social and morality (Arwanda et al., 2020; Purwanti, 2017; Wahyudin, 2018). Education can be defined as all planned activities with organized material, carried out on a scheduled basis in a supervisory system and given an evaluation based on predetermined goals.

Teaching and learning activities are the main activities in the entire educational process in the classroom. The success of achieving educational goals depends a lot on the quality of the

implementation of the teaching and learning process. The teaching and learning process in schools is strongly influenced by the activities or methods and methods used by the teacher. Educational methods are methods used by teachers or groups of people to guide children or students according to their development towards the goals to be achieved (Esminarto et al., 2016; Hazmiwati, 2018; Yuliarni et al., 2013). The teacher's ability to deliver material is important in the teaching and learning process. The emergence of many obstacles both from the students and the teachers as educators related to the learning model in the application of learning. Varied learning models can make students feel happy and more active in participating in the learning activities carried out (Rahmadani et al., 2018; Viviyung, 2015; Wahyuni, 2019).

The Student Teams Achievement Divisions (STAD) cooperative learning model is a learning method that focuses on teaching and problem-solving skills, followed by skill strengthening (Nurhazannah, 2017; Suratno, 2013; Viviyung, 2015). The use of varied learning models is considered capable of increasing the enthusiasm of students in participating in the teaching and learning process, for with cooperative learning as much as possible student participation in acquiring knowledge is very necessary. The teaching method that will be applied must pay attention to the target or subject of the action actor.

According to Faridah et al., (2016; Maharani, 2017; Rudyanto, 2016) students in the adolescent category tend to want to be independent, want everything to be free, demand creativity, want to be appreciated as big children who don't want to be confined but want to be free. Therefore, the learning method is an alternative choice and can be applied to vocational students. The advantages of the Student Teams Achievement Divisions (STAD) cooperative learning model are (1) it encourages students to be more active in the learning process, (2) can foster student curiosity, (3) trains students' thinking skills in solving problems, (4) fostering interaction between students shows that the learning model can improve student learning outcomes (Kristin, 2016; Sofianti et al., 2013; Wardani, 2015).

This study focuses on the use of the Student Teams Achievement Divisions (STAD) cooperative learning model. This model is one of the simplest types of cooperative learning models, and is the best model to use at the beginning for teachers who are new to using a cooperative approach (Slavin, 2015:143). STAD consists of five main components, namely class presentations, teams, quizzes, individual progress scores, and team recognition. Students are divided into certain groups and the division of each group consists of students with different levels of achievement, student of different gender, ethnicity, religion, and race. In practice, the STAD model requires students to actively participate in discussions when the teacher gives assignments while the teaching and learning process is taking place in class.

The learning process for competence focuses on the process of achieving standardized results through appropriate and correct procedures, and is supported by adequate learning tools. The competence of students needs to be equipped with learning models that are in accordance with their field of expertise. The learning model is a conceptual framework that describes a systematic procedure for organizing certain learning experiences and serves as a guide for teaching and learning designers (Trianto, 2009).

This shows that the learning model can improve students' activities and learning outcomes, by applying the Student Teams Achievement Divisions (STAD) type cooperative learning

model, students will be more active and creative in solving problems encountered in learning, it can improve students' memory. Regarding the learning material that has been delivered, students better understand the content of the material being taught because students are directly involved in the learning process so that student learning outcomes will increase, so as the practical competence of vocational students will increase and in accordance with educational goals.

This research is supported by several relevant studies such as: (1) research conducted by (Rahmadani et al., 2018), which obtained the results that the development of teaching materials obtained a mathematical module based on the STAD type cooperative model with a guided discovery method that was valid, practical, and effective; (2) research conducted by (Viviyung, 2015), which obtained the results that the use of the STAD type cooperative learning model can improve Civics learning outcomes; (3) research conducted by (Febriana, 2017), which obtained the results that the competency-based learning model with a world of work approach in the D3 Catering program was effective for use in the learning process. To see student competence, it is necessary to have an evaluation, this evaluation has the function to assess the results and learning process. Where the goal is to find out the completeness of students in mastering the indicators of basic competencies that have been set.

Related to this, Nana Syaodih Sukmadinata, (2004: 102) states that "Learning achievement can also be referred to as learning outcomes which are the realization or expansion of potential skills or capacities possessed by a person which can be seen from behavior in the form of mastery of knowledge, thinking skills as well as motor skills. Similarly, Nana Sudjana (2015: 22) in her book argues that "Learning outcomes are abilities that students have after they receive their learning experiences". Learning achievement comes from the words, "achievement" and "learning" (Zainal Arifin, 1990: 2-3). Achievement is a result that has been achieved.

In the SKKNI standard above, it certainly becomes a model of learning objectives that must be achieved. So, it requires innovation and collaboration of learning systems to achieve educational goals in accordance with these standards. In addition, learning innovations can also develop and vary. Because the cooperative learning system has an emphasis on the responsibility system, which is directly related to the development of students' mindsets. Then it collaborates with STAD, which can support students to conduct group and self-assessments. The existence of this evaluation can improve the learning process.

Based on the explanation above, to see the competence of SMK students by referring to the SKKNI, it is necessary to have a more innovative learning process. Therefore, this study wanted to analyze descriptively related to student competence through STAD-based cooperative learning (Students Teams Achievement Divisions) in the hope of becoming a learning pattern to further activate students in the learning process.

## **METHODOLOGY**

The type of research used in this research is descriptive analysis. As stated by Sugiyono (2009:35) that qualitative research can be in-depth research if it uses an in-depth approach, such as descriptive analysis. Where descriptive analysis is used for the foundation of further research that is developmental and applicable. This is emphasized by Sugiyono (2017:146) that qualitative research is research that examines the depth of literary data analysis. So as the basis

for conducting further research that is practical and developmental.

The data taken are from several previous studies related to the application of the STAD cooperative learning model in the education space. Therefore, the data displayed is the data of previous research in the table model. Then conclusions are drawn from several previous studies, and become reinforcement for this research. The data collection technique in this research is to analyze the literative data sources and then compare them. The raw data that has been collected is then processed and analyzed. The data analysis technique used is the descriptive quantitative statistical data analysis technique, which is used to get an overview of the distribution of research data for each variable as it is, without making conclusions that are applicable to the public. The raw data that has been collected needs to be processed and summarized so that it can be described and easily understood.

## **DISCUSSION**

### **1. Overview of Vocational High School Students' Skill Competencies**

The description of the quality of vocational education graduates is based on the adjustment of the opinion of Finch and Crunkilton (1999: 15-16) that the quality of vocational education applies a double measure, namely quality in school or in-school success standards and quality in society out-of-school success standards. The first criterion covers aspects of the success of students in meeting curricular demands oriented to the demands of the world of work, while the second criterion includes the success of students who are shown in their ability to perform in accordance with national or international competency standards after they are in the actual field of work. The competency profile of SMK graduates consists of general competencies and vocational competencies, each of which contains key competencies. General competencies refer to the goals of national education and generic life skills, while vocational competencies refer to the Indonesian National Work Competency Standards (SKKNI). In the SKKNI there are 176 areas of industrial practice performance, all of which are references to SMK institutions.

The projected expertise program has developed very rapidly. Among them are Programs in Agriculture, Tourism, Marriage, Marine, Business, Offices, Health and Technology (Information, Electricity, Machinery) (Premono, 2010). Article 20 paragraph (1) of Law no. 20 stipulates that every student in each educational unit has the right to receive educational services in accordance with their talents, interests, and abilities. In other words, one of them is a vocational high school (SMK). The SMK curriculum is made so that students are ready to work directly in the world of work. The curriculum content in SMK is structured in such a way as to suit the needs of the existing world of work. This is done so that students do not experience difficulties. This is in line with the objectives of vocational secondary education, namely according to PP. 17 article 77, 2010: 55 namely, a) have faith and fear God Almighty, have noble character, and have a noble personality, b) knowledgeable, capable, critical, creative, and innovative, c) healthy, independent, and confident, and d) tolerant, socially sensitive, democratic, and responsible. Vocational Schools play a role in preparing students to be ready to work, both working independently and filling existing job vacancies. Vocational school development must be oriented to determining labor market demand. Calhoun & Finch, 1982, as quoted by As'ari

Djohar, 2008, defines vocational education as follows. "Vocational education is organized educational programs which are directly related to the preparation of individuals for paid or unpaid employment, or for additional preparation for a career requirements other than a baccalaureate of advanced degree."

According to Djohar (2008), the components related to employment include three main aspects, namely (1) employment opportunities for all who need them in a structure of employment that ensures continuity between individual choices, adequate income, and community fulfillment of goods and services; (2) education and training capable of optimally developing human potential; and (3) adjustment mechanisms between people and work, without harming individuals or the amount of production. From these three components, it is very clear that education is one of the important components in the world of employment, especially in the second component which can be fulfilled by SMK (at the secondary school level) and vocational education (at the higher education level).

## **2. Supporting Research Sources**

Research conducted by Purnawati (2007) in her research entitled "Application of Student Teams Achievement Divisions (STAD) Cooperative Learning Methods on Student Achievement in Accounting Education and Training Class X SMK Cokroaminoto I Surakarta Training Year 2007/2008". The results showed that there was an increase in student achievement through the STAD method with several indicators, including: (1) students seemed more enthusiastic and enthusiastic in participating in teaching and learning activities, (2) students seemed more enthusiastic and enthusiastic in participating in group discussion activities, (3 ) during the delivery of material by the teacher, students look active and understand in the sense that they respond to questions from the teacher, (4) an increase in student learning outcomes from 38.46% as many as 10 students in the first cycle increased to 21 students by 80.77 % in cycle II.

Dwi Permestiaty (2006) in his research entitled "Application of Student Teams Achievement Divisions (STAD) Cooperative Learning with LKS for Strengthening the Basic Concepts of Ecosystems". The results showed that: (1) the students' concepts on the basic material of ecosystems that experienced strengthening were the organization of life in Cycle I and Cycle II which increased by 43.59%, components of the ecosystem in Cycle I and Cycle II increased by 15.39%. , the interaction between ecosystem components in Cycle I and Cycle II increased by 38.46%, the types of ecosystems in Cycle I and Cycle II increased by 10.26%, (2) the quality of learning biology that has increased was group learning increases learning motivation. you in Cycle I and Cycle II have increased 0.5%.

Through group studying, I was more motivated to think in Cycle I and Cycle II increased 0%, I preferred to study in groups rather than individually in Cycle I and Cycle II experienced an increase of 0%, group learning made it easier to understand the lessons in Cycle I and Cycle II experienced an increase of 0%, group learning is more encouraging to express an opinion 0.5%.

Likewise, research conducted by Theresia, et., al. (2019) in his research on the implementation of STAD type cooperative learning is intended as an effort to improve students' mathematical understanding. The main purpose of this study is to examine the increase in mathematical understanding of each indicator. Besides, this research is also to examine the

opinions of students and teachers about the implementation of STAD cooperative learning. The subjects in this study were class VIII A students who had superior abilities at SMP Negeri 52 Bandung. The instruments used in this study were comprehension tests, questionnaires, observation sheets, lesson units and lesson plans, daily journals, and interviews. This research was carried out in 3 cycles, where each cycle consisted of 4 main activities, namely planning, action, observation, and reflection. From the results of the study, it was found that there was an increase in the average understanding of students from previous learning.

Mastery learning classically increases in each cycle, from the poor to the good category. However, the mastery of classical learning after the sub-summative test is said to be sufficient because only 77.27% of the total number of students have achieved learning mastery. In addition, there is an increase in the level of understanding of each indicator. This can be seen from the level of understanding of students who understand wholly increases in each cycle, thus showing that students who were initially at the level of understanding of students who understand partly, partially understand misconceptions, misconceptions or do not understand have shifted to a level who fully understands. This increase can also be seen in the average level of student understanding which increases in each cycle. In terms of attitudes, both teachers and students gave a positive response to STAD cooperative learning. With this learning, students more easily understand each material given. In addition, student activity will always encourage the level of learning success. Based on the results of research and discussion, suggestions can be made that the type of STAD cooperative learning can be used as an alternative in an effort to improve student understanding.

The subjects taken in the research conducted by Agus Setya Reni are trading companies. The subject matter used in Cycle I was recording transactions into a special journal, while in Cycle II the subject matter used was posting from a special journal to the general ledger. This study uses different objects in using the subject matter, namely adjusting journals in Cycle I and work balances in Cycle II. The research conducted by Dwi Permediati is to add LKS as its object and its application is carried out in one of the natural science subjects, namely biology. This research does not add LKS as its object and is carried out on social science subjects, namely accounting.

That is, studies related to STAD (Students Teams Achievement Division) as stated by Arends (2001) that the STAD pattern has several goals that are cognitive and social, in addition, STAD has simple but focused information, the exist of learning groups that are mutually exclusive. dependent on each other, cooperative learning. This is of course related to graduation standards, where the Graduate Competency Standards (SKL) of educational units are qualifications of graduates' abilities that include knowledge, skills, and attitudes, which are used as assessment guidelines in determining student graduation from education units. Graduate competency standards include competencies for all subjects or groups of subjects (E. Mulyasa, 2011: 91).

Therefore, STAD-based learning is very important to achieve educational goals, as well as achieve graduate value standards. The implication is the development of students' intelligence. Learning is a translation of instruction, which is widely used in education in the United States. This term is heavily influenced by the flow of cognitive-holistic psychology implying reciprocal

interaction and transactional communication between teachers and students to achieve the goals that have been set. Learning that stimulates the development of students' intelligence will be in line with several principles of learning itself, among others are Encourages Contact Student and Faculty, the frequency of contact between teachers and students, Develops Reciprocity and Cooperation Among Students, efforts to improve student learning even better. Active Learning, Feedback, Time of Task, making good use of time, communicating high expectations, building communication between teachers and students, Respecting Diverse Talents and Ways of Learning, students are given the opportunity to show their talents and learn by their own way of working (Akhmad Sudrajat, 2016:57).

From the explanation of the data sources above, it is known that STAD-based learning is an effort to build learning principles as stated by Akhmad Sudrajat. That the mental development of students and the development of students' intelligence depends on how the learning principles are carried out, and really provide opportunities for students to develop themselves and their intelligence through learning approaches that are not monomethodological and more innovative. STAD is the basis of learning that responds to innovation and self-development.

## **CONCLUSION**

From the explanation of the data and research sources above, this research can be concluded that STAD or the Students Teams Achievement Division is a learning model that does not only focus on achieving learning outcomes but also trains cooperative students so that they become competent students. Application of cooperative learning model type Student Team Achievement Division (STAD) which has increased in cycle I to cycle II so as to achieve the success indicators that have been set. The learning process by applying the Student Team Achievement Division (STAD) type of cooperative learning model can improve student learning outcomes. So that to achieve the Indonesian National Work Competency Standards (SKKNI) for vocational students, it is necessary to have the type of STAD cooperative learning model. This is in line with the results of previous studies. Therefore, this research can descriptively see how the STAD type cooperative learning process improves learning outcomes which indicates an increase in the competence of SMK students.

## **REFERENCES**

- Arends, R.I. (2001). *Exploring Teaching: An Introduction to Education*. New. York: Mc Graw-Hill Companies.
- Arifin, Zainal. (1990). *Evaluasi Instruksional: Prinsip-Teknik-Prosedur*. Bandung: Remaja Rosdakarya
- Arwanda, P., Irianto, S., & Andriani, A. (2020). Pengembangan Media Pembelajaran Articulate Storyline Kurikulum 2013 Berbasis Kompetensi Peserta Didik Abad 21 Tema 7 Kelas IV Sekolah Dasar. *AlMadrasah: Jurnal Pendidikan Madrasah Ibtidaiyah*. <https://doi.org/10.35931/am.v4i2.331>
- Departemen Pendidikan Nasional, (2003). *Undang– Undang Nomor 20 Tahun 2003 Tentang Sistem Pendidikan Nasional*. Jakarta: Depdiknas.

- Djamarah, Syaiful Bahri. (2005). *Guru dan Anak Didik Dalam Interaksi Edukatif Suatu Pendekatan Teoritis Psikologis*. Jakarta: PT. Rineka Cipta.
- Esminarto, E., Sukowati, S., Suryowati, N., & Anam, K. (2016). Implementasi Model STAD Dalam Meningkatkan Hasil Belajar Siswa. *Briliant: Jurnal Riset Dan Konseptual*, 1(1), 16. <https://doi.org/10.28926/briliant.v1i1.2>
- Faridah, N., Isrok'atun, I., & Aeni, A. N. (2016). Pendekatan Open-Ended Untuk Meningkatkan Kemampuan Berpikir Kreatif Matematis Dan Kepercayaan Diri Siswa. *Jurnal Pena Ilmiah*, 1(1), 1061–1070. <https://doi.org/10.23819/pi.v1i1.3025>
- Febriana, Rina. (2017). Efektivitas Model Pembelajaran Berbasis Kompetensi Dengan Pendekatan Dunia Kerja Pada Program D3 Tata Boga, No. 1. DOI: <https://doi.org/10.21831/cp.v36i1.8891>
- Finch, C. R & Crunkilton, J. R. (1999). *Curriculum development in vocational and technical education: planning, content and implementation*. Boston: Allyn and Bacon, Inc.
- Hasim, et., al. 2017. Penerapan Model Pembelajaran Kooperatif Tipe Student Teams Achievement Division (STAD) Terhadap Respon Siswa Kelas Xi Teknik Pemesinan Di Smk Dharma Siswa 1 Sidoarjo. *JPTM 691*) 2017, 151-155
- Kristin, F. (2016). Efektivitas Model Pembelajaran Kooperatif Tipe STAD Ditinjau Dari Hasil Belajar IPS Siswa Kelas 4 SD. *Scholaria: Jurnal Pendidikan Dan Kebudayaan*, 6(2), 74–79. <https://ejournal.uksw.edu/scholaria/article/view/230>
- Kuswana, W. S. (2013). *Dasar-dasar Pendidikan Vokasi dan Kejuruan*. Bandung: Alfabeta.
- Maulida, M., Wati, M., & An'nur, S. (2015). Pengembangan Bahan Ajar Berbasis Pendidikan Karakter Dalam Mendukung Implementasi Kurikulum 2013. *Berkala Ilmiah Pendidikan Fisika*, 3(1), 11–19. <https://doi.org/10.20527/bipf.v3i1.760>
- Mulyasa, Enco. 2009. *Kurikulum Tingkat Satuan Pendidikan*. Bandung: PT. Remaja Rosdakarya.
- Nurhazannah, Y. (2017). Meningkatkan Hasil Belajar Siswa Menggunakan Model Pembelajaran Kooperatif Tipe StudentTeam Achievement Devision (STAD). *Jurnal Pendidikan Matematika Dan IPA*, 8(2), 50–59. <https://doi.org/10.26418/jpmipa.v8i2.21176>
- Permestiati, Dwi, 2006. Penerapan Pembelajaran Kooperatif Metode Student Team Achievement Division (STAD) Disertai LKS untuk Penguatan Konsep Materi Pokok Ekosistem. UNS.
- Premono, Agung, 2010. Kompetensi Keahlian Sekolah Menengah Kejuruan: Antara Kebijakan dan Realita. *Jurnal Pendidikan Penabur*, 15(9) 2010.
- Purnawati, Novia, 2007. Penerapan Metode Pembelajaran Kooperatif Tipe Student Teams Achievement Divisions (STAD) terhadap Prestasi Belajar Siswa Mata Diklat Akuntansi Kelas X SMK Cokroaminoto I Surakarta Tahun Diklat 2007/2008. Fakultas Keguruan dan Ilmu Pendidikan Universitas Sebelas Maret.
- Rahmadani, Y., Tayeb, T., & Baharuddin. (2018). Modul Matematika Berbasis Model Kooperatif Tipe STAD Dengan Metode Penemuan Terbimbing Pada Pokok Bahasan Teorema Phytagoras. *Lentera Pendidikan : Jurnal Ilmu Tarbiyah Dan Keguruan*, 21(1), 23–32. <https://doi.org/10.24252/lp.2018v21n1i3>
- Risma. (2012). Efektivitas Model Pembelajaran Tipe Student Team Achievement Division (STAD) dengan Model Pembelajaran Konvensional pada Mata Diklat Mengenal Alat dan

- Bahan Bangunan. *Jurnal Nasional-Skripsi* 1(1), hlm. 1-15.
- Sharan, S. (2014). *The Handbook of Cooperative Learning Methods*. Yogyakarta: Istana Media.
- Slavin, E. Robert. 2008. *Cooperatife Learning*. Bandung: Nusa Media.
- Sudjana, Nana. 2015. *Penilaian Hasil Proses Belajar Mengajar*. Bandung: PT. Remaja Rosdakarya.
- Sugiyono. 2009. *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, dan R&D)*. Bandung: Alfabeta
- Suharsimi, Arikunto dkk. 2009. *Penelitian Tindakan Kelas*. Jakarta: PT Bumi Aksara.
- Sukmadinata, Nana Syaodih. 2004. *Metode Penelitian Pendidikan*. Bandung: remaja Rosdakarya.
- Theresia, et., al. 2019. Kajian Penerapan Metode praktikum dengan pendekatan STAD pada mater korosi. *Oxygenius Journ Of Chem*, 1(1) 2019, 10-14.
- Trianto. (2009). *Mendesain Model Pembelajaran Inovatif Progresif*. Jakarta: Kencana.
- Viviyung, 2015. *Penggunaan Model Pembelajaran Kooperatif Tipe Stad Untuk Meningkatkan Hasil Belajar Pkn Siswa Kelas V Sd Negeri 32 Sungai Limau Kabupaten Padang Pariaman*. *JPPI* 1(1) 2015, 38-46, Akses Online: <http://jurnal.iicet.org>