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Analyzing Online Learning Satisfaction and Language Learning Strategies Use

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Abstract

This mixed-method approach study is conducted to find out the positive relationship between students' satisfaction and their LLS use in the context of ICT for ELL. Having wed out for the sake of validity and reliability, 46 sets of both SERVQUAL and SILL questionnaires were then administered to 83 students of telecommunication engineering at *Akademi Telkom Jakarta*. The result of the study was explained in inferential and descriptive as well as qualitative in nature. The statistical result confirmed the positive effect of online learning satisfaction on the use of LLS. The low correlation coefficient is detected between students' satisfaction and the use of LLS ($r = .235$, $p < .05$); however, the regression model $Y = 74.3 + 0.20X$ is then eligible to estimate and generalize. Thus, by paying a lot attention to SERVQUAL dimensions, the students will more explore their LLS use. The findings provide a greater understanding of students' satisfaction and LLS use. LLS – CALL integration model could be developed as the implications of the research for further study.

Keywords: ICT, Language Learning Strategies, Online Learning, Student Satisfaction, SERVQUAL

I. INTRODUCTION

To gain effective teaching and learning process, both teachers and the students need to adapt to an adequate amount of English practice and exposure using technology tools; however, it might almost impossible to do face-to-face learning on the ground during this pandemic era. A challenge to provide excellent teaching service by integrating language learning into ICT tools might lead to questions whether such new learning approach meets the needs and expectancy. To bear in mind that the fully use of e-learning has never been implemented before, another issue came out whether the online learning conducted nowadays would really represent the prior long-established classroom in the aspects of quality and interactivity. Furthermore, the shifting from the conventional classroom into online-based learning is not that trouble-free effort because there must be a readiness among the people who get involved; the institution, teachers, students, facility supports, including the interactivity among them all.

Since the concept of language teaching demands students to achieve effective communication skills, all situations in real communication that occur naturally could be taken into account of ICT learning materials which should be presented in motivating ways. The teachers should tell clearly the objectives and the reasons why certain learning activities are important to them. These ideas could connect the students to their future real-life situations where they have to use English, which lead them to be more paying attention to English instructions in their recent online classroom.

The existence of advanced ICT for language learning has also changed the roles of the teachers. Teacher is no longer a single man who knows everything in the classroom. The students can choose their learning interests within their own pace. The features of teaching service quality offered using ICT implementation need to be representative enough as a learning environment. Thus, the teacher needs to direct the students to achieve their learning objectives effectively. Also, the teachers need to be familiar with technology buttons to introduce target language in a friendly way, and give clear enough instructions due to their learning satisfaction is dynamic and easy to change. Xiao and Hurd [1] asserted that such online learning requires new kinds of skills, motivation, and commitment in an effective learning setting which has a direct impact on the use of language learning strategies. The students who are not satisfied with their learning tend to be easy to give up while those who have strong commitment to learn will activate their strategies to achieve. Besides investigating the students' new adaptation to language learning strategy use, it is also important to find out their level of satisfaction from the perspective of online learning experiences, interests, teachers' performance on service quality, and the use of CALL.

Meanwhile, the dimensions of online teaching Service quality lead the satisfaction of learning that offers magnificent benefits that might activate the LLS use. Such positive constructions mentioned above are possible variables as well as solutions related to the investigation on online learning. Teachers' service quality of online learning plays an important part of learning in a term of students' perspective which enables them to get their language learning strategy use going.

II. LITERATURE REVIEW

2.1 Students' satisfaction

The investigation of online SERVQUAL in this research implicitly explored the satisfaction of the students with online teaching that falls into five dimensions of the great work of Parasuraman in Ramya et al [2]. They are reliability, responsibility, assurance, empathy, and tangibility. Tamilselvi [3] asserted that quality was defined as the totality of features and characteristics of products or services that bear on its ability to satisfy stated or implied needs. Therefore, quality is related to the value of an offer, which could evoke satisfaction or dissatisfaction while service is an offer in exchange. The dimensions of service quality are illustrated in the figure 1 below;
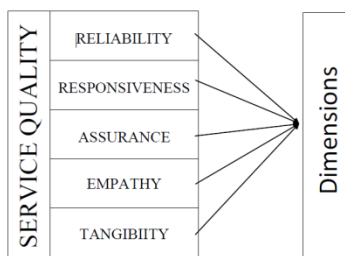

Figure 1: SERVQUAL Dimensions

In a study of satisfaction based on service quality, Ilias et.al [4] determined whether there were satisfaction differences based on demographic characteristics as gender and race. By employing adjusted five-dimension SERVQUAL in a form of survey, the result then showed that students were in high satisfaction with an overall mean score of 4.5. The study indicated that there were no significant differences based on student satisfaction gender and race. However, they noted that SERVQUAL is a useful tool in the measurement of steady and consistent satisfaction by students. SERVQUAL dimensions are nowadays used to measure the satisfaction level or perceptions of customers in many fields – including education.

The dimensions of SERVQUAL are flexible to almost any conditions and can be implemented based on what information to get. For example, to find out the students' satisfaction with online learning, Roach and Lemasters [5] conducted a comparative study – online versus offline courses. They documented their work resulted that the students in the online program were satisfied with the courses in the terms of delivery, contents, and the online learning itself in comparison to on-ground courses. To support with, Keengwe et al [6] argued that students' expectations influence the instructor's design of effective technology tools in online

courses, and are the key to understanding the satisfaction construct. Then, it goes to the conclusion that satisfaction was most impacted by learning convenience combined with the effectiveness of e-learning tools.

To get more insight into the students' satisfaction levels with online learning, Baharin et al [7] conducted a study to ascertain the influence of student satisfaction. They investigated the effectiveness and efficiency as the aspects of interactivity to evaluate the students' level of satisfaction. The study resulted that majority of respondents would give satisfaction through the efficiency and effectiveness of online learning because they really use ICT in learning.

As a matter of fact, investigating the satisfaction level of the students with learning is as important as leading them to promote as autonomous learners. Learning can be effective when it is fun.

2.2 Language Learning Strategy

Oxford Advanced Learner's Dictionary defined the word strategy as a plan that is intended to achieve a particular purpose. Also, the process of planning something or carrying out a plan in a skillful way. Earlier, language learning strategies were defined by Rubin in White [8] as the technique the learners may use to acquire knowledge. Some extents to his definition, language strategies related to the choices, intentional part of learning, or optional methods of learning. However, in his recent definition, he elaborated the learning strategies as any steps, plans that are used by the learners to obtain, storage, retrieve, and use the information. In short, language learning strategies are the process of organizing some steps to learn the target language. As the comprehensive characterization, Oxford then classified language learning strategy as follows;

Direct strategies: Memory, Cognitive and Compensation Strategies.		
Memory Strategies They help students store and retrieve new information	*Cognitive Strategies* They involve more direct manipulation of the learning material itself.	*Compensation Strategies* They help learners to understand or produce messages in the target language despite limitations of knowledge.
Indirect strategies: Metacognitive, Affective, and Social Strategies.		
Metacognitive Strategies They involve planning, thinking about the learning process as it is taking place, and monitoring, and evaluating one's progress.	*Affective Strategies* They help students to regulate emotions and motivations.	*Social Strategies* They help to learn through interaction with others.

Figure 2: Oxford's LLS Classification System.

Based on her taxonomy, Oxford [9] divided the learning strategy into two majors, that is, direct and indirect ones. Earlier dealing with the target language, while latter functions to support the language learning process. In fact, both strategies help students to succeed in their language learning.

Related to the implementation of LLS in online learning, Aliasa et al [10] investigated the role of using Facebook Notes on the learners' strategy use and its effect on academic writing performance. They suggested that Facebook Notes had the potential to be used as a language learning strategy training tool. Internet-literate undergraduates were observed to be enthusiastic about the training tool. As a result, the students began to use the indirect LLS more in their learning. Such study contributed to a model of LLS activation when the students feel satisfied and find it is interesting to learn. Moreover, the Facebook Notes features provide literal auto-correction that allows the users to improve their writing skills.

In a term of LLS use preferences, Solak and Cakir [11] determined the use of LLS of e-learners within their correlation study. The result revealed that the majority of e-learning students preferred taking advantage of meta-cognitive and memory strategies while they were the least users of the cognitive and affective strategies. The study then suggested that using LLS had an effect on academic achievement.

It goes without saying, Xiao and Hurd [1] investigated the students' frequent use of LLS towards Chinese student university. The study conducted revealed that distance English learners in China were beginning to deploy various strategies to facilitate their learning, and took more responsibility for their studies. The study then concluded that the training should be integrated into the instructional design of the materials to enhance strategy awareness and emphasized the facilitative role of learning strategies in language study. Shared the same idea, Altunay [12] stated in his study that it was important to investigate the effective use for distance language learners who do not have direct face to face contact with their tutors.

2.3 The Relationship between Students' satisfaction and LLS

Students' satisfaction within online language learning has an integral part of learning, and that it should, therefore, become a vital component that promotes learning success since it influences the students' behavior; such as the strategies to task completion and understanding the materials. The students who were perceived that the teaching service quality was good then might feel happy to learn, and in turn, will activate their own strategies to meet their learning responsibilities.

The role of the teacher and the technology tools used highly determines students' satisfaction with online learning. Online learning service quality in a relation to the frequent use of LLS is not clear; however, good quality in online learning facilitates students with a positive atmosphere that helps to learn. As Hurd [13] offered the view that online learning technologies can help reduce anxiety and increase motivation in learners engaging in distance modes of independent learning because they could control the pace and output according to their needs and preferences. In addition, there are opportunities for collaboration and support from others afforded by the ICT technology, including the role of the teachers to provide feedback, advice, and encouragement.

Eventually, there have been many studies documented the students' satisfaction as the outcome; however, none of them focus on it as the indicators of the success of LLS use. The idea of LLS use is then proposed as their features in classification of learning strategies by Oxford. The topic of LLS use in the context of online learning is underlying reason for autonomous learning – the students start to be aware of their learning responsibilities. Haucine [14] asserted that ICT improves independent learning, learners' collaborations, communication, attainment, and outcome.

Investigating the frequent use of LLS is crucial to determine the success of the learning. Satisfaction is not the goal of learning; it is easy to change, and it is a merely confirmatory predictor of LLS use. The students who are satisfied with their learning will find ways to succeed in their learning.

III. RESEARCH METHOD

This mixed quantitative and qualitative approach research used correlational technique. Umar [15] stated that such technique involves collecting data in order to determine the relationship and its degree between two or more variables. Then, a survey technique using two sets of questionnaires was performed to obtain the data by measuring the perceptions of both students' satisfaction and their current use of LLS. The items of satisfaction questionnaire were modified SERVQUAL dimensions, while the items for learning strategy use were adapted from Oxford's SILL in Oxford [9]

The questionnaire items using a five-point Likert scale were graded to identify the quality of satisfaction in a mean score ranging from very low (1.0-1.4), low (1.5-2.4), medium (2.5-3.4), high (3.5-4.4), and very high (4.5-5.0). Such mean score classification was also applied to the frequency use of LLS ranging from very low use, low, moderate, high, and very high use, respectively. Besides using mean score which is more general in research, the researcher alternated score interpretation based on interval, percentages, and the number of responses. The interval is described as below;

0%   - 19.9   = (very disagree, low)
20% - 39.9%   = (disagree, low, dissatisfied)
40% - 59%   = (normal, neutral, moderate)
60% - 79.9%   = (agree, good, satisfied)
80% - 100%   = (very agree, excellent)

The pilot was previously carried out employing 40 students randomly of the population. As a result, some items were not included in the final form of the questionnaire for the sake of validity and reliability of the research instrument. The research involved 83 students of *Akademi Telkom Jakarta* majoring in telecommunication engineering who registered English Class in the academic year of 2020/2021. Such sample was taken by using convenience sampling technique and Slovin formula with 5% error of tolerance to optimize the research. Next, the data instruments of the research analyzed were processed in SPSS Version 26 for Microsoft Windows. Frequency, means, standard deviations were also implemented to decision making of both variables. Later on, the output showed that both variables of research instrument were eligible to conduct as the normality and homogeneity met parametric statistics. Finally, the statistical hypothesis then proposed as follows;

Hypothesis:

H1:   There is some positive effect of students' satisfaction (X_1) on the use of LLS (Y).

H0:   There is not any positive effect of students' satisfaction (X_1) on the use of LLS (Y).

The following questions were answered in this research:

1. Was there any positive effect of the students' satisfaction on the use of LLS?
2. What was the correlation between the students' satisfaction and the LLS use?
3. Which LLS were used the most and the least while learning online?
4. How was the students' satisfaction level during online learning?

IV. RESULTS AND DISCUSSION

The model summary output in table 1 illustrates that the value of R square 0.55, which means that 0.55 percent of the total variance has been explained, not very impressive. The Pearson's correlation value of 23.5% indicates that the relationship between students' satisfaction and the use of LLS is low, but it goes to the same positive directions.

TABLE I
MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.235a	.055	.043	7.589	.055	4.726	1	81	.033	.990

a. Predictors: (Constant), X_SATISFACTION
b. Dependent Variable: Y_LLS
Source: SPSS Version 26 Output

Meanwhile, the coefficient table 2 below shows that the use of LLS value remains 74.3 unless the students' satisfaction variable intervention (intercept). Since the relationship is significant, the regression equation model of Y = 74.3 + 0.205 X is then eligible to estimate and generalize; this is supported by F_{obs} which is greater than $F_{crit.}$ A decision can be withdrawn, for every unit increase in students' satisfaction (an increase of one), the predicted value of the language learning strategy frequency use increases by 74.3. The hypothesis test rejected H0, stated that there is some positive effect of students' satisfaction on the use of LLS. Later on, the t-test sig. is smaller than α =0.05, indicating that H0 is rejected or the effect of learning satisfaction on the frequent use of LLS is significant. As satisfaction reflects outcome and reciprocity, then Nguyen [16] claimed that it is one of the important bases for assessing the learning effectiveness. Learning satisfaction with ICT technology then allows them to learn at their pace, and use preferred learning methods and strategies.

TABLE 2
COEFFICIENT TEST FOR X_1 TOWARDS Y

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	74.365	6.690		11.115	.000	61.053	87.676
	X_Satisfaction	.205	.094	.235	2.174	.033	.017	.393

Source: SPSS Version 26 Output

4.1 Students' satisfaction Survey Findings

The overall SERVQUAL dimensions showed that the total mean score was 3.19 or 63.9%, indicating that the students were satisfied (interval scale). The analysis of SERVQUAL dimensions based on students' responses described and ranked as follows; assurance (3.29), tangibility (3.24), responsibility (3.19), reliability (3.14), and empathy (3.11). None of the five sub-dimensions was reported to be dissatisfied or at a low level of satisfaction.

Reliability
The sub-dimensions of reliability elicited the students' perceived service quality that measures the ability to fulfill promises. Here are some valid items and mean score recorded. The items of having knowledge to mastery online learning platforms (3.20), the timing of learning process (3.22), the clarity of language learning instruction (3.26), and on-time lecture scheduling (2.86). The survey indicated that the students' satisfaction were at high-end in a medium continuum.

It is imperative to get accustomed to using online learning platforms more frequently and recognize their features and characteristics to apply in certain language learning activity. When it is done, the lessons delivered will be more smoothly, such as; starting and finishing the lesson on time, the speed of transition from slide to slide presentation, and so on. The possible online learning problems that are likely to occur then confirmed the Cakici [17] stating that "….. *teachers felt it difficult to fully integrate computers into lessons and the teachers had to give up too much time to instructional and not being able to allow students enough time to practice and gain experience with skills being taught."* It also takes time to practice selecting suitable learning materials integrated into online learning. Without preparation, the lesson will spend much longer time and the students may lose the target language they need to practice.

Responsiveness
Responsiveness is the willingness to help students such as; responding to the questions, complaints, and providing prompt service. The students were claimed at medium satisfaction with the responsiveness of the teacher related to holding a group discussion (3.30), the teacher responded to the students' opinions (3.04), and responded to the questions (3.22).

Assurance
Defined as the teacher's knowledge that inspires to build trust and confidence to the students, including the courtesy to communicate the lessons (3.50), the dimension of assurance achieved the largest mean score contribution. The teacher guaranteed their learning benefits (3.21), and assuring the upcoming schedule (3.16). Such features of assurance put bonding effect on their high frequent use of social and affective strategies.

Empathy
Empathy shows the ability to personalize the students, make the students feel that they are cared and special with their weaknesses, limitation, and need. More than 50 of 83 students claimed that the teacher understood their specific needs (3.43) and understood their learning difficulty (3.32), followed by the items of 'teacher gave suggestions to their task completion (2.94), showed sincerity (2.98), and gave individual attention (2.90).

Tangibility
More than half of the students claimed that they were at high satisfaction related to the availability of e-learning sources (3.53) and its accessibility (3.51) consecutively. Some other tangibility sub-dimension items achieved medium satisfaction, such as; 'the teacher's use of modern-looking teaching tools was at medium satisfaction (3.36). The appropriateness of online learning platform choice that supports learning (3.20) and its effectiveness (3.12) respectively, remaining the 'teacher's presentations are visually appealing (3.03), and 'the availability of speaking or presentation practice' (2.95).

Based on the survey findings related to the online teaching service quality on students' perceptions mentioned above, there are necessities to bear in mind integrating language learning related to the ability in using the tools or familiarity with ICT features. Livingstone [18] argued that "the problems in time management,… choosing technological tools matching with course content are some consideration before employing ICT." Besides, lack of facility and technical supports should be minimized to complete the lessons within allocated time successfully.

With regards to the nature of learning language is to interact might be another matter. Not all learning aspects could be allocated in ICT equally. For example, in a presentation practice, the real classroom condition could not be fully replaced by video conference or written texts. The students really needed to practice their gestures, body language, and eye contacts in it. The students did not get a challenge to perform their language. However, at advantage, they increased their frequent use of affective strategy in a term of giving them to be more relaxed and able to manage their anxiety.

4.2 Language Learning Strategy Survey Findings

As regards the sub variable mean score result, both affective and social demonstrated their popularity rather than other strategies, with results towards the high end of the medium continuum (4.07 and 3.93 respectively), next, cognitive and compensation (3.36 and 3.35 respectively), then followed by memory (3.07) and meta-cognitive (2.81).

Overall, the survey revealed that the average mean score of indirect language learning strategies was 3.60, and that of direct strategies was 3.26. In other words, the students employed indirect strategies more often to tackle their online learning than those of direct ones. Such findings confirmed the frequent use of LLS in China conducted by Xiao and Hurd [1] in their study. The indirect LLS such as Affective and Social strategy demonstrated their frequency among users in distance learning. The survey findings of each category then are highlighted as below;

Memory strategies
Memory strategies refer to an action the students take to remember and retrieve information. With the overall mean score of 3.07, it indicated that the students were in moderate use of memory strategy. The item of 'connecting new things to what they already know (3.13) was consistent with connecting the new English sound to a situation in which the word might be used (3.12). They were also moderate users of reviewing English lessons (2.6) or only 22 of 83 students who did such a thing. Reviewing English lessons seemed to be neglected since online learning put them on more assignments to submit in a due time than things to remember.

Cognitive strategies
Cognitive refers to understanding and producing the language. As a strategy to understand and produce the language, the students claimed that they were at high frequent use in the items of 'I write notes, messages, letters, or reports in English (4.06), followed by 'I say or write new English words several times (3.59). These findings were in line with Aliasa [10] suggested that online learning applications like Facebook Notes could improve writing skills. The students were at medium frequent use of items 'I try to find patterns in English (3.26), and using the English words they knew in different ways (3.19). However, the item of 'I first skim an English passage (read over the passage quickly) then go back and read carefully (2.71)' did not seem to be popular.

Such results simply showed that the students played a greater role of productive skills such as writing and speaking than receptive – reading and listening. Indeed, word processing and other applications are very helpful to improve writing skill. Other features of the application also can detect mispronounced words and giving options to imitate. They also could practice their speaking in a video conference with their friends practicing new words, or talking to other people in an English web-community. Similarly, the students could have benefitted the other two skills.

Compensation strategies

Such strategies are using the language despite lack of knowledge. Of four items of compensation or the strategy the students employed in spite of lacking knowledge, 67 of 83 students claimed that they tried to guess what the other person would say next in English (3.68), followed by the item of 'if I can't think of an English word, I use a word or phrase that means the same thing' (3.54), to understand unfamiliar words, I make guesses (3.19) and 'I make up new words if do not know the right ones in English' (3.01).

Meta-cognitive strategies

These strategies function to coordinate the learning process with mean score of 2.81. It was found that they had clear goals for improving their English skills (3.07). The items of 'I notice my English mistakes that help me to do better' (2.84); 'I pay attention when someone is speaking English (2.85), and 'I planned the schedule so they would have enough time to study English' (2.50).

Unlike two other previous indirect strategies which seem to be popular among the students themselves, their low-frequent use of meta-cognitive strategy was a contradictive result while learning online. As Xiao [1] suggested that it is important to develop coordinating the learning process in meta-cognitive competence. The presence of the teacher also seems to be important to keep the students stay on their learning goals. The students need guidance to accomplish their learning success too.

Affective strategies

Affective strategies aim at regulating emotions. They seemed to be the most successful strategies the students employed while learning online (4.07). The survey resulted that most of the students tried to relax whenever they felt afraid of using English (3.95), encouraged themselves to speak English when they were afraid of making a mistake (4.43), and noticed if they were tense or nervous when studying or using English(3.83). This finding confirmed that the role of ICT in language learning instruction reduces students' learning anxiety as a consequence of minimizing teacher-centeredness. Mahrooqi and Troudy [19] claimed that it certainly encourages the students to practice the target language. Sharing the same viewpoint, Wijirahayu and Dorand [20] asserted that the success of affective strategy use does not always depend on the students' role; the teachers need to introduce other features such as; progressive relaxation, deep breathing, and positive self-talk.

Social Strategies

Social strategies are also known as learning with other people. These strategies contributed to the second high rank of all strategies. Almost all of the students asked others to slow down or repeat if they did not understand something (4.30). In addition, more than fifty students asked the speakers to correct them when they talked (3.74). The students also were frequent users of practicing English with their friends or other students (3.6). The majority of the students also claimed that they asked for help from English speakers (4.25). Lastly, the frequent use of social strategies then was reflected in their answers that the students asked questions in English (3.77).

The higher frequent use of indirect strategy than memory and cognitive strategies showed that the students emphasized more on feeling than thinking. More students employed such strategies to support their learning success. Online learning allows the students to use technology devices to communicate with people around the world. Therefore, they were likely to construct both social strategies and affective strategies to practice their target language.

V. Conclusion

This research seemed to be out of the box to put the students' satisfaction as the exogenous variable that might give an effect on the use of LLS. It is a consideration that satisfaction is neither the end of the study result nor a permanent condition. Satisfaction conveys a psychological state that enables the students to be well-performed by employing learning strategies to cope with their learning difficulty. It is also taken that the factors determined the perceptions of the students have pedagogical implications for the online teaching

service quality. For example, while doing online learning, the students of *Akademi Telkom Jakarta* preferred using indirect strategies to the direct ones. They used affective and social strategies more frequently than metacognitive ones. As the least frequent use of all strategies, it is a teachers' duty to activate so that the students start to be more conscious about their language learning development.

Meanwhile, this research documented a statistical regression model that estimates greater LLS use among the students. Therefore, by paying attention to the students' satisfaction, more effective teaching and learning process will be easier to achieve. In other words, the students could have more frequently used their LLS if they had felt satisfied with the SERVQUAL provided.

The unimpressive relationship between online learning satisfaction and the use of LLS might be caused by the nature of English teaching and learning that needs a real-life interaction. They found it was not challenge at all to practice their speech using video conference. Therefore, Livingstone [18] asserted that ICT "is not suitable for all learners in all situations and for all purposes, and may require some considerable learner training for effective use." More researches are required to determine the importance of the framework to the quality of online teaching service. Thus, explicit trainings then should be conducted both to the teachers and the students in a model of ICT Language learning to improve awareness of LLS use.

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