Learning Saturation *Online* in Students Based on *School Burnout Inventory* (SBI)

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ABSTRACT
Online learning is an alternative learning activity during a pandemic. However, it has an impact on student learning saturation. The factors of student learning saturation include giving a lot of assignments, monotonous learning strategies, and limited interaction with classmates. The research aims to identify student learning saturation during online learning. This study uses a quantitative descriptive method to obtain an overview of student learning saturation. The sample in this study was 184 students at the State Senior High School 1 Pasir Sakti. There are 78 male students and 106 female students. The instrument uses the school burnout inventory (SBI). The data analysis technique in this study was carried out using descriptive statistics by looking for the average value and standard deviation. The results show that students have learning saturation which is included in the medium category with an average value of 37.61. The findings showed that 20 (25.6%) of 78 male students had a high frequency of learning boredom and 7 (6.6%) of 106 female students had high learning saturation. This shows that male students have a high level of learning saturation compared to female students.

Keywords: Study saturation, Covid-19 pandemic, Online Learning.

1. INTRODUCTION

The pandemic *Covid-19* has had a wide impact on various aspects of life, including the continuity of education. Educational institutions are an important sector that must continue in a pandemic situation. Given that education is a place with a high intensity of gathering, the institution is temporarily closed and learning is diverted from home using assistance applications such as *whatsapp, google classroon, zoom, edmodo, google meet* and so on [1][2].

In the era of thepandemic *Covid-19*, technological developments are increasingly widespread in education, especially in the realization of online learning. Online learning is a decision that must be made by basic educational institutions to universities so that educational goals can be implemented effectively and efficiently. Through learning from home, students can become more independent because they use strategies that are *student-centered* [3]. Fitriyani et al. (2020) shows that the motivation of students to take part in online learning is in

the very good category [4]. Even in a pandemic, students have the enthusiasm to learn to use technology.

Students are in early adulthood, when at this age the individual has the freedom to determine himself, and the future view is more realistic so that it is easier to adapt to the environment [5]. Students begin to organize thinking operationally and are required to be responsible for deciding something so that they will make more systematic hypotheses when exposed to problems and not only use emotions [6]. However, this adjustment will be more difficult for individuals in their teens, such as high school students.

Entering adolescence, individuals often feel life changes that are increasingly fast and complex, which easily cause stress, anxiety, depression, and various negative emotions that cannot be completely avoided by individuals [6]. These characteristics of adolescents allow students to experience higher academic stress than students. Moreover, considering that not all regions have fast internet access and not all students have adequate learning media, it makes adapting learning at home difficult, so that learning motivation for students who

take online learning or online in the midst of a pandemic situation decreases [7].

In the process of implementing online learning, teachers and students often experience obstacles such as operating learning applications, internet networks and devices, learning management, assessment, and supervision [8]. In addition, student participation is less than optimal [9], due to limited interaction with teachers [10]. Students feel that face-to-face contact with the teacher is important for effective learning [11].

The learning process using multimedia online is more tiring and tedious [12]. Furthermore, limited learning strategies and socialization with peers affect students' emotions when learning online [13]. Students experience academic fatigue when faced with the demands of online learning [14]. According to the research by Teuber et al. (2021), academic demands positively affect academic fatigue [15]. In addition, anxiety and a sense of laziness arise in participating in online learning [15], due to limited learning facilities in the form of *cellphones,* which are inadequate, unstable internet network signals, and unsupportive peer invitations to study [15].

Learning boredom is still an unresolved learning problem. Study saturation in the form of fatigue is a form of maladaptive behavior in schools and mental health disorders [16][17]. The research of Sunawan et al. (2021) showed that during online learning activities during the COVID-19 pandemic, there was no difference in the level of saturation between students who allocated a small amount of online learning duration (less than 1 hour per day) and more [18]. Saturation rates are higher for older women and teachers [19]. This means that online learning has an impact on increasing student learning saturation.

Factors that can predict an increase in learning saturation are the low relationship between students and teachers, as well as the lack of feedback between peers and frequent conflicts in the classroom [20]. This shows that learning saturation or *burnout* can be influenced by internal and external factors, so it is very important for students and teachers to know the extent of learning boredom experienced by students. Therefore, this study aims to determine the level of student learning saturation. This study provides a description of learning saturation in different contexts because measurements of student learning saturation at SMA N1 Pasir Sakti did not exist before. This is important to do to understand the condition of students when learning online. The research results are expected to be used as information material for teaching staff to evaluate and provide guidance and counseling services.

2. METHOD

This research uses a quantitative approach with a descriptive type of method. A quantitative approach is used to obtain generalization of the number of samples about the saturation of students' online learning. The descriptive method in this study was conducted to obtain an overview of student learning saturation during online learning. The research was conducted at the State Senior High School 1 Pasir Sakti. sampling using a *simple random sampling technique.* A total of 184 students in grades X, XI and XII of SMA Negeri 1 Pasir Sakti participated in this study.

The research instrument used the *School Burnout Inventory* (SBI), which was developed by Salmela-Aro and Naatanen (2005). SBI aims to measure the academic burnout of adolescent students. The adoption process begins by looking for SBIs that have been translated into Indonesian by Rahman (2020) and adopting the items as a whole. The Indonesian version of the SBI was then distributed to the subjects in the form of an instrument online.

SBI is based on three indicators, namely: emotional exhaustion at school, cynicism about the meaning of school, and feelings of inadequacy at school. SBI has nine statement items with six answer choices [21]. Filling in using six alternative answers, namelystrongly disagree, partially disagree, disagree, partially agree, agree, and strongly agree. The nine items include: 1) I feel overwhelmed by my schoolwork, 2) I often sleep badly because of matters related to my schoolwork, 3) I brood over matters related to my schoolwork a lot during my free time, 4) The pressure of my schoolwork causes me problems in my close relationships with others, 5) I feel a lack of motivation in my schoolwork and often think of giving up, 6) I feel that I am losing interest in my school work, 7) I'm continually wondering wether my schoolwork has any meaning, 8) I often have feelings of inadequacy in my schoolwork and 9) I used to have higher expectations of my schoolwork than I do now. Data collection was assisted by guidance and counseling teachers by providing instruments through the *Google form.*

3. RESULT AND DISCUSSION

Based on these problems, a study was conducted by collecting data from 184 students at SMA N 1 Pasir Sakti. There were 78 male students (42.39%) and 106 female students (57.61%). Respondents are in the age range of 15-18 years. Learning saturation is classified into three categories, namely high, medium and low. The results of the analysis are presented in Table 1.

Table 1. Overview of Student Learning Saturation

Score	Categories	F	%
X < 28.33	Low	36	19.6
28.33 ≤ X ≥ 46.89	Medium	121	65.8
X > 46.89	High	27	14.7
Total		184	100
Mean		37,61	

Table 1 shows that students have learning saturation which is included in the medium category with an average value of 37.61. The data shows that 14.7% of students have learning saturation in the high category, 65.8% of students have learning saturation in the medium

Saturation is defined as an unpleasant and temporary event experienced by students as a lack of interest and difficulty concentrating on student activities while studying [24]. Students who have an interest in doing a task, but students feel unable so that it can cause students to learn. To review boredom in the classroom while studying and taking tests is one of the important factors to consider for an effective assessment analysis [25]. Boredom is defined as the effect of motivational drives on a person in relation to environmental factors [26].

Study saturation can occur due to several factors, such as academic anxiety and interest in learning, truancy, and

Table 2. Learning saturation scores based on indicators

Indicator	Item	%	Interpretation
Emotional Exhaution	I feel overwhelmed by my schoolwork	74,73	High
	I often sleep badly because of matters related to my schoolwork	71,2	High
	I brood over matters related to my schoolwork a lot during my free time	72,1	High
	The pressure of my schoolwork causes me problems in my close relationships with others	65,4	High
Cynism	I feel a lack of motivation in my schoolwork and often think of giving up	69,11	High
	I feel that I am losing interest in my school work	70,02	High
	I'm continually wondering wether my schoolwork has any meaning	74,09	High
Personal Inadequacy	I often have feelings of inadequacy in my schoolwork	70,38	High
	I used to have higher expectations of my schoolwork than I do now	59,87	Medium

category, and 19.6% of students have learning saturation in the low category. The results of the analysis based item are presented in Table 2.

Table 2 shows that the score for each item is in the high category. In the statement, I used to have higher expectations of my schoolwork than I do now, and I get a lower score than the other items. The trigger for the emergence of student learning saturation is the number of tasks given so that students feel tired and lazy when participating in teaching and learning activities. Especially during the pandemic *COVID-19,* learning is done through *Google Classroom, which is* text-based. Learning methods that rely on text without *video conferencing* and monotonous learning situations are the main sources of academic stress during the pandemic [22]. Faber's research (1991) found that men are more prone to stress and *burnout* when compared to women [23]. Boys *and men are* more easily bored in class. In line with that, the research findings show that there are differences in learning saturation between male and female students.

lazy learning [27]. Then students feel anxious and hopeless [28]. In addition, there is also low external stimulation during the teaching and learning process [29]. People who experience learning saturation assume that their work is boring and requires a high cognitive workload, so that a person feels forced to perform tasks that are uncomfortable or under pressure to perform certain tasks. However, some studies show that saturation is a result of subjective factors. This includes the perception of monotony that results in frustration, dissatisfaction, and a loss of one's interest and focus [30].

During learning *online*, students feel they have more homework or more assignments than face-to-face learning. Thus, the workload and learning felt by students will increase. In particular, students need to complete, feel the need for time. Students who do their homework on time and do not receive certain social support. In this case, parents are not ready to become tutors and feel they do not have peers or teachers as a source of learning information when studying at home, so they study *online* at home.

Students have lost the shadow of a teacher teaching students while they are studying at home. Students who considered that teachers who taught in class had shown efforts to help understand the material, such as using easy-to-understand vocabulary and using examples of videos and illustrations, were less likely to feel bored during class lessons because they saw that teachers did more than just listen [31]. In addition to acting as a learning facilitator, teachers can create a learning environment that helps students feel comfortable and enthusiastic about learning.

An online communication application used by teachers to carry out distance learning. The implementation of distance learning encounters many obstacles, not only for teachers but also students feel it. Teachers try to use learning strategies by using media. However, teaching staff and students must use additional applications, internet facilities that require quite a lot of quota, and the duration is too short [32]. However, a common problem that students often experience is the limitations of doing homework assignments. Not infrequently, students lack communication tools (*mobile phones)* for learning, so teachers also experience limitations in delivering material [7].

A study of nursing students found participants' anxiety regarding the impact of thepandemic *COVID-19* [33]. This anxiety causes saturation in online learning. Many participants said they were angry with the situation with so many environmental distractions and distractions from the internet. Dinamika psychological provides context for the onset of boredom due to various social conditions prevailing in the student environment. In addition, the increasing number of disease cases and the increasing number of countries affected by the outbreak have caused public concern and anxiety about this disease outbreak [34]. Saturation is also caused by the increasing distance between human activities. This is the result of a policy of social distancing and a ban on leaving the house. Therefore, it can cause anxiety that is exacerbated by a lack of interpersonal communication [35].

Online learning allows students to communicate through intermediaries, which makes interpersonal relationships less meaningful. The lack of such interaction, coupled with the limitation of physical gatherings, has an impact on student activity. Initially, students felt satisfaction with their long vacation. Because they can rest more and can do nothing. However, over time, students feel bored because there is nothing they can do outside the home [36]. Other studies have shown that boredom indicates low self-control [37].

Therefore, those who get bored quickly while studying at home have poor self-control. Individuals tend to be unable to regulate, guide, and direct forms of behavior that can direct them in a positive direction.

Learning activities that involve face-to-face interactions between teachers and students can increase student enthusiasm, reduce anxiety, and increase students' self-confidence [38]. Reber (1988) argues that learning saturation is a condition where a person's productivity decreases within a certain period of time and optimal results are not obtained [39]. When students learn saturation, their brain systems cannot adjust properly, so they do not function optimally. According to Cross (1974), student fatigue, which is student learning boredom, is divided into three parts: 1) Physical fatigue in students, 2) sensory fatigue in students, and 3) mental fatigue in students [40].

For educators, it is important to design the right curriculum and learning context, and to provide a quality teaching process that can help alleviate negative emotions in students. The learning environment (eg, task demands and feedback on students to achieve maximum learning outcomes) requires supporting factors to influence the way students interpret learning situations and their emotions [41]. In line with that, Daschmann et al. (2011) argue that there are seven situations that cause boredom: being too challenged, being under-challenged, being bored with unchanging routines, not finding meaning in learning, having better things to do than being in class, not liking the teacher, and feeling bored, not involved can be the focus of intervention [42]. For example, by providing optimal learning and teaching materials so that academic boredom can be reduced. To achieve success in learning, educators must make efforts so that students are able to better manage negative emotions, such as the use of cognitive assessment strategies. The existence of learning strategies given to students will reduce students' boredom in learning so that they can stimulate students and raise enthusiasm for learning.

Some experts have developed teaching methods to reduce the problems that arise due to learning *online*. Cai and Wang (2020) developed a six-step teaching method that focuses on using academic performance feedback to ensure a smooth online learning experience amid thepandemic *Covid-19* [43]. Sathish et al. (2020) found that interactive learning, an important educational element for traditional teaching methods, was also effective for online teaching methods used during *Covid 19*, and they presented the need for methods that promote learning through one learner to another [44]. These

interactions have a positive effect on students' prosocial behavior, thereby facilitating the creation of a sustainable learning environment [45]. Prosocial behavior refers to a series of social behaviors in which students form a partnership to seek mutual benefits, such as helping other students or supporting people who are at risk. So, to create a learning environment *online,* sustainable, interactive learning tools should be utilized and student learning fatigue should be minimized.

In recent years, with the continuous development of learning analysis technology, more and more research predicting learning has emerged with various methods. Dietz-Uhler and Hurn (2013) revealed that predicting student performance by analyzing learning behavior is by helping develop learning to evaluatelearning systems *online* more effectively, continuously increasing system availability, and expanding system functionality to visualize learners both of behavior and future trends. with a more appropriate learning model. Then help teachers to understand student learning behavior tendencies, and teachers engage in appropriate interventions for students at the right time, then help teachers to continuously improve the curriculum and improve the quality of teaching. At the same time, the system can also help teachers to provide timely assistance to students with poor performance in a timely manner to improve their learning performance [46][47].

AUTHORS' CONTRIBUTIONS

Eka Angraymi is responsible for developing the research framework, developing the background, collecting data, and organizing the discussion.
Diana Septi Purnama is responsible for analyzing data, formulating theories, and sub-discussions.
Anisa Siti Nurjanah is responsible for analyzing data, formulating theories, and compiling discussions.

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