

## LEARNING STYLES, SENSE OF CLASSROOM COMMUNITY AND STUDENT ENGAGEMENT IN HYBRID LEARNING

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### Article History

Received:

29-03-2023

Revised:

24-05-2023

Accepted:

26-05-2023

Available online:

30-06-2023

### ABSTRACT

The aims of this study were: to analyze differences in learning outcomes, learning satisfaction, a sense of class community, and student involvement between the experimental and control classes, to analyze the effect of learning styles on learning outcomes, learning satisfaction, a sense of class community, and student involvement. This type of research is a quasi-experimental, with a population of accounting education students. The sampling technique uses purposive. Data collection techniques in the form of tests and questionnaires. Data analysis techniques in the form of prerequisite tests and hypothesis testing. The results of the study are: there is no difference in learning outcomes and learning satisfaction between hybrid and face-to-face learning, in hybrid learning there is a difference in sense of classroom community with face-to-face learning, in hybrid and face-to-face learning there is also no difference in student engagement, overall learning style. has a positive effect on learning outcomes, learning satisfaction, and sense of class community, and learning styles have no effect on student engagement

**Keywords:** Learning styles, Sense of Classroom Community, Students' engagement, Hybrid learning

### ABSTRAK

Tujuan penelitian ini adalah: menganalisis perbedaan hasil belajar, kepuasan belajar, sense of classroom community, dan student engagement antara kelas eksperimen dan kontrol, menganalisis pengaruh gaya belajar terhadap hasil belajar, kepuasan belajar, sense of classroom community, dan student engagement. Jenis penelitian berupa quasi experimental, dengan populasi mahasiswa pendidikan akuntansi. Teknik sampling menggunakan purposive. Teknik pengumpulan data berupa tes dan kuesioner. Teknik analisis data berupa uji prasyarat dan uji hipotesis. Hasil penelitian yaitu: tidak ada perbedaan hasil belajar dan kepuasan belajar antara pembelajaran hybrid dan tatap muka, dalam pembelajaran hybrid ditemukan perbedaan sense of classroom community dengan pembelajaran tatap muka, pada pembelajaran hybrid dan tatap muka juga tidak ditemukan perbedaan dalam student engagement, gaya belajar secara positif berpengaruh terhadap hasil belajar, kepuasan belajar, dan sense of classroom community, dan gaya belajar tidak berpengaruh terhadap keterlibatan siswa.

**Kata kunci:** Gaya belajar, kelas komunitas, Keterlibatan Siswa, Pembelajaran Hybrid

## A. INTRODUCTION

Currently, online learning has been used since the Covid-19 Pandemic from the elementary to tertiary education level. Although several studies have compared the effectiveness of online learning with face-to-face learning, the results from these studies have been inconsistent. Most published studies show no difference in student learning outcomes and student satisfaction, regardless of whether learning is taken face-to-face or online. Several studies show that there is no difference in student performance and satisfaction between students in online learning or face-to-face learning (Shamsuddin & Kaur, 2020) (Yudhira, 2021) (Zenab & Sukawati, 2022).

Other findings are different which state that online learning has an effect on learning outcomes. Study from Anggrawan, (2019), (Bali & Liu, 2018) (Gherheş et al., 2021) which shows that online learning provides learning outcomes for students who can achieve better performance and provide a higher level of satisfaction than students who take part in face-to-face learning. However, several other researchers have mentioned the negative effects of online learning, including the finding that students in online learning feel less satisfied (Abas, 2015) (Gherheş et al., 2021) (Bird et al., 2022). Thus, more research is needed with different perspectives related to this topic.

When discussing student learning effectiveness, individual characteristics, students' engagement and group climate, these three things are very influential factors. Past research supports the idea that individual differences play an important role in studying and learning (Oosterheert & Vermunt, 2001)(Price, 2004). One particular concept that has provided some valuable insight into student differences is learning styles. Learning style is a combination of how a person absorbs knowledge and how the information or knowledge obtained is organized and processed. Understanding learning styles is a consistent way for students to understand, remember, think and solve problems with stimuli and information (Cassidy, 2004) (Hatami, 2013). Many individuals prefer to understand and process information in a certain way. Even if the learning methods and materials do not fully suit students' learning styles or do not suit students' personal preferences, motivated students will continue to learn. However, if teaching materials are adapted to students' learning styles, students will learn and understand more quickly and easily (Pashler et al., 2009)(Razzak et al., 2019).

In addition to learning styles, learning also requires a feeling of connectedness between one person and another, or between groups and other groups. Students who are involved in classroom learning often feel that they are part of a group. In learning, the connectedness between one student and another student plays an important role in creating a supportive, collaborative, and inspiring environment (Erdem Aydin & Gumus, 2016). This allows for a richer exchange of knowledge, development of social skills, mutual reinforcement of motivation, and greater opportunities for personal and career development (Graff, 2003) (Erdem Aydin & Gumus, 2016)(Anlı, 2019). This connection is called the sense of classroom community.

The development of hybrid learning refers to merging or integrating direct learning (face-to-face) and online learning (Kastornova & Gerova, 2021). Hybrid learning creates a more flexible learning experience, combining the advantages of both face-to-face learning approaches and online learning. Hybrid learning is flexible in terms of time and place. Students have the flexibility to study anywhere and anytime, can access learning materials online and study independently, and attend scheduled face-to-face sessions. This allows students to manage their own time and access learning materials according to their needs.

Hybrid learning also has advantages in the use of technology. Hybrid learning uses technology to support the learning process. Students can access online learning materials, communicate with fellow students and teachers through digital learning platforms, and use interactive learning aids. Technology enables easier access, rapid dissemination of information, and more engaging learning experiences (Saichaie, 2020). Although in hybrid learning there are learning components that are carried out online, hybrid learning still provides opportunities for direct interaction between students and teachers, as well as collaboration with fellow students. Face-to-face sessions can be used for discussions, group activities, or live demonstrations. This helps in the development of social skills, cooperation, and problem solving through direct interaction. Hybrid learning can also increase student engagement through engaging and interactive use of technology. Students have the opportunity to study through a variety of formats, such as videos, animations, games or online discussion forums. This helps increase students' interest and motivation in learning (Meydanlioglu & Arikan, 2014).

The implementation of hybrid learning is currently implemented in schools and tertiary institutions, namely combining face-to-face with online learning. Research shows that this combination has the potential to promote learner-centered learning and can increase engagement (Dori & Belcher, 2005). Hybrid learning began to be intensively used, especially during the COVID-19 pandemic. This pandemic has forced many educational institutions to adopt a learning model that combines elements of in-person and online learning to keep students and teachers safe. Hybrid learning allows educational institutions to continue the learning process despite school closures or unexpected changes in conditions. This model allows for smoother transitions between in-person and online learning, so learning doesn't have to stop completely.

Although introduced as a response to the pandemic situation, hybrid learning also provides an opportunity to enrich long-term learning experiences by leveraging technology and promoting flexibility in education. There hasn't been much research on hybrid learning, especially research exploring practical courses and prospective teacher students exploring experiences with hybrid learning.

Recent research on hybrid learning has become a spotlight in the world of education. This learning method combines the use of digital technology with face-to-face interactions in the classroom, creating a dynamic and integrated learning environment. Recent studies have shown that hybrid learning can provide a number of significant benefits for students. In this context, the use of technology allows students to access

learning materials online, repeat lessons, and work on assignments more flexibly. Meanwhile, direct interaction with teachers and fellow students in class helps build social connections, active engagement, and in-depth discussion. These studies also highlight that hybrid learning can increase student engagement, develop critical thinking skills, and facilitate collaborative problem solving. In addition, the researchers also found that hybrid learning can increase student motivation and reduce the level of boredom towards learning. These findings show the great potential of a hybrid learning approach in shaping a holistic learning experience, aligning technological developments with the needs of quality education. Along with the progress of this research, it is hoped that the use of hybrid learning will be increasingly developed and widely applied to improve student learning outcomes at various levels of education.

The purposes of this study were: (1) To find out whether there were differences in learning outcomes between the experimental and control classes, (2) To find out whether there were differences in learning satisfaction between the experimental and control classes, (3) To find out whether there were differences in Sense of Classroom Community between the experimental and control classes, (4) to find out whether there are differences in students' engagement between the experimental and control classes, (5) to determine the effect of learning styles on learning outcomes, (6) to determine the effect of learning styles on learning satisfaction, (7) To find out whether learning styles affect Sense of Classroom Community, (8) To determine the effect of learning styles on students' engagement.

## **B. RESEARCH METHOD**

In this study, the research approach is a quantitative approach and is of the Quasi Experimental type. This type of research is almost similar to the type of classical research, but helps researchers to see causal relationships from various situations that exist. It is called quasi because it is a variation of classic experimental research. In this study the controls were better than the pre-experimental, but there were still weaknesses, because usually no equivalence was reached between the experimental and the control group. Research experiment means an experimental method to study the effect of certain variables on other variables, through trials under special conditions that are deliberately made. So what is meant here is that there are special conditions created by researchers to try out methods or techniques and strategies that will be carried out by researchers. However, the type of method used is quasi-experimental.

The concentration in this study was active fourth semester students who were taking accounting computer courses, who had previously taken introductory accounting courses and accounting computer delivery courses. The total population consisted of 4 classes, namely: Accounting Education A, Accounting Education B, Accounting Education C. The sampling technique used was purposive sampling, namely that 1 class was obtained as an experimental class (which implemented hybrid learning) and 1 other class was a control class (offline learning).

The indicators used for learning styles use the Experiential Learning Theory (ELT) developed by David Kolb classifying student learning styles into 4 main tendencies: Experiential Learning Theory which involves four learning styles: convergent (thinking and acting), divergent (seeing situations from different points of view), assimilation (understanding and organizing information), and accommodation (learning through direct experience ). Sense of Classroom Community indicators include: connectedness items, learning items. The indicators used for student's engagement are: Behavioral Engagement, Emotional Engagement, and Cognitive Engagement. Learning outcomes use the score of the final semester examination, and indicators of learning satisfaction include: real, responsiveness, certainty, and empathy.

Data collection techniques used for this study were tests and questionnaires. The types of tests used in this study are ability tests and quizzes. An aptitude test to measure skills related to speed, safety or both. In addition to tests, data collection was also carried out through questionnaires which were distributed to students, this was done in order to find out data on learning satisfaction, Sense of Classroom Community and student engagement based on research instruments. This study conducted two data analysis tests, namely the pra-analysis analysis test and the hypothesis test. Pra-analysis test, namely by testing normality and homogeneity between the subjects of the experimental group and the control group and then testing the hypothesis between the experimental group and the control group.

## C. RESULTS AND DISCUSSION

### Results

The statistical test results obtained a decision that the first hypothesis test was accepted, which means that there was no difference in student learning outcomes between the experimental and control classes. Test the hypothesis using the independent sample t-test test and found no difference in student learning outcomes between the experimental class learning using hybrid learning and the control class using face-to-face learning, where the tailed sig.2 value was  $0.362 > 0.05$  with an average score -the average of the experimental class is 78.67 and the control class is 76.27. So that between the experimental class and the control class there is no difference in learning outcomes.

The second hypothesis was accepted in this study where it was found that there was no difference in student learning satisfaction between the experimental class (hybrid learning) and the control class (face to face learning). Independent sample t-test was conducted to explore the relationship between student learning satisfaction between the experimental group and the control group. The results showed that there was no significant difference between the experimental and control groups (sig (2-tailed) of  $0.889 > 0.05$ ). Participants in the experimental class setting (hybrid) had an average score of 79.52 learning satisfaction and learning satisfaction for the control class was 79.88 so that there was no significant difference between student learning satisfaction in the experimental class (hybrid learning) and the control class (face to face). ).

There is a difference in Sense of Classroom Community between students in the experimental class (hybrid learning) and the control class (face to face learning) in the answer to the third hypothesis test. The third hypothesis was rejected on the findings of this study. An independent sample t-test was conducted to explore the relationship between the sense of classroom community between the experimental class and the control class. The results show that students from the control learning class (face to face) feel a sense of community among others that is more intense and deep in the learning process (average score 73.79) compared to experimental class students who do hybrid learning (average value 69.85). The difference between the two groups, namely the experimental class and the control class, was significant with a sig 2-tailed value of 0.003 < 0.05).

The results of the fourth hypothesis test in this study were that there was no difference in students' engagement between learning in the experimental class (hybrid learning) and the control class (face to face learning). The researcher used an independent sample t-test and the test results found no difference in student's engagement between students who study in the experimental class (hybrid) and in the control class (face to face) where the sig 2-tailed score is 0.847 > 0.05 with an average score of 83.81 for the experimental class and 84.36 for the control class. between the experimental class (hybrid learning) and the control class (face to face) there is no difference in student's engagement.

Student learning style has a positive effect on learning outcomes is the result of the fifth hypothesis test. The fifth hypothesis is accepted in this study. From the statistical test results, it was found that there were differences in learning styles on the learning outcomes of students in the experimental class and the control class where the Sig 2 tailed value was 0.006 < 0.05, which means that there is an influence of learning styles on learning outcomes. The results of the fifth hypothesis test are presented in table 1 below:

Tabel 1. Learning Style Regression Test on Learning Outcomes  
Coefficients<sup>a</sup>

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	76.356	2.747		27.793	.000
	Gaya Belajar	.406	.987	.054	.411	.006

a. Dependent Variable: Hasil Belajar

Source: Primary data processed (2022)

Testing the next hypothesis (hypothesis 6) was accepted in this study, where students' learning styles had a positive effect on learning satisfaction. From the results of statistical tests, it was found that there were differences in learning styles on student learning satisfaction in the experimental class (hybrid) and the control class (face to face) where the value of Sig. 0.011 < 0.05 which means that there is an influence of learning styles on learning satisfaction. The output of the sixth hypothesis test is presented in table 2 below:

Tabel 2. Learning Style Regression Test on Learning Satisfaction

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	73.860	2.544		29.037	.000
	Gaya Belajar	2.391	.914	.325	2.616	.011

a. Dependent Variable: Kepuasan Belajar

Source: Primary data processed (2022)

Next is the seventh hypothesis test. The seventh hypothesis is accepted in this study, which means that student learning styles have a positive effect on Sense of Classroom Community. From the results of statistical tests, it was found that there was an influence of learning styles on the sense of classroom community between students in the experimental class (hybrid learning) and the control class (face to face learning) where the value of Sig.  $0.012 < 0.05$  which means that there is an influence of learning styles on the sense of classroom community. The output of the seventh hypothesis test is presented in table 3 below:

Tabel 3. Learning Style Regression Against Students Classroom Community

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	70.134	1.448		48.431	.000
	Gaya Belajar	.809	.520	.200	1.556	.012

a. Dependent Variable: Student Classroom Community

Source: Primary data processed (2022)

The last is the test of the eighth hypothesis. The eighth hypothesis test showed that student learning styles had no effect on students' engagement. From the results of statistical tests, there was no effect of learning styles on student's engagement between students in the experimental class (hybrid learning) and the control class (face to face learning) where the Sig value was  $0.140 > 0.05$ , which means that there was no effect of learning styles on student's engagement. The statistical output of the eighth hypothesis test is presented in table 4 below:

Tabel 4. Learning Style Regression Test on Students Engagement

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	80.288	2.908		27.608	.000
	Gaya Belajar	1.563	1.045	.193	1.496	.140

a. Dependent Variable: Student's Engagement

Source: Primary data processed (2022)

## Discussion

### Learning Outcomes Between Experiment Class (hybrid) and Control Class (face to face)



This research compares the learning effectiveness of students, including learning outcomes, learning satisfaction, sense of classroom community, and student's engagement, in two types of learning settings, namely the experimental group (learning is carried out in a hybrid manner) and the control group (learning is carried out face to face). In addition, this study also describes the relationship between learning styles on learning outcomes, learning satisfaction, sense of classroom community, and student engagement.

The statistical test results showed that there was no difference in learning outcomes between the experimental class (hybrid learning) and the control class (face to face learning). The possible reason for this result is that after online learning during the Covid-19 pandemic which lasted more than two years made students more accustomed to and began to adjust to the implementation of hybrid learning. Learning outcomes are also influenced by various factors, including learning methods, student-teacher interactions, the support provided, the learning environment, and the characteristics of the students themselves. Therefore, learning outcomes may vary between hybrid learning and face-to-face learning. Although it is possible that some students may achieve equal learning outcomes in both methods (hybrid learning and face-to-face learning), differences in the implementation of hybrid learning and face-to-face learning can affect how students receive and process information. Some students may be better suited to a face-to-face learning style that emphasizes hands-on interaction, while others may be more comfortable with hybrid learning that provides flexibility and independence in learning. This is in accordance with the findings of research conducted by Eryilmaz (2015) and Berga et al., (2021) which states that learning that is carried out in a hybrid manner or learning that is carried out face-to-face does not produce differences in student learning outcomes.

#### **Learning Satisfaction Between Experiment Class (Hybrid) and Control Class (Face to Face)**

Statistical test results showed that there was no difference in learning satisfaction between the experimental class (hybrid learning) and the control class (face to face learning). There are several factors that can affect the level of learning satisfaction between hybrid learning and face-to-face learning, causing similarities or similarities. Some of the reasons why the satisfaction of learning in the two methods are the same, one of which is flexibility. Hybrid learning gives students flexibility in accessing learning materials online. This can give them the freedom to study the material according to the time and place they choose, which can increase learning satisfaction. Another factor is interaction. Even though hybrid learning involves some online learning, there are still opportunities for direct interaction with teachers and classmates in face-to-face sessions. This social interaction can meet students' needs for connection and active participation in the learning process, which in turn can increase learning satisfaction. Providing feedback is also a factor in learning satisfaction. In both hybrid and face-to-face learning, it is important for teachers to provide constructive feedback to students. This feedback can help students understand their strengths and weaknesses in learning and provide additional encouragement and motivation. If students feel the feedback they receive is useful and supports their development, they will be more satisfied with the learning process. There is no difference



in learning satisfaction between hybrid learning and face-to-face learning in line with the results of research conducted by Kurthen & Smith (2005), Xiao et al. (2020), Bailey (2020).

#### **Differences in Sense of Classroom Community Between Experimental Class (Hybrid) and Control Class (Face to Face)**

The results of this study indicate that students in face-to-face learning classes feel a stronger sense of classroom community than students who take part in hybrid learning. Sense of classroom community can be seen as a social community of students who share knowledge, values and goals. Sense of classroom community is considered weak if students have little interaction, distrust or competitive relationships. Students in classes that carry out face-to-face learning say that they often spend more time in discussions without being asked by the lecturer. Through communication and discussion, students can express their own ideas, besides that they can also always be connected to one another.

Face-to-face learning can improve the sense of classroom community more than hybrid learning because in face-to-face learning there is direct interaction, where students have the opportunity to interact directly with teachers and classmates. They can communicate verbally and non-verbally, share ideas, ask questions, and participate in class discussions. This interaction allows students to build stronger interpersonal relationships and increases their sense of knowing one another.

In addition, in face-to-face learning, there is an intense physical presence where students and teachers are physically present in the same classroom. This creates a more unified learning environment and allows students to feel stronger social bonds. They can see facial expressions, body language, and other social contexts which helps in establishing rapport between students and developing a sense of community. In face-to-face learning, group activities are also established which make it possible to involve group activities directly in class. Students work together on projects, discussions, or team activities that promote cooperation and social interaction. Hands-on collaboration in groups helps strengthen a sense of unity and interdependence between students. In face-to-face learning, emotional involvement is also formed.

Physical presence in face-to-face learning allows students to feel greater emotional involvement. They can share stories, experiences, and emotions directly with classmates and teachers, creating deeper bonds and empathy among class members. While hybrid learning can create spaces for interaction and collaboration through online platforms, face-to-face learning generally provides broader opportunities to build a stronger sense of classroom community. Face-to-face learning further enhances the sense of classroom community compared to hybrid learning. This is in line with the findings of research conducted by Rovai (2001) Baturay (2011) Kavrayici (2021).

#### **Differences between Student Engagement Experiment Class (Hybrid) and Control Class (Face to Face)**

The results showed that there was no difference in student engagement between the experimental class (using hybrid learning) and the control class (using face-to-face learning). Social interaction between students and teachers, as well as between fellow

students, can affect the level of student engagement. Face-to-face learning often provides more opportunities for in-person interaction, such as class discussions, group work, or direct teacher feedback. However, with hybrid learning, space can also be provided for social interaction through online platforms or video conferencing sessions.

The physical classroom environment in face-to-face learning can provide a more direct and interactive stimulus for students, which can increase their engagement. On the other hand, hybrid learning can allow students to learn in a more comfortable and individual environment, which can affect their level of engagement. In hybrid learning, stable and sufficient access to technology and internet connectivity is important. Students who have limited or unstable access to technology may face challenges that can affect their level of student engagement. In addition, both hybrid and face-to-face learning can involve a variety of learning methods, such as lectures, discussions, projects or hands-on experience. It is important for educators to use diverse and engaging methods in both types of learning to promote student engagement.

### **The Effect of Learning Style on Learning Outcomes**

Analysis of learning styles shows that learning styles have a positive effect on learning outcomes. Learning style as one of the factors in students is very influential on the achievement of student learning outcomes in accounting computer practice learning. This means that the more appropriate the learning style is with the student's personality, the higher the student's academic achievement in order to achieve learning achievement (Maheni, 2019) (Rambe & Yarni, 2019). In contrast, if the learning style does not match the student's personality, the lower the academic achievement.

Each individual has different learning preferences and learning styles that are more effective for them. Some well-known learning styles are visual (using pictures and diagrams), auditory (listening to information), and kinesthetic (involving physical movement). Learning styles can affect learning outcomes because different learning styles can affect the way a person processes and understands information. Knowing learning styles can help a person identify the most effective learning strategies for them.

Learning style can also influence a person's preference for an effective learning environment (Muhtadi, 2006) (Marpaung, 2016). Some individuals may do better learning in a quiet, distraction-free environment, while others may need social interaction or physical activity to maximize their understanding. Understanding one's learning style and using appropriate strategies can increase motivation and confidence in the learning process. When people feel that the learning method they are using matches their preferences, they tend to be more motivated to learn and feel more confident in facing learning tasks. Learning style is not the only factor that influences learning outcomes. Other factors such as teaching quality, learning environment, support, and motivation also play an important role in achieving good learning outcomes.

### **The Influence of Learning Styles on Learning Satisfaction**

Analysis of learning styles also shows that learning styles have a positive effect on learning satisfaction. Student satisfaction can be defined as the student's perception of the

value of the educational experience in an educational environment. Student learning satisfaction is a reflection of how students experience and understand the learning and is an important measure in evaluating a learning program. Satisfaction is a very significant problem in the implementation of the learning process which is a measure of the quality and effectiveness of teaching and learning. Student satisfaction is an important concept because it can ultimately lead to higher levels of motivation. When someone learns according to their preferred and suitable learning style, they tend to feel more satisfied in the learning process.

When a person's learning style matches the learning method used, they are more likely to feel comfortable and involved in the learning process. Learning styles that match the learning methods used can also increase learning effectiveness. When someone can use their learning style well, they are more likely to understand and remember information better. These results can provide a feeling of accomplishment and increase learning satisfaction.

Learning styles that are well understood and applied also give a person more control over how they learn. They can choose learning strategies that suit their preferences, choose materials or resources that suit their learning style, and set up a supportive learning environment. This provides a sense of control and freedom, which in turn can increase learning satisfaction. Appropriate learning styles can also increase motivation in the learning process. When someone feels that the learning method they are using matches their preferences, they are more motivated to learn, more interested in the material, and more involved in learning activities. This can give positive feelings and increase learning satisfaction. However, learning satisfaction can also be influenced by other factors as well, such as the quality of teaching, learning environment, and other individual factors, and understanding and applying appropriate learning styles can be one of the factors that support higher learning satisfaction. Research evidence shows that hybrid learning provides satisfying experiences, engagement, learning, performance, and success (Sahin & Shelley, 2008)(Suhandiah et al., 2022).

### **The Influence of Learning Styles on the Sense of Classroom Community**

Analysis of learning styles also shows that there is a positive influence of learning styles on the sense of classroom community. Student learning style is an individual way that is owned by students to obtain, absorb, organize, and process information in the learning process. Everyone has a different learning style, when someone has learned to use the right learning style it will have an impact on the effectiveness of absorbing the information received. According to Rovai, (2002) and Aydin & Gumus (2016) sense of classroom community there must be a feeling of connectedness and hope of learning together among members so that a strong sense of community can be built among students in the class. For a strong feeling of connectedness, there needs to be cohesion, trust, interdependence and team spirit among students. On the other hand, students in a hybrid class can achieve their goals, goals and expectations of learning together through meaningful interactions.

A person's learning style can affect the sense of classroom community because collaboration occurs in groups. Learning styles that involve collaboration and group work, such as kinesthetic or auditory learning styles, can encourage social interaction and collaboration between students. When students with similar learning styles work together in groups, they can support one another, share ideas, and feel more connected to one another, which enhances the sense of classroom community.

Learning styles also require help or explanation from others, such as the auditory learning style, can create opportunities to help each other in class. Students with this learning style may be more open to asking questions and discussing material with classmates or teachers, which can strengthen relationships between students and create a positive sense of classroom community.

Each individual has a different learning style. When students understand that everyone has unique learning preferences, they are more likely to value diversity in the classroom. This can create an inclusive environment and reinforce a sense of classroom community, where every student feels welcome and valued. Different learning styles can also open opportunities for mutual learning between students. Mutual learning activities strengthen relationships between students and enhance the sense of classroom community.

#### **The Influence of Learning Styles on Student Engagement**

Analysis of learning styles also shows that there is no influence between learning styles on student's engagement. According to Alrashidi et al., (2016) student's engagement regarding the impact of deviant behavior and decreased academic achievement, resulting in lower academic success. So that an effective learning innovation is needed to increase student engagement. Student Engagement shows that the participation of students in learning is a form of motivation that is seen through the behavior, cognition, or emotions of students, and refers to the performance of students who are energetic.

Learning style has no effect on student engagement or involvement because it is suspected that there is a discrepancy in the use of inappropriate learning strategies. The inability to know effective learning styles allows students to use inappropriate learning strategies. When students use learning strategies that do not suit their learning style, they tend to be unfocused, less active, and less involved in learning. In order to achieve optimal student engagement, it is important to consider student learning styles and provide a variety of learning methods that allow each student to engage and learn effectively.

#### **D. CONCLUSION**

The conclusion from this study is that there is no difference in learning outcomes between hybrid learning and face-to-face learning. In addition, there was no difference in learning satisfaction between hybrid learning and face-to-face learning. In hybrid learning, differences in the sense of classroom community were found with face-to-face learning. Hybrid learning and face-to-face learning also found no difference in terms of student engagement. Learning styles positively influence learning outcomes, learning satisfaction,

and a sense of classroom community. Meanwhile, learning style has no effect on student engagement.

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