Vol 10(2) (2021): 97-106
DOI: http://dx.doi.org/10.24235/sc.educatia.v10i2.9167

SCIENTIAE EDUCATIA: JURNAL PENDIDIKAN SAINS

http://www.syekhnurjati.ac.id/jurnal/index.php/sceducatia

Levels of Anxiety of High School Students when Learning Biology during the Covid-19 Pandemic

Tiza Azizah Ghasani, Anda Juanda*, Yuyun Maryuningsih

Department of Biology Education,Faculty of Education and Teacher Training, IAIN Syekh Nurjati Cirebon, Indonesia

*Corresponding author: Jl Perjuangan by Pass Sunyaragi Kesambi Kota Cirebon, Jawa Barat, Indonesia. E-mail addresses: andajuanda@syekhnurjati.ac.id

article info

Article history:
Received: 21 October 2021
Received in revised form: 08 November 2021
Accepted: 05 December 2021
Available online: 31 December 2021

Keywords:
Attitude
COVID-19 pandemic
Levels of anxiety
Online learning

abstract

Distance learning is a new learning model for students and teachers. Therefore, it requires a long time to adapt. This study aimed to describe students' attitudes towards anxiety. The research population was SMA NU Juntinyuat, and the research sample was 80 students of class ten. The data were collected using the questionnaires of student anxiety levels and student strategies. This study revealed that 44 students had a very anxious category while 36 students had an anxious type. The high school students' strategy to deal with anxiety showed that 50 students were in the anxiety category while 30 students were in the moderate coping category. These findings concluded that most students had a high anxiety level in learning biology. Meanwhile, students' strategies to solve anxiety were classified as a moderate-coping strategy in anxiety.

1. Introduction

At the beginning of 2020, the world was shocked by the outbreak of a new virus, namely the Coronavirus (SAR-CoV-2). This disease is called Coronavirus disease 2019 (Covid-19). Covid-19 is a disease identified as Coronavirus that attacks the respiratory system. To stop the spread of Covid-19, the current learning system at schools has been conducted using an online system known as distance learning. Distance learning does not require face-to-face or direct learning between students and teachers because it is performed online using several platforms, such as e-learning, WhatsApp groups, or video conferencing.

Online learning is a new learning method for students and teachers. However, the realization of distance learning takes a long time to adapt (Hakiman, 2020). Science learning must facilitate students to think, speak, and work through minds and hands-on science; such a condition means that trials must prove thinking (Prasetyo, 2013). It is predicted that the online learning system can cause anxiety in all circles, both students and teachers. Anxiety can decline students' learning outcomes. Learning before the Covid-19 was carried out offline, and students' learning outcomes relatively increased.

In contrast, learning during the pandemic was established online. Learning using online applications has never been done before (offline). Online learning is a teacher-centered method, while students receive a lot of learning burdens, such as various to complete. Such a condition causes anxiety and boredom. Online learning provided quite good effects; for example, during the

Covid-19 pandemic, students did not negatively learn online and interact outside the learning. Students' attitudes were also quite good because teachers always control them during learning (Jannah et al., 2021)

Stuart and Laraia (2005) define anxiety as an unpleasant, uncomfortable, worried, or restless feeling that can come from outside or inside the body. An anxiety test is dangerous for students (Zeidner, 2005). A study by Winata (2021) found that students' concentration on online learning is still low because it is new for them. Most people also feel a certain anxiety when placed in a performance situation. Individuals who experience an anxiety test will probably experience increasing anxiety. This will interfere with their ability to do a task mastered. Wahyuningsih (2021) investigated students' attitudes towards learning during the pandemic and discovered that their attitudes were reasonably good because they were sometimes lazy to take part in learning.

This study conducted a preliminary survey by observing learning in one high school in Cirebon and found that some students' learning outcomes decreased because the implemented online learning system only provided materials and videos. Moreover, the teachers' lack of curriculum understanding impacted the students' DL conditions. Such a condition triggers students to experience anxiety, as seen in their behavior, such as not being earnest in carrying out learning activities, sleeping during learning, less participating in the learning activities, being lazy to take notes, not participating in discussions, and reluctantly doing the assignments from the teacher. Tasks from the teacher cause many students to complain and feel stressed out online learning; meanwhile, short teaching time and dense material confuse students in completing the assignments (Kusumawati et al., 2020).

The results of interviews in the preliminary study showed that the students experienced the following conditions; 1) Most students felt uncomfortable with online biology learning. 2) Most students considered that they did not understand the material taught by the teacher during the online biology class. 3) Most students were afraid of asking the teacher about biology topics they did not understand. 4) Most students were worried about their inability to solve biology problems. 5) More assignments given by the teacher pressured most students. 6) The interview results conclude that most SMA NU Juntinyuat Cirebon students have experienced anxiety in learning during the Covid-19 pandemic.

Learning biology during the pandemic is a new phenomenon for high school teachers and students. Such a phenomenon is also new for biology subjects which generally require environmental media, practical work, and direct explanations in their learning. It is assumed that online biology learning is not optimal and effective because students lack access to technology. Online learning using the WhatsApp application was quite successful because the material was delivered according to the students' development levels. Furthermore, WhatsApp offers users to share photos or videos (Shodiq & Zainiyati. 2020). In contrast, non-optimal online learning makes students do not get enough understanding. Rosidi, Handayani and Idrus (2021) revealed that online biology classes during the Covid-19 pandemic were in a positive category because students had independent study time, wherever and whenever possible.

Moreover, they were free to determine the learning system; thus, it became more flexible and efficient. However, the online attitude assessment is inaccurate because teachers cannot directly examine the students' attitudes during the learning process. In addition, the attitude assessment is necessarily addressed during online learning in the new normal era (Ramdhayani et al., 2020). Before the pandemic, students attended face-to-face classes, and teachers delivered the material well until the semester. In contrast, during the Covid-19 pandemic, some teachers must condense the biology material as much as possible due to several restrictions. Consequently, the students do not find it difficult to do the online assignments.

2. Method

The information source of this research was 80 class X students of SMA NU Juntinyuat Cirebon. This research employed the saturated sampling technique used in a population whose members are sampled. This sampling was used in a population with a relatively small number.

This study employed a mixed-method approach because the data analysis was presented entirely to obtain comprehensive information. The internal components were preliminary studies, instrument compilers, instrument validation, data collection techniques, and conclusions.

Research is a directed and purposeful scientific activity. Its procedure is broadly carried out through several stages that begin with a preliminary study to determine the problems emerging in the research area. Therefore, the stages could focus on the research problems.

The stages of this preliminary study included preparing a design of the research field, choosing a research site, managing permits, exploring research sites, and selecting informants for research data sources. The next stage was compiling the instrument and arranging the instrument grids to determine the questionnaires' points. This study employed the attitude questionnaire for high school students when learning biology during the Covid-19 pandemic (A1) and the questionnaire on students' strategies to deal with anxiety (A2). The questionnaires were divided into indicators arranged when preparing the instrument grid to facilitate the researchers' composing questionnaire questions distributed to students.

The next stage was t validating the instrument by a material expert. The validator was selected by considering the research objectives. The validator, namely WW (a pseudo name), was a lecturer in mathematical psychology. He directed the researchers to revise the research instrument grid and the questionnaire questions. Then, he validated the questionnaire instruments; thus, they were suitably applied in this research.

The next stage was collecting data related to the problem formulation and research objectives. The data were collected by interviewing informants and distributing questionnaires to students online and offline platforms. In other words, the data were retrieved using questionnaires and documents. The questionnaires distributed to students were the A1 questionnaire to investigate the high school students' attitude toward biology learning during the pandemic and the A2 questionnaire to examine students' strategies to solve anxiety. Meanwhile, the employed documents were students' learning outcomes obtained from the biology teacher of SMA NU Juntinyuat Cirebon. Before collecting the data, the researchers prepared some elements, such as interview sheets, questionnaire sheets, voice recording devices, and photo cameras. The researchers directly interviewed student informants who experienced anxiety.

The next stage was analyzing research data. Qualitative research analyzed the data while and after taking research data. The activities of data analysis were as follows: 1) compiling the data and information, 2) adapting the data to the research study, 3) describing the high school students' attitudes toward biology learning during the pandemic era, 4) explaining students' strategies to dealing with anxiety, 5) exploring the relationship between anxiety levels and students' strategies to dealing with anxiety, 6) investigating students' learning outcomes during the pandemic.

Furthermore, the collected data were studied comprehensively by adding several psychological theories. The results of the data analysis were then concluded, and suggestions were made for relevant parties. Therefore, the results of this research are applied as inputs to conducting more effective, efficient, and productive research activities.

3. Result and Discussion

High school students' attitudes toward biology learning during the Covid-19 pandemic

The questionnaire results showed the high school students' attitude toward learning biology during the Covid-19 pandemic. The questionnaires determined whether the students experienced anxiety when learning biology during the pandemic. This research divided the students into three categories: very anxious, anxious, and slightly anxious. The results of determining the anxiety level categories are presented in Table 1.

Table 1. Categories of high school students' attitudes

No	Category	Frequency	Percentage (%)
1	Very anxious	44	55%
2	Anxious	36	45%
3	Slightly anxious	0	0%

Table 1 signifies the results of high school students' attitudes toward biology learning during the pandemic. The results show that 44 students (55%) were in the anxious category, 36 (45%) were in the anxious category, and no student was in the slightly anxious category. Most of the ten graders at SMA NU Juntinyuat Cirebon were in the very anxious category when learning biology during the pandemic. Such a condition means that students cannot control anxiety, worry, nervousness, difficulty concentrating, and physical symptoms when learning biology online. According to Bandura (2010), successful students have a medium level of anxiety. A high level of anxiety can directly damage students' ability to excel and decrease their learning outcomes. This is in line with Haynes' research in Demas and Suherman, who state that age is very susceptible to feeling pressure and experiencing anxiety. This study denotes that online learning during the pandemic makes the students feel anxious; thus, their learning outcomes decline.

The results of determining the students' strategies to deal with anxiety were presented in three categories: well coping, fairly well coping, and unable-to-cope. These results are summarized in Table 2.

Table 2. Categories of high school students' strategies to face anxiety

No	Category	Frequency	Percentage (%)
1	Well coping	50	55.56%
2	Fairly well coping	30	33.33%
3	Unable-to-cope	0	0%

Table 2 shows the high school students' strategies in dealing with anxiety. The data present that 50 students (55.56%) were in the well-coping category, 30 students (33.33%) were in the fairly well-coping category, and no student was in the unable-to-cope category.

The relationship between high school students' attitudes toward biology learning during the Covid-19 Pandemic and their strategies to face anxiety

Anxiety is considered one of the inhibiting factors in the learning process and can interfere with concentration during learning, problem-solving, psychological issues, and biological problems. Students who experienced anxiety in biology learning showed several symptoms, such as irregular breathing, nervousness, shaking, and heart palpitations. The relationship between high school students' attitudes toward learning biology during the Covid-19 pandemic era and their strategies to deal with anxiety. They could find a correlation between the two because when students experienced anxiety, they searched for strategies to deal with anxiety, for example, a strategy to reveal shortness of breath. Irregular efforts were made by moving fingers before studying or self-talking in front of the mirror to regulate the breath slowly, relax the breath, and

reduce nervousness or shaking. These strategies brought a positive relationship; the students could thus learn biology more comprehensively. Table 3 shows the relationship between high school students' attitudes toward biology learning during the Covid-19 pandemic and their strategies to deal with anxiety.

Table 3. The relationship between students' anxiety with strategies to deal with anxiety

		Students' attitude	**Student's' strategies to deal with anxiety**
Students' attitude	Pearson Correlation	1	.021
	Sig. (2-tailed)		.851
	N	80	80
Students' strategies to deal with anxiety	Pearson Correlation	.021	1
	Sig. (2-tailed)	.851	
	N	80	80

Table 3 shows r-count is 0.021, and r-table is 0.220. The finding 0.021 < 0.220 indicates no relationship between high school students' attitudes toward biology learning during the Covid-19 pandemic and their strategies to deal with anxiety. To conclude, the student's attitude toward biology learning during the Covid-19 pandemic did not positively affect their strategies to deal with anxiety. Table 3 shows the students' significance of the attitudes toward biology learning during the Covid-19 pandemic by 0.851. Since 0.851 is greater than 0.05, the number shows no relationship between the students' attitudes toward biology learning during the Covid-19 pandemic and their strategies to deal with anxiety.

The relationship between the high school students' attitudes toward biology learning during the Covid-19 pandemic and their learning outcomes

The anxiety level was one of the non-intellectual psychological factors affecting students' learning outcomes. Meanwhile, their learning outcomes were influenced by external factors and internal factors. The external factors refer to outside the students, such as the family, environment, house, local communities, schools, and peers. Meanwhile, the internal factors refer to factors that exist within the students, such as psychological factors (interest, habits, motivation, and emotion), physical factors, and physical and psychological maturity (MKPD Development Team, 2012). Strong students' motivation encourages them to work hard and never give up facing all challenges (Riyanto & Mariani, 2019). The high school students' attitude toward biology learning during the Covid-19 pandemic was related to their learning outcomes. It aimed to investigate whether their anxiety could affect their learning outcomes during the pandemic.

Students' learning outcomes during the Covid-19 pandemic obtained various results. This signifies that the learning process during the pandemic has not been carried out as expected because most students' learning outcomes do not increase. Moreover, the condition in which students gained learning outcomes less than the minimum completeness criteria interpreted that other factors affected their learning outcomes. These factors included a less supportive family environment when the students were studying, peers, learning habits, interest in learning, and multiple emotions. Another factor that influenced the learning process was the teacher's monotonous delivery method. The monotonous method made students bored and not understand the material well. Thus, they were anxious about the learning outcomes. Moreover, it is predicted that the learning-from-home will decrease after the pandemic.

Table 4. The relationship between students' anxiety and learning outcomes

		Students' attitude	Students' learning outcomes
Students' attitude	Pearson Correlation	1	-.135
	Sig. (2-tailed)		.232
	N	80	80
Students' learning outcomes	Pearson Correlation	-.135	1
	Sig. (2-tailed)	.232	
	N	80	80

Table 4 shows the calculated r-value (Pearson Correlations). The relationship between high school students' attitudes toward biology learning during the Covid-19 pandemic their learning outcomes is 0.135. Since 0.135 < 0.220, the number concluded a weak correlation between the high school students' attitudes toward biology learning during the Covid-19 pandemic and their learning outcomes. Moreover, this study discovered that the students' learning outcomes were negative during the pandemic. Meanwhile, the significance value (2-tailed) was 0.232. The score 0.232 > 0.05 denotes a negative relationship between the students' attitudes toward biology learning during the pandemic and learning outcomes.

The relationship between students' strategies to face anxiety with their learning outcomes in the biology learning process during the Covid-19 pandemic

Students' strategies could reduce their anxiety. Meanwhile, the correlation between students' strategies to deal with anxiety and their learning outcomes aimed to discover a positive correlation between the two variables. Feby (2020) examined how students' anxiety influenced their biology learning during the Covid-19 pandemic. He revealed that a strategy was necessary to overcome anxiety in biology learning. Biology learning consists of several strategies to help each student effectively learn. If a student can use the strategy correctly, he will achieve good grades or learning outcomes. Finally, their anxiety when learning biology will disappear. Table 5 shows the students' strategies to solve anxiety and their biology learning outcomes during the Covid-19 pandemic.

Table 5.The relationship between students' strategies to face anxiety with learning outcomes

		Students' strategies to face anxiety	Students' learning outcomes
Students' strategies to face anxiety	Pearson Correlation	1	.142
	Sig. (2-tailed)		.209
	N	80	80
Students' learning outcomes	Pearson Correlation	.142	1
	Sig. (2-tailed)	.209	
	N	80	80

Table 5 shows the relationship between students' strategies to deal with anxiety and their biology learning outcomes during the Covid-19 pandemic. The result shows that the Pearson Correlation value between students' strategies and learning outcomes is 0.142. Since the value was 0.142 < 0.220. This result indicates no positive relationship between the students' strategies to deal with anxiety and their learning outcomes. The significance value (2-tailed) was 0.209 or > 0.05. This number denoted no significant relationship between students' strategies to deal with anxiety and their learning outcomes.

The anxiety experienced by class X students brought several impacts. First, the students found it difficult to focus on distance learning. The Covid-19 has threatened students psychologically and physically and disrupted their daily life. Moreover, they continuously heard various news and began to think about how to guard and protect themselves from the Covid-19. The students also had another problem because they were required to focus on learning while they were at home. Consequently, the students feel anxious. Therefore, they become unfocused and difficult to concentrate on learning biology (Hanifah et al., 2020). (2). Second, the students easily felt tired when studying at home. Such a situation frequently disabled them to sleep. Thus, their resting hours were reduced. Moreover, they easily felt tired when attending biology classes, doing assignments, studying, and performing daily activities. The students felt physically exhausted and mentally exhausted, and more emotional. Moreover, they lost their interest in performing fun activities, had decreased trust in friends or family, and suffered from other symptoms. Third, the emergence of self-doubt disabled students to complete biology assignments. Moreover, they were embarrassed to ask questions in class and other activities. These feelings decreased their motivation to learn biology online, and they became pessimistic about his learning outcomes. Fourth, the students quickly got bored learning biology because the teacher applied boring learning techniques.

Distance learning was mostly done by giving assignments on WhatsApp, Google Form, or other applications (Handari & Wulandari, 2020). This is in line with research by Oktawirawan (2020), who found that students experienced a high level of anxiety due to several factors experienced by students when attending distance learning during the Covid-19 pandemic. These factors were difficulties in understanding learning materials, decreasing learning motivation, declining conditions, limited conditions, difficulty in doing tasks, internet network quotas, etc. This study proved that online learning causes students' psychological concerns and anxiety. These causes further brought mental health problems for students and parents. It is admitted that many children studying at home experience anxiety and stress because distance learning during the pandemic has given them many tasks (Chaterine, 2020).

Class X students' anxiety during the Covid-19 pandemic cannot be left alone. Their strategies to deal with anxiety during the pandemic required increasing concentration by sorting what should be done. Moreover, getting enough rest helped them reduce their anxiety. The less sleeping, the greater level of anxiety they would experience. This problem can be solved by increasing quality sleep.

Consequently, their anxiety reduced. To overcome anxiety experienced by class X students, parents must support and motivate the students' learning and provide direction about the Covid-19. Teachers or workers must prepare the material with creative delivery; thus, students do not get bored with biology learning quickly. There are several ways to get rid of anxiety during online biology learning, such as relaxing the body, taking deep breaths and exhaling them slowly, moving fingers to release anxiety and tension, or doodling to overcome the anxiety.

Several previous studies investigated students' strategies to deal with anxiety during the pandemic. Herna and Evelyn (2021) discovered that distance learning during the Covid-19 pandemic has made students anxious and stressed because they were confused with material, passive, less creative, less interested in learning, and less productive. Moreover, the pandemic has accumulated less useful information. To reduce students' anxiety and stress, they could apply several coping strategies: problem-focused-coping and emotion-focused-coping (Angelica & Tambunan, 2021).

The Pearson Correlation was employed to examine the correlation between the high school students' attitudes toward learning biology during the Covid-19 pandemic (A1) and their strategies to deal with anxiety (A2). The results show that the r-count was 0.021, and the r-table

was 0.220. The value 0.021 < 0.220 shows no positive relationship between the students' attitudes toward biology learning during the pandemic and their strategies to deal with anxiety. Meanwhile, the significance value of the students' attitude toward biology learning during the Covid-19 pandemic is 0.851. This value is greater than 0.05 and denotes a negative relationship. To conclude, there was no relationship between the students' attitudes toward biology learning during the Covid-19 pandemic and their strategies to deal with anxiety. The negative relationship in this study explains that the higher the student's anxiety, the lower the student's strategy is to deal with anxiety and vice versa.

Students faced difficulty in understanding the material during distance learning. This condition greatly affected the students to achieve the objectives of learning biology. Understanding the concept material at the beginning of learning highly influences the following. If students have difficulty understanding the material taught by the teacher, they will experience learning difficulties, and the achievement of the expected goals will be reduced.

The high school students' attitude toward learning biology during the Covid-19 pandemic negatively correlated with students' learning outcomes. This result indicates that the two variables had a mutually contradictory and insignificant relationship because the students' anxiety about biology learning during the Covid-19 pandemic was high. The students' learning outcomes will increase if their anxiety level experienced is low.

These results align with the research results by Anggreini (2010), who discovered a significantly negative relationship between the students' attitudes toward biology learning during the Covid-19 pandemic and their learning outcomes. Thus, the higher the students' attitudes, the lower the students' learning outcomes will be. On the other hand, the lower the students' attitude, the higher their learning outcomes (Sahin & Yuksel, 2008). It can be concluded that the students' anxiety towards online learning can become an inhibiting factor in obtaining good learning outcomes.

Analyzing students' strategies to deal with anxiety had no positive relationship with their learning outcomes. This result proved that students' learning outcomes decreased because they did not use any strategies to deal with anxiety. Therefore, certain efforts are necessary to reduce students' anxiety toward online learning. Teachers can make efforts include; During biology learning, the teacher should teach creatively; thus, the students do not easily get bored. Interlude activities are conducted through various games; thus, students remain conducive when learning. The teacher must create fun biology learning. The teacher must provide difficult materials and tasks because too easy questions will cause students to get bored quickly.

Online learning is not merely about pursuing curriculum targets achieved by students, but it must be carried out in a fun way. Therefore, students can avoid worrying and will not get bored when learning. Kodirun (2017) discovered that students who could control anxiety when learning biology would learn more enthusiastically because they were worried their learning outcomes were not satisfying. Such a condition shows that their anxiety has a positive effect. There are several strategies to minimize students' learning anxiety. The teacher should creatively teach during the biology class; thus, students will not easily get bored. Interlude activities should be performed through various games; thus, the students remain conducive when learning. The teacher should create fun biology learning. The materials and tasks are compiled by considering a difficulty level. They should not be too easy because the students can quickly get bored. Relaxation makes students more able to control themselves from overreacting when being anxious.

4. Conclusion

This research revealed that the high school students were in the anxiety category when learning biology during the Covid-19. For example, they were not concentrating on biology learning, easily got bored because of the teacher's monotonous teaching method, and frequently had an unstable connection. Meanwhile, the students' strategies to deal with anxiety during the Covid-19 pandemic were considered good. For instance, they could help each other when in trouble, tell each other when having problems with friends, control themselves when facing tension by moving their fingers, hands, or feet, and doodle when getting bored. There was no relationship between the students' anxiety levels and their strategies to deal with anxiety. There was no relationship between students' anxiety levels and their learning outcomes. There was no relationship between students' strategies to deal with anxiety and their learning outcomes.

References

Anggraeni, T (2010). *Hubungan Antara Kecemasan dalam Menghadapi Mata Pelajaran Matematika dengan Prestasi Akademik Matematika pada Remaja*. Skripsi pada Fakultas Psikologi Universitas Gunadarma

Ardianto, P. (2018). Gejala Kecemasan Pada Siswa Sekolah Menengah Kejuruan. *Jurnal Ilmiah Bimbingan Konseling Undiksha*, *9*(2), 87-91.

Arika, Y. (2020, March 18). Lebih dari 849 Juta Siswa di Dunia Belajar di Rumah. Kompas. Retrievedfrom.https://kompas.id/baca/humaniora/dikbud/2020/03 /18/lebih-dari-849-juta-siswa-di-dunia-belajar-dirumah/.

Aris Munandar dan Maryani Enok. *Fieldstudy Geografi*, (Ponorogo : Uwais Inspirasi Indonesia), hal 91.

Djiemi. (2020). Cemas Akibat Covid-19? Kata Dokter itu Adaptasi Normal. https://lifestyle.bisnis.com/read/20200401/106/1221064/cemas-

Feist, J., & Gregory J. F. (2020). *Teori Kepribadian Buku 1 Edisi 8*. Salemba Humanika

Fitria, L., & Ifdil, I. (2020). Kecemasan remaja pada masa pandemi Covid-19. *Jurnal Educatio: Jurnal Pendidikan Indonesia*, *6*(1), 1-4.

Forum Penelitian Muda Indonesia. (2017). *Bunga Rampai Forum Penelitian Muda Indonesia 2017*. Bandung : ITB, hal 203.

Hanifah, M., Yusuf Hasan, B., Nanda Noor, F., Tatang Agus, P., & Muhammad, R. (2020). Kajian jenis kecemasan masyarakat cilacap dalam menghadapi pandemi covid 19. *Kajian Jenis Kecemasan Masyarakat Cilacap dalam menghadapi Pandemi Covid 19*.

Jannah, N., Zakir, S., & Sesmiarni, Z. (2021). Pengaruh Pembelajaran Online Terhadap Sikap Belajar Siswa Kelas X pada Mata Pelajaran TIK di MAN 1 Mandailing Natal. *COMSERVA: Jurnal Penelitian dan Pengabdian Masyarakat*, *1*(7), 306-312.

Kartika, D. (2020). Faktor–Faktor Kecemasan Akademik Selama Pembelajaran Daring Pada Siswa SMA di Kabupaten Sarolangun. *Jurnal Pendidikan Tambusai*, *4*(3), 3544-3549.

Kodirun, K., Masi, L., & Aprilia, A. (2017). Pengaruh Kecemasan Belajar terhadap Hasil Belajar Matematika Siswa Kelas X SMA Negeri 1 Gu. *Jurnal Pendidikan Matematika*, *8*(1), 25-36.

Kusumawati, E., Rahardjo, S., & Sari, H. P. (2015). Model pengendalian faktor risiko stunting pada anak bawah tiga tahun. *Kesmas: Jurnal Kesehatan Masyarakat Nasional (National Public Health Journal)*, *9*(3), 249-256.

Mansyur, A. R. (2020). Dampak covid-19 terhadap dinamika pembelajaran di indonesia. *Education and Learning Journal*, *1*(2), 113-123.

Masitoh, A. (2020). Strategi koping siswa dalam menghadapi stres akademik di era pandemi Covid-19. *Academica: Journal of Multidisciplinary Studies*, *4*(2), 185-198.

Meuthia, F.Y. (2015). *Strategi Pengemdalian Kecemasan Dalam Pembelajaran Keterampilan Berbicara Bahasa Inggris.* Facultas of letter of Ekasakti University.

Nevid, J. S., Rathus, S. A., & Greene, B. (2005). *Psikologi abnormal*. Jakarta: Erlangga, 96-101.

Oktawirawan, D. H. (2020). Faktor pemicu kecemasan siswa dalam melakukan pembelajaran daring di masa pandemi covid-19. *Jurnal Ilmiah Universitas Batanghari Jambi*, *20*(2), 541-544.

Pakpahan, R., & Fitriani, Y. (2020). Analisa Pemanfaatan Teknologi Informasi dalam Pembelajaran Jarak jauh di Tengah Pandemi Virus Corona COVID-19. *JISAMAR: Journal of Information System, Applied, Management, Accounting and Research, 4(2), 30–36.*

Paramitha, S. R. (2019). *Intisari Biologi Dasar,* Jakarta : Diandra Kreatif

Prasetyo. Z. K. (2013, September). Pembelajaran sains berbasis kearifan lokal. In *Prosiding: seminar nasional fisika dan pendidikan fisika* (Vol. 4, No. 1).

Ramdhayani, E., Noviati, W., Deniati, L., & Kurniati, E. (2020). Analisis Penilaian Sikap Siswa Biologi Selama Pembelajaran Daring Pada Era Tatanan Baru. *JURNAL PENDIDIKAN MIPA*, *10*(2), 107-110

Riyanto, O. R., & Mariani, S. (2019). Mathematics Critical Thinking Reviewed from Self-efficacy and Motivation of Learning in Arias Learning. *Journal of Primary Education*, *8*(5), 243-250.

Rosidi, A., Jufri, A. W., Handayani, B. S., & Al Idrus, A. (2021). Sikap dan Gaya Belajar Biologi Siswa SMAN 1 Batulayar semasa Pandemi Covid-19. *Jurnal Ilmiah Profesi Pendidikan*, *6*(3), 412-416.

Rusdiana, E., & Nugroho, A. (2020). Respon mahasiswa pada pembelajaran daring bagi mahasiswa mata kuliah pengantar hukum Indonesia UNESA. *Integralistik*, *31*(1), 1-12.

Schunk, D. H., Pintrich, P. R., & Meece, J. L. (2012). *Motivasi dalam pendidikan: Teori, penelitian, dan aplikasi. Jakarta: PT. Indeks.*

Shodiq, I. J. F., & Zainiyati, H. S. (2020). Pemanfaatan Media Pembelajaran E-Learning Menggunakan Whastsapp Sebagai Solusi Ditengah Penyebaran Covid-19 Di Mi Nurulhuda Jelu. *Al-Insyiroh: Jurnal Studi Keislaman*, *6*(2), 144-159

Shukla, T., Dosaya, D., Nirban, V. S., & Vavilala, M. P. (2020). Factors extraction of effective teaching-learning in online and conventional classrooms. *International Journal of Information and Education Technology, 10(6), 422–427*

Stuart, G. W., & Laraia, M. T. (2005). *Principle and Practice of Psychiatric Nursing*. Philadelphia.

Sugiyono. (2018). *Metode Penelitian Pendidikan*. Bandung : Alfabeta

Suratmi, S., Abdullah, R., & Taufik, M. (2017). Hubungan antara Tingkat Kecemasan dengan Hasil Belajar Mahasiswa di Program Studi Pendidikan Biologi untirta. *Jurnal Pembelajaran Biologi: Kajian Biologi dan Pembelajarannya*, *4*(1), 71-76.

Tahrus, Z. N. H. (2020*). Dunia dalam Ancaman Pandemi: Kajian Transisi Kesehatan dan Mortalitas Akibat Covid-19": Kajian Demografi Sosial (Makalah).* Jakarta.

Wahyuningsih, S. (2021). *Sikap siswa terhadap pembelajaran daring menggunakan E-Learning berbasis WEB mata pelajaran al-qur'an hadits di MA Rauhdatul Jannah* (Doctoral dissertation, IAIN Palangka Raya).

Winata, I. K. (2021). Konsentrasi dan Motivasi Belajar Siswa terhadap Pembelajaran Online Selama Masa Pandemi Covid-19. *Jurnal Komunikasi Pendidikan*, *5*(1), 13

Yusuf, F. M. (2018). *Strategi Pengendalian Kecemasan Dalam Pengajaran Keterampilan Berbicara Bahasa Inggris.* Faculity of letters of Ekasakti University.