The Role of Teacher Interaction and Self-Directed Learning on High School Students' Online Learning Satisfaction

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Abstract. *The aim of this study is to examine how high school students' satisfaction with online learning is impacted by instructor involvement and self-directed learning. A quantitative methodology was employed, involving 340 pupils from five different Surabaya schools. Random cluster sampling with stratified sampling was the method used. The learner-instructor interaction questionnaire by Kang and Im (2014), the student satisfaction with online learning scale adopted from Dziuban et al. (2015), and the self-rating scale of self-directed learning derived from Sulasiwi et al. (2019) are the measuring tools used in this research. With a value (R Square) of 0.401, the regression test results indicate that student satisfaction with online learning is significantly influenced by both teacher interaction and self-directed learning. Self-directed learning provided 0.233 and instructor interaction contributed 0.454, respectively, to the total. Teachers should be able to acquire excellent communication skills in this way in order to teach. In addition, counseling sessions are held for students to help them become self-sufficient in their online education. It is well established that students who engage positively with teachers and who possess strong self-directed learning skills would be more satisfied with their online education, which leads to in online learning success.*

Keywords - *learning satisfaction, self directed learning, learner-instructor interaction, online learning*

Abstrak. Penelitian ini bertujuan untuk menginvestigasi peranan interaksi guru dan kemampuan kemandirian belajar terhadap kepuasan belajar online siswa SMA. Metode yang digunakan adalah pendekatan kuantitatif melibatkan sebanyak 340 siswa/i pada lima sekolah yang berbeda di Surabaya. Teknik sampling yang digunakan adalah *stratified cluster random sampling*. Alat ukur dalam penelitian ini menggunakan *learner-instructor interaction questionnaire* oleh Kang dan Im (2014), *Self-Rating Scale of Self-directed learning* diadaptasi dari Sulasiwi, dkk. (2019) serta *Student Satisfaction with Online Learning scale* diadaptasi dari Dziuban Dkk., (2015). Dari hasil uji regresi dapat disimpulkan *interaksi guru* dan *self-directed learning* memberikan pengaruh signifikan terhadap kepuasan belajar online siswa dengan nilai (*R Square*) sebesar 0,401. Secara parsial *interaksi guru* berkontribusi sebesar 0,454 dan *self-directed learning* sebesar 0,233. Dengan demikian guru diharapkan mampu mengembangkan skill komunikasi efektif dalam mengajar. Serta melakukan sesi konseling untuk siswa agar dapat mandiri dalam belajar online. Diketahui bahwa siswa yang memiliki kualitas interaksi dengan guru yang baik, serta memiliki kemampuan *self-directed learning* yang tinggi dapat meningkatkan kepuasan belajar online siswa yang akan mengantarkannya pada kesuksesan pembalajaran online.

Kata Kunci – *kepuasan belajar, self directed learning, interaksi guru, pembelajaran daring*

I.INTRODUCTION

Online schooling is a style of education in which students separate from educators and instruction is conducted via a variety of communication media technology sources. Following the COVID-19 pandemic, distance learning was implemented in Indonesian education. The Ministry of Education and Culture issued Decree 36962/MPK.A/HK/2020 to manage the deployment of online learning for pupils. According to Law No. 20 of 2003, Article 1 Paragraph 15, online education in Indonesia is carried out through the Distance Learning System or pembelajaran jarak jauh (PJJ). (Asmuni 2020).

Online learning encompasses a range of activities, including group assignment projects, virtual media tests, and conversations in online forums (Wei & Chou, 2020). Regarding the types of online learning, web-facilitated learning is defined by Allen and Seaman in Khalid (2014) as online learning that employs one to 29% online technology; courses that use 30 to 79% online technology are referred to as hybrid learning. Fully online education is defined as using online technologies for more than 79% of instruction.

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High school students are unfamiliar with the experience of online learning. In Indonesia, senior secondary school students are typically within the ages of 15 and 18, during which time their mental and emotional intelligence are still developing. High school pupils must be able to acquire higher order thinking skills in the classroom in order to succeed at this level (Rustiyani, et al., 2021). According to research by Shi and Qu (2021), high school pupils possess a variety of cognitive skills, including the capacity for deductive and inductive reasoning, accurate knowledge retrieval, and memory reciting. High school pupils are said to have the capacity for self-control to manage their emotions and conduct in addition to cognitive aspects (Duckworth & Seligman, 2010). It makes sense to carry out online learning at the high school level based on these capabilities. However, there has not been much research that further evaluates online learning at this level.

The ilustration of the quality of online learning during the COVID-19 pandemic is mixed. Literature from Sutia and Sagita (2020) in high school and vocational school shows that students rarely get feedback on the assignments they do, apart from that quotas and internet signals are still obstacles to online learning. A survey of how student perceive their happines with the online process during the PJJ distacne learning conducted by Nilayani (2020) resulted in 70% of high school students being dissatisfied with the readiness of school infrastructure for conducting online learning, even though facilities and infrastructure are the main support for the online learning process. A survey conducted by Pratama and Mulyati (2020) stated that students prefer offline learning to online. Lack of feedback, internet problems and lack of prepared online infrastructure make teachers less optimal in carrying out their duties so that the expected learning objectives are not achieved.

The prior description of online learning suggests that the intended learning needs of Indonesian students have not been satisfactorily met by online learning. According to Amini's (2020) analysis of the research, many students experienced stress caused by the pressure of the coronavirus pandemic's delayed digital adaptation process. Students become disinterested and lack enthusiasm for taking online lessons due to the lack of connection between lecturers, students, and peers. Research from the past backs up this assertion. Khalid (2014) said that students' dissatisfaction with their virtual learning experience stems from teachers' limited engagement in the instructional process.

The online problems described in the previous review are actually several indicators of asyncronous learning satisfaction. Online learning satisfaction is a variety of students' positive or negative perceptions of what they get from completing and experiencing online learning (Dziuban et al., 2015). However, learning satisfaction cannot be expressed explicitly. Satisfaction with online learning will be seen in students' reactions in the process of participating in online learning. Learners who are satisfied with online learning have three characteristics, the first is engagement in learning, namely students have attachment to learning, are able to reflect on learning results, are able to collaborate, are able to understand lessons and discuss. The second is an agency where satisfied students have an initiative attitude in their learning and are obedient in completing assignments. The final characteristic is assessment, students who are satisfied with their learning will be able to evaluate and control their learning progress (Dziuban, et al., 2015).

The attrition rate, or the amount of online learning space wasted, is a critical factor in the problem of online learning satisfaction as it is higher than in-person learning (Elkins, 2015). According to Ali and Ahmad (2011), students who are dissatisfied with their online education are more likely to drop out, show less perseverance, and be unmotivated to continue with their online studies. Students will experience emotions of isolation, perform poorly academically, and squander online learning space if online learning programs fail to suit their needs (Turley & Graham, 2019). Another source, namely Khalid (2014), explains that students are actors in online learning, if they are

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not satisfied with learning, then students will leave online learning, and according to (Tirrell & Quick, 2012) students will despair of withdrawing from online learning.

Numerous research demonstrate that desire to participate in distance courses is affected by satisfaction with digital learning (Ali & Ahmad, 2011; Hart, 2012). Active, content-aware, capable of managing their own study time, and with a responsible attitude toward online learning are characteristics of students who are happy with online learning (Kumalasari & Zakiah, 2020). According to several reports, student retention or commitment to continuing online learning is increased when they are satisfied with their online education, which also serves as a predictor of academic performance (Ahn, 2012). According to Khalid (2014), student happiness with online learning will encourage them to keep learning, while Kuo et al. (2014) discovered that students who are happy with online learning will display a high attitude of perseverance to succeed in online learning.

Student perceive satisfaction in virtual learning is a reflection of the quality of the learning process received by students (Pramono et al., 2020), so it is one of the keys to evaluating distance learning (Alqurashi, 2019). Researching learning satisfaction will provide opportunities for educational institutions to design specific improvement and development targets for students who use online learning services (Kuo, 2014), because students' positive reflections on online learning experiences are an important indicator of online learning programs. Educational institutions or researchers will have data to design online learning programs that have a level of commitment to continuing online programs or a high retention rate (Kuo, 2014). Understanding online learning satisfaction can help education providers to detect areas of online learning that need to be improved and strengted the excellent of service, delivery and evaluation of students' online learning (Alquraysy, 2019).

It is crucial to assess online learning in terms of student online learning satisfaction because arranging online learning carries a larger risk of waste or attrition rate than face to face instruction (Garratt-reed et al., 2016). It seems sense that student satisfaction with online learning will lower the risk of attrition and impact students' willingness to continue using online learning resources (Hawkins et al., 2013). Education providers will find it challenging to suit learners' demands and boost the efficacy of online learning without looking into online learners' satisfaction (Harsasi & Sutawijaya, 2018).

The development of online learning outside Indonesia was researched by Butz (2003) and Metz (2011). Butz (2003) in his dissertation explained that online learning in the Unitted States, especially at the secondary school level, will develop in the future, so it is vital to identify factors of student and parental happines in online learning. Metz (2011) stated that one of the barriers to the development of online learning is a lack of research on the aspects that influence academic success and student satisfaction in learning via the internet. The analysis carried out by Butz (2004) and Metz (2011) is supported by the latest research by Turley and Graham (2019), they stated that investigations of learning satisfaction in secondary schools are still lacking, so they recommend further research to review student learning satisfaction in this domain.

Based on several factors that can influence online learning satisfaction, researchers want to focus on student-teacher interaction factors (learner-instructor interaction). This is because there are still studies that show different results regarding the effect of learner teacher communication on learning satisfaction. Research conducted by (Ahn, 2012; Andersen, 2013; Cole, 2016; Elkins, 2015; Y. Kuo et al., 2013) states that teachers are an important factor as intermediaries in providing assistance, dialogue, responding and providing feedback to students. Meanwhile, other research

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conducted by Elson and Krispin (2011) and Li & Jhang (2020) stated from the results of their research that learner-instructor interaction was not significantly related to online learning satisfaction. Based on this, this research can complete the explanation of the corelation within teacher interaction (learner-instructor interaction) and virtual learning satisfaction.

Amalia and Sa'adah (2020) emphasized that online learning problems originate from teachers and students themselves, so the existence of the learner-instructor interaction variable (Andersen & Jeffery, 2013) is important to study in implementing the online learning model. Learner-instructor interaction (Ahn, 2012) is a component in online learning that determines the extent of students' understanding of learning through positive dialogue interactions between teachers and students when online, when students understand the material presented by the teacher then this will make students satisfied with what he received while online. Previous research that examined the influence of learner-instructor interaction on online learning satisfaction (Ahn, 2012; Andersen & Jeffery, 2013; Khalid, 2014) focused on students. In this study, researchers were interested in conducting similar research by testing it on high school student subjects.

Both the teacher and the students participate in learner-instructor interaction. Students' general impressions of their interactions with teachers during the online learning process serve as a basis for measuring the quality of learner-instructor interaction. This can be explained by the fact that instructor interactions during online instruction have an impact on the students. Instructors must employ a kind of strategies to meet the education requirements of their students when they are learning online. Students will be better able to concentrate on the online course material if they respond positively to the accommodations made by the teacher (Bouhnik & Marcus, 2006). Experience demonstrates the effectiveness of learner-instructor interaction, since students perceive pedagogical changes based on their comprehension of the class topic and their comfort level in the online learning climate. The quality of learner instructor interaction can be proven through experience which makes students feel changes in pedagogy based on understanding the lesson topic. Then student feel comfort of the online learning room from the results of student communication with the teacher (Kang & Im, 2013).

As previously mentioned, independence in the form of discipline and a responsible attitude are necessary for the online learning process (Bawa, 2016). Self-directed learning is one way to characterize this capacity. According to Shen et al. (2014), self-directed learning (SDL) is the process by which each learner takes the initiative to identify their own learning needs, create learning objectives and tactics, and assess their own learning results. According to Loeng (2020), the capacity to guide one's own learning is essential for learning because it helps students perceive themselves as responsible and autonomous agents who choose their own learning objectives. This promotes student autonomy and engagement in the learning process.

When learning shifts from in-person instruction to online instruction, students need to be capable of self-directed learning (Durnalı, 2020). Because online learning involves uncertainty, it is required of students to be able to develop autonomous learning strategies, also known as self-directed learning. Mead (2011) claims that when given assignments requiring total student initiative, students lacking in self-directed learning skills will exhibit anxiety.

Few studies have been conducted on self-directed learning in Indonesian online learning contexts during the pandemic; those that have been done primarily concentrate on high school students' overall independence. According to research by Hidayat et al. (2020) and Zahro and Amalia (2021), students in high school and vocational schools tend to be less independent when it comes to finding online resources during the COVID-19 epidemic. This occurs because students' online study habits differ from their in-person learning patterns in the classroom, necessitating some adjustment

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time. Studies by Yilmaz (2017) and Loeng (2020) show that students' satisfaction with online learning is influenced by self-directed learning's capacity to assist their academic performance.

Based on the literature description above, it can be understood that learner-instructor interaction and self-directed learning on students' online learning satisfaction are important things to research further in relation to online learning. In Indonesia itself, the distance learning system is applied at all levels of education, however existing research on online learning satisfaction tends to be conducted on student university subjects only (Kumalasari & Zakiah, 2020; Napitupulu, 2020; Prasetya & Harjanto, 2020), for this reason This research can complement previous studies. This research examines the influence of learner-instructor interaction and self-directed learning on students' online learning satisfaction. The author wants to prove whether there is an influence between learner-instructor interaction and self-directed learning on the online learning satisfaction of high school students in Surabaya.

II.METHODE

All Surabaya high school students in the tenth grade will be the population under study. 16,488 pupils are enrolled in the tenth grade at all Surabaya high schools for the 2021–2022 academic year, according to data compiled by school.id. Students in the tenth grade were picked because, Throughout the shift from junior to high school, they faced difficulties adjusting to their new environment. Puberty presents a problem since it increases stress sensitivity and necessitates independence from students by the time they reach high school. Aside from that, several students reported being dissatisfied with their online learning, as per the problem results in the early survey.

The education area in the city of Surabaya is divided into five areas, namely Central Surabaya, South Surabaya, North Surabaya, West Surabaya and East Surabaya. To get a proportional number of samples from each area. Sampling in this study used stratified cluster sampling. Stratified cluster sampling combines the characteristics of stratified sampling and cluster sampling. Based on Isaac's formula with a population of 16,488 people, a sample of 340 students were found to be respondents in this study.

The instruments used in the research consisted of three, namely:

1. Online learning satisfaction in this research uses the Student Satisfaction with Online Learning Scale developed by Dziuban, et al. (2015). Dziuban explained that the satisfaction aspect of online learning consists of three parts, namely engaged learning, agency and assessment. This scale has been adapted into the Indonesian version by Kumalasari and Zakiah (2020) with a translation process, expert judgment and validity and reliability testing. The reliability coefficient for the online learning satisfaction scale in this study was $\alpha = .928$
2. The learner-instructor interaction variable in this study was measured using the Learner-Instructor Interaction Questionnaire adapted from Kang and Im (2013). This scale consists of five aspects, namely Guidance and facilitating learning, Social intimacy, Instructional communication, Presence of instructor, Instructional support. The reliability coefficient of the learner-instructor interaction scale in this study is $\alpha = .923$
3. The Self-Directed Learning Scale uses Sulasiwi, et al.'s scale. (2019). This scale consists of 5 aspects, namely awareness, learning strategy, learning activities, evaluation and interpersonal ability. The reliability value of the Self-Directed Learning scale in this research is $\alpha = .956$

The study's findings show how self-directed learning and learner-instructor interaction affect students' satisfaction with online instruction. High school students in Surabaya who were studying from home

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completed an online Google Sheet Questions, which served as the major data source. We gathered secondary data by reading through scientific publications. Data processing was done with the SPSS 26 program. The research code of ethics was adhered to in every step of the process.

III.RESULT AND DISCUSSION

The outcomes of data analysis in this study are summarized as follows.

Table 1. Respondent Demographics

Stratum	Cluster	Total Student	Total Sampel	Persentase
Central Surabaya	SMAN A	225	68	20 %
South Surabaya	SMAS B	175	54	16%
North Surabaya	SMAN C	251	75	22%
West Surabaya	SMAN D	213	65	19%
East Surabaya	SMAN E	253	78	23%
Total student		1117	340	100%

Source: data sekolah.id

Tabel 2. Determination test

Model Summary

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	*.636[a]*	*.404*	*.401*	*11.43025*

a. Predictors: (Constant), X2, X1

Source: SPSS analysis

Table 2. Shows an R value of 0.636 based on the relationship level classification described by Sugiyono (2011), so the level of relationship between learner-instructor interaction and self-directed learning variables on students' online learning satisfaction is at a strong relationship level.

Tabel 3. Anova Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29863.535	2	14931.768	114.288	.000[b]
	Residual	44029.288	337	130.651		
	Total	73892.824	339			

Source: SPSS analysis

Based on Table 3, the F value is 114.288 with a significance level of 0.000 < 0.05. These results answer the hypothesis in this research, namely, learner-instructor interaction and self-directed learning together influence the online learning satisfaction of high school students in the city of Surabaya.

Tabel 4. t Test Results

Coefficients[a]

Model		Unstandardized equations. B	Unstandardized equations. Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-11.559	5.325		-2.171	.031
	X1	.497	.063	.454	7.912	.000
	X2	.125	.031	.233	4.052	.000

a. Dependent Variable: Y

Source: SPSS analysis

The values that can be seen to see the contribution of each independent variable partially to the dependent variable are in Table 4. From this table it can be seen that the beta value in learner-

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instructor interaction is 0.454 or in percentage, namely 28% and in self-directed learning beta value is 0.233 or a percentage of 13%.

Data research from five high schools in Surabaya reveals that student satisfaction with e-learning, learner-instructor connection, and self-directed learning falls into the medium group. Based on multiple linear analysis, the modified R Square value of 0.401 indicates that learner-instructor contact and independent learning have a 40.1% influence on learners' online learning contentment. Partially, the learner-instructor interaction regression coefficient is 0.497, meaning that the higher the quality of student interaction with the teacher, the higher the student's online learning satisfaction. The coefficient of variance for self-directed learning is 0.125, which implies that the greater the self-directed learning capacity, the higher the student's online learning contentment

Learner-instructor interaction is defined as a two side interaction within teachers and students. This interaction model can be recognized in various forms such as lesson clarification, guidance, support, responding to students so as to minimize the negative impact of online learning. Kang and Im (2013) define learner-instructor engagement as a psychological perspective of the full process of constructing academically relevant change through persistent dialog among more than two individuals in online learning. This research examines the influence of learner-instructor interaction on online learning satisfaction because there are still studies that show different results regarding the effect of learner-instructor interaction on learning satisfaction. The next reason is the online learning satisfaction indicator which consists of engaged in learning, which is in line with the expected output from learner-instructor interaction. For example, students' active participation in the form of attitudes, discussions and questions during online learning as an output of high quality learner-instructor interaction is in line with the target behavioral indicators of the online learning satisfaction variable. In the online learning satisfaction variable, student engagement in learning is shown by the behavior of students who dare to reflect on themselves and collaborate when learning online with their friends and class teachers (Dziuban et al., 2015).

The purpose of learner-instructor contact in virtual classroom satisfaction is to connect the psychological aspect such as emotions and perceptions between teachers and students who are physically separated. When students feel isolated, bored and fed up, the teacher's attitude of providing (gudiance learning) in the form of praise or positive affirmation for the student's presence will increase the student's self-confidence in online learning. Teacher communication patterns (instructional communication) in the form of exchanging ideas, responding to each other's dialogue will increase students' self-esteem which makes them comfortable in online learning. Online learning has the potential for technical obstacles for students in the middle of learning, when teachers can help students solve technical and academic problems, it will make students feel the usefulness of the teacher's presence (presence of instructor). Other aspects of learner-instructor interaction such as instructional support, namely teachers trying to deliver material using fun methods such as quizzes, videos and games, can maintain students' commitment to continuing to participate in online learning. The role of learner-instructor interaction based on its aspects will increase the satisfaction aspect of online learning, in this case engagement in learning and assessment, so that the better the quality of interaction students get from the teacher, the students will feel satisfied with the online learning experience.

Research done by Kuo, et al. (2014) on 221 students at Intermountain West University was the first to identify the impact of learner-instructor interaction on online educational satisfaction. The research indicates that learning satisfaction is impacted by the learner-instructor connection, with a significant value ($p < .01$) and $r = 0.392$. Research with 167 University of Western Pennsylvania

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students enrolled in online courses is another source of information (Alqurashi, 2019). With a significance value ($p < .01$) and $r=0.288$, or as a proportion of learner-instructor contact explaining 8.2% of the variance in student online learning satisfaction, the results demonstrate that learner-instructor interaction has an impact on learning satisfaction.

Self-directed learning plays an important part in improving student enjoyment by strengthening individuals to be self-directed or direct themselves on how to solve problems that occur in online learning so that students succeed in getting the benefits of knowledge in their learning process. When separated from friends and teachers, students will feel pressured to do their assignments. In this condition, students who are able to develop an attitude of awareness, namely awareness of what their learning targets are, Will be able to sustain enthusiasm for further learning. Based on a literature study conducted by Loeng (2020), the aspect of self-directed learning in the form of learning strategies will help students to focus on analyzing the priorities of what needs to be studied first. Then the evaluation aspect will help students to recognize their learning needs after going through an evaluation process carried out independently. Another aspect of self-directed learning, namely learning activities, will make students responsible for planning and determining decisions regarding when to study and where to study. Thus, the role of self-directed learning based on its aspects will increase the satisfaction aspect of online learning, especially in the agency and assessment aspects. The better students' internal abilities in controlling their learning needs and strategies, the more disciplined attitudes, attitudes of responsibility, and students tend to monitor online learning results, which is a characteristic of students who are satisfied with the convenience of online learning.

Not much research has specifically identified the role of self-directed learning on online learning satisfaction. However, There exists research that explicitly assesses the influence of independent learning on learning satisfaction. The first research was conducted by Yilmaz (2017) on 236 Turkish University students. This research examines the influence of e-learning readers on online learning satisfaction, one aspect of which is self-directed learning. The findings indicate that self-directed instruction has an impact on online learning satisfaction with a value of ($p < .00$) and $r=0.18$. Similar research was also conducted by Kumalasari & Zakiah (2020) on 379 Indonesian students. The results show that online learning readiness which is characterized by self-directed learning contributes together with academic resilience to online learning satisfaction with a value of ($p < .00$) and $r=0.10$.

Based on the description of previous research, research conducted by the author obtained similar results that self-directed learning contributes to the influence of online learning satisfaction. Both students and high school students showed that the self-directed learning variable had a positive impact on online learning satisfaction. This is realized by students' ability to plan their learning process, pay attention to learning discipline and try to independently complete assignments well.

When combined, the two independent variables have a positive and significant influence on online learning satisfaction, the influence value obtained is even higher, namely approximately 40.1%. In the learner-instructor interaction, the frequency of appearance of participants with moderate scores dominated at 223 participants (65.6%). Furthermore, self-directed learning was dominated by medium scores, namely 228 participants (67%). This result is also the same as variable Y, the majority of participants had moderate scores, namely 217 participants (63.8%).

Similar norming results for learner-instructor interaction self-directed learning and learning satisfaction demonstrate a link between the variables. The category of students who have online learning satisfaction scores in the medium category can be caused by the experiences students gain

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during online learning. According to Agarwal and Kaushik (2020), some students tend to choose face-to-face learning because it is easier to gain understanding in learning. The flexibility and dynamic nature of online learning makes some students tend to like online learning. Another source, namely Elshami et al., (2021) stated that students felt comfortable in online learning after receiving permission from their families to take part in online programs. However, the long duration and accessibility problems remain challenges for students in online learning.

In this research, it was proven that learner and instructor interaction and self-directed learning contributed 40.1% of the influence on high school students' online learning satisfaction, which means that there were 59.9% of other factors that have impact on students' online learning satisfaction. Based on the literature reviewed by the author, Several characteristics or variables might affect the degree of fulfillment with online learning. These factors include instructor attitude toward e-learning (Chen Sun, et al., 2008), social presence, learning environment (Strong et al., 2012), interaction (Andersen, 2013), learner-content interaction, learner-learner interaction (Ahn Byungmun, 2012; Andersen & Jeffery, 2013; Khalid, 2014), online learning self-efficacy (Shen, et al., 2013), internet self-efficacy (Kuo, et al., 2014), teaching presence (Kucuk & Richardson, 2019), readiness online learning (Kumalasari & Zakiah, 2020; Yilmaz, 2017).

It is projected that the study's findings would convert into valuable recommendations for different organizations that offer remote learning opportunities. In an effort to be the secret to effective online learning, schools should take action to raise student learning satisfaction. Teachers can receive training from schools on how to communicate effectively with students virtually. In addition, professional training can be provided by schools to enhance instructors' proficiency in implementing digital learning technologies. Therefore, it stands to reason that raising teacher proficiency will enhance the standard of communication between instructors and students during the online learning process. According to the author's views, students will be more dedicated to maintaining their disciplined participation in online learning if they have positive connections with their teachers.

Moreover, research indicates that students' happiness with online learning can be raised through self-directed learning. In an effort to teach students to be self-reliant, recognize different learning styles, and arrange their own learning needs, school administrators might offer them information through focus groups, training seminars, and individual counseling. According to the author's views, pupils that are ready to embrace online learning will typically grasp teachings with ease and demonstrate resilience when faced with challenging circumstances. This reduces the possibility of failure when engaging in online learning considerably.

IV.CONCLUSION

This study provides an answer to the author's formulated problem, which is that the satisfaction of learners with online learning in Surabaya is significantly influenced by learner-instructor contact and self-directed learning. Learner-teacher contact is the factor by itself that most significantly contributes to online learning. Pleasure, according to the regression results. Self-directed learning is the final variable. There are a number of disadvantages to this study, one of which is that the scores obtained might not match the real ones. Students may believe that if they do poorly on the questionnaire, it will negatively impact their academic grade because the homeroom instructor oversees the distribution procedure.Additionally, all students were included in the test of the impact on their happiness with online learning rather than only those in the departments with the most accessible specializations at the school, such science, social studies, and languages. It is anticipated

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that recommendations for more research would look at the satisfaction with online learning at various educational levels. Particularly in elementary, middle, and high school, it can be an option for further research topics. This is due to the fact that diverse circumstances, ages, developmental stages, levels of schooling, and cognitive capacities will all affect how online learning satisfaction is perceived.

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