



## GENDER DIFFERENCES IN STUDENTS' SATISFACTION OF PHYSICS ONLINE LEARNING

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### Abstract :

The purpose of this study was to see the level of student satisfaction in carrying out online learning by comparing the perspectives of male and female students. This study used a cross sectional survey research method to 329 students in Bengkulu province consisting of 130 male students and 199 female students. Sampling for this study used a random system. The results showed that the highest satisfaction index for female students was the score they got during their activities with an average score of 4.10, on the contrary, they had the lowest score on the belief that they could study independently without face-to-face, which was the lowest point with a score of 3.07. From the male perspective, they were satisfied with the way to connect the previous learning by the teacher with an average score of 3.94 but the same as female students, most male students were also not sure that they would be able to study online.

Keywords: Gender; Learning Physics; Satisfaction Index

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## INTRODUCTION

In the Law of the Republic of Indonesia no. 20 of 2003 article 1 paragraph 1 concerning the National Education System SISDIKNAS (2003) states that: "Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by himself, the community, the nation and the State. Seeing the learning conditions that were hit by the Covid-19 Pandemic, even though now it has begun to subside, online learning is becoming a new norm (Agarwal & Prasad, 2013). A lot of learning is turning online by synchronous and asynchronous (Basri et al., 2021) terutama di sekolah-sekolah di kota besar sampai akhir 2022.

The impact of Covid-19 has weakened all sectors of the education system, including the implementation of education. The government's plan for implementing face-to-face learning starting in January 2021 is to hand over permits in full to the local government, as contained in the agreement letter of four Ministers namely; The Ministry of Education and Culture, the Minister of Religion, the Minister of Health, and the Minister of Home Affairs have yet to be fully implemented for all regions in Indonesia. meanwhile, for the city of Bengkulu the learning process since February 2022 has been carried out online and until an undetermined deadline after January-February 2022 has carried out learning offline.

Online learning, which is a new norm, indirectly provides a change in students' perceptions of learning. One of the students' perceptions of learning is the level of satisfaction. Satisfaction level according to Aktan 2010 in (Rat Dwiyana Putra, 2019) is a feeling where hopes, needs, and desires can be fulfilled from a service. In learning satisfaction, the service in question is the learning service felt by students. This is very important to note because student satisfaction has been shown to be positively correlated with the quality of learning outcomes (Putra & Syarkowi, 2021; Yulia & Putra, 2020).

Learning that meets expectations not only provides an assessment of the high quality of learning in the classroom, but also becomes a pre-eminence in an educational institution so that it is very important to have a process of guaranteeing the level of student satisfaction with learning. On the other hand, learning is highly subjective and unique for each student. One of the variables that causes differences in perceptions is gender. Gender always refers to the division of sexes in the form of women and men (Sumar, 2015). Gender can be an ability differentiator where if female students are good at doing verbal tasks in the early years and can be maintained, while male students show more language problems than female students (Nuyami et al., 2014). In addition, gender is a basic category that determines a perception in various aspects of life (Fernando et al., n.d.).

This different perception according to gender also influences the variable level of student satisfaction with learning (Weiss, 2001). Finally it is very important to conduct research on differences in perceptions of student satisfaction with learning conducted in schools based on a gender perspective.

## **RESEARCH METHOD**

This study aims to obtain information on how the level of student satisfaction with learning physics is viewed from a gender perspective. The research method used is a cross sectional survey research method (Cresswell, 2012; Sumargo, 2020). Where survey research is a quantitative research method used to obtain data that occurred in the past or present, about beliefs, opinions, characteristics, behavior, variable relationships and to test several hypotheses (Sugiyono, 2013). The sample technique in this study used incidental sampling techniques or temporary samples (Cresswell, 2012). The sample for this study was 329 students in Bengkulu province, spread across 3 regencies and cities, namely in the cities of Bengkulu, Rejang Lebong and Seluma. This sample consisted of 130 male students and 199 female students. The instrument of this research is a questionnaire adapted from (Palmer & Holt, 2009) with the following indicators:

Tabel 1. Indicator of student satisfaction with online physics learning

No	Indicators
1	Access To Learning Source
2	Learning Alone
3	Organize Of Learning
4	Content
5	Connection Between Learning And Daily Life
6	Connection To Past Learning/Experience
7	Interaction With Teacher/Staff
8	Interaction To Other Student
9	Connection To Assignment with Previous Task
10	Test
11	Way To Submit The Assignment
12	Feedback
13	Expected Good Score
14	Sending Task Online
15	Quality Of Information During Online Learning
16	Communicate
17	How Satisfied With Online Learning

This research activity began with making a research instrument in the form of a questionnaire adapted from (Palmer & Holt, 2009). This questionnaire was distributed using the help of the Google form using a Likert scale of 5 scales, strongly agree, agree, neutral, disagree and strongly disagree (Joshi et al., 2015). The data analysis technique from this activity is to use quantitative descriptive data analysis

techniques (Arikunto, 2013; Jaya, 2019) by looking for the mean or average in each indicator of the level of student satisfaction with learning physics.

## RESULTS AND DISCUSSION

This research was conducted in 3 schools in 3 regencies/cities in Bengkulu province, with respondents in the form of students in grades X and XI or the first and second years of state senior high schools. The general research results can be shown as shown below. From the data above, information is obtained that in general students' perceptions of online learning are in the agree category, with the lowest point being in the learning alone category or in independent learning. While the highest category is in the desire to get the best score.

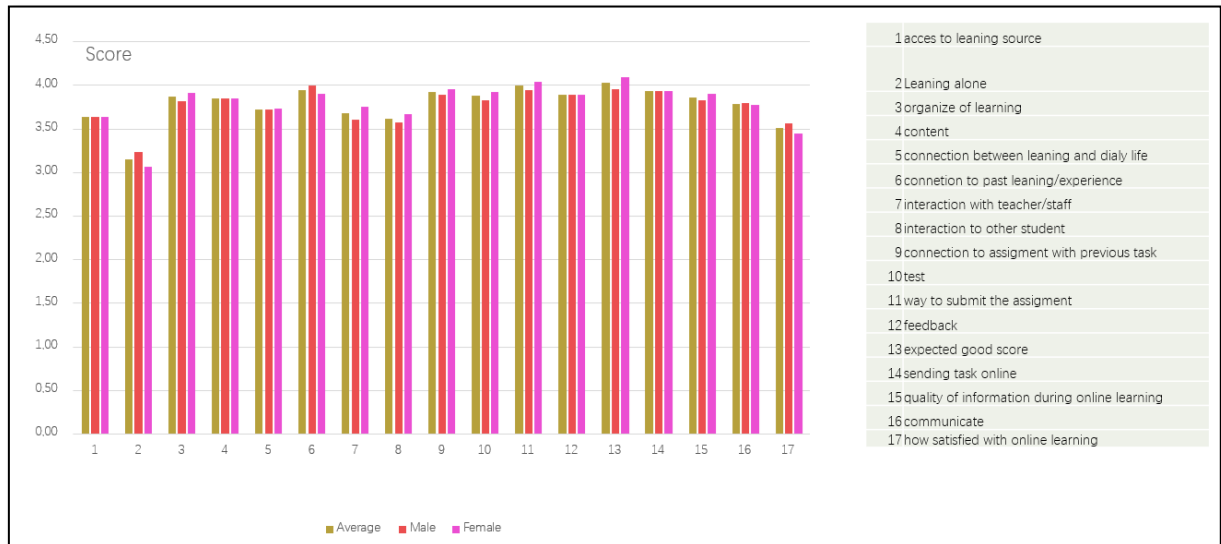


Figure 1. Research Result

From a gender perspective, the highest satisfaction index for female students is on the value items they get during their activities with an average score of 4.10, on the other hand, those with the lowest score are on the belief that they can learn independently without face-to-face meetings, which is the lowest point with a score of 3.07. from this it can be concluded that most female students are very confident of getting good grades during online learning. This is in line with the results of the study (Nuyami et al., 2014; Ramadhani & Siregar, 2021) where female students have better self-efficacy than male students, where this ability represents confidence in their abilities (Bandura, 2001; Marra et al., 2009) and female student also tend to reach higher score in online exam(Chang et al., 2014). In addition, female students are more this because in online learning, especially synchronous learning, students get a lot of verbal interaction where the female gender is more dominant and superior in processing this type of information moreover using the computer based/online (Gunn et al., 2003; Price, 2006; Sugihartono et al., 2007).

From the male perspective, they were satisfied with the way the assignments were given by the teacher with an average score of 3.94, but the same with female students, the majority of male students were also not sure they would be able to study online. This shows that male students really like the current learning connection with previous learning or in other terms, male students prefer the apperception process used during the online learning process. In online learning in all sample schools, students got a different apperception from before, where through online learning students were able to properly document previous learning. Besides that, every time the teacher started learning, he would accidentally associate today's material with previous material. This is in line with the characteristics of male students who are higher in terms of spatial ability or the ability to illustrate a concept (Sugihartono et al., 2007; Syahputra, 2013).

Besides that, in indicator 2, namely the process of self-learning is low both according to the male and female gender perspectives. This indicator is very low compared to the average of each indicator. This shows the presence of anxiety or lack of confidence in students in learning independently.

This is in accordance with the results of the study Rachmah & Rahmiyati (2022), where there are these barriers in online learning during covid. This also indicates that there is unusual anxiety during online learning (Sembiring & Wardani, 2021; Septiani & Purwanto, 2020) due to the loss of face-to-face interaction which has become a habit in conventional learning. In the chart in indicator 7 and 8, the data also notice if there are different satisfaction of interaction during online learning, the female more satisfied compared to another. This finding in line with research Lowes et al., (2016); Morante et al., (2017) which are found if interaction female students relatively higher than male.

Finally, in the final indicator it is very clear that the index of student satisfaction with learning is skewed to the right. The score of this indicator is around 3.5. This indicates that students are generally satisfied with learning. On the other hand, the category of student and teacher interaction and student and student interaction is relatively lower compared to other categories besides the self-study category. This indicates that the interaction in learning and the way students learn on their own must be a serious concern by teachers in planning online learning (Garland & Martin, 2005).

## CONCLUSION

In general, students are satisfied with online learning conducted by schools. Female students gave a high satisfaction score on the belief that they would get a good score/score during online learning, on the other hand male students felt the apperception of online learning was very satisfying. However, on the other hand it is very clear that there are differences in independent learning indicators which are not perceived as giving satisfaction to students, both male and female students. In addition, this finding indicates that the interaction in learning and the way students learn on their own must be a serious concern by teachers in planning and implementing online learning.

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## REFERENCES

- Agarwal, S., & Prasad, R. (2013). Effect of stabilizer on sensory characteristics and microbial analysis of low fat frozen yoghurt incorporated with carrot pulp. *International Journal of Agriculture and Food Science Technology*, 4(8), 797–806.
- Arikunto, S. (2013). *Prosedur penelitian suatu pendekatan praktik*.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52(1), 1–26.
- Basri, M., Husain, B., & Modayama, W. (2021). University students' perceptions in implementing asynchronous learning during Covid-19 era. *Metathesis: Journal of English Language, Literature, and Teaching*, 4(3), 263–276.
- Chang, C.-S., Liu, E. Z.-F., Sung, H.-Y., Lin, C.-H., Chen, N.-S., & Cheng, S.-S. (2014). Effects of online college student's Internet self-efficacy on learning motivation and performance. *Innovations in Education and Teaching International*, 51(4), 366–377.
- Cresswell, J. W. (2012). Planning, conducting, and evaluating quantitative and qualitative research. *Educational Research*.
- Fernando, F., Zarkasih, Z., & Ilhami, A. (n.d.). Studi Analisis Keterampilan Proses Sains Melalui Penerapan Model Pembelajaran Cooperative Ditinjau Dari Perspektif Gender. *Marwah: Jurnal Perempuan, Agama Dan Jender*, 19(2), 148–159.
- Garland, D., & Martin, B. N. (2005). Do gender and learning style play a role in how online courses should be designed. *Journal of Interactive Online Learning*, 4(2), 67–81.
- Gunn, C., McSparran, M., Macleod, H., & French, S. (2003). Dominant or different: Gender issues in computer supported learning. *Journal of Asynchronous Learning Networks*, 7(1), 14–30.
- Jaya, I. (2019). *Penerapan Statistik untuk penelitian pendidikan*. Prenada Media.
- Joshi, A., Kale, S., Chandel, S., & Pal, D. K. (2015). Likert scale: Explored and explained. *British Journal of Applied Science & Technology*, 7(4), 396.
- Lowes, S., Lin, P., & Kinghorn, B. R. C. (2016). Gender differences in online high school courses. *Online Learning*, 20(4), 100–117.
- Marra, R. M., Rodgers, K. A., Shen, D., & Bogue, B. (2009). Women engineering students and self-Gender Differences in .... (Ahmad Syarkowi, et al) pp:1-5

- efficacy: A multi-year, multi-institution study of women engineering student self-efficacy. *Journal of Engineering Education*, 98(1), 27–38.
- Morante, A., Djenidi, V., Clark, H., & West, S. (2017). Gender differences in online participation: Examining a history and a mathematics open foundation online course. *Australian Journal of Adult Learning*, 57(2), 266–293.
- Nuyami, N. I. M. S. R. I., Suastra, I. W., & Sadia, I. W. (2014). Pengaruh Model Pembelajaran Kooperatif Tipe Think-Pair-Share Terhadap Self-Efficacy Siswa SMP Ditinjau Berdasarkan Gender. *Jurnal Pendidikan Dan Pembelajaran IPA Indonesia*, 4(1).
- Palmer, S. R., & Holt, D. M. (2009). Examining student satisfaction with wholly online learning. *Journal of Computer Assisted Learning*, 25(2), 101–113. <https://doi.org/10.1111/j.1365-2729.2008.00294.x>
- Price, L. (2006). Gender differences and similarities in online courses: challenging stereotypical views of women. *Journal of Computer Assisted Learning*, 22(5), 349–359.
- Putra, N., & Syarkowi, A. (2021). Perbandingan Kepuasan Siswa terhadap Pembelajaran Fisika Sistem Online dengan Menggunakan Smartphone dan Laptop. *Jurnal Ilmiah Pendidikan Fisika*, 5(3), 487–498.
- Rachmah, D. N., & Rahmiyati, R. (2022). Kejenuhan, Mengasahi Diri, Dan Gender Dapatkah Mempengaruhi Belajar Mandiri Siswa Di Masa Pandemi Covid 19? *Jurnal Visi Ilmu Pendidikan*, 14(2), 118–125.
- Ramadhani, R., & Siregar, R. F. (2021). Analisis self efficacy matematika siswa terhadap pembelajaran daring pada masa pandemi Covid-19. *MAJU: Jurnal Ilmiah Pendidikan Matematika*, 8(2).
- Rat Dwiyanita Putra, I. D. G. (2019). Peran Kepuasan Belajar Dalam Mengukur Mutu Pembelajaran Dan Hasil Belajar. *Jurnal Penjaminan Mutu*, 5(1), 22. <https://doi.org/10.25078/jpm.v5i1.756>
- Sembiring, I., & Wardani, H. (2021). Analisis Kemandirian Belajar dan Kecemasan Belajar Matematika Ditinjau Dari Gender Siswa. *Jurnal MathEducation Nusantara*, 4(2), 13–23.
- Septiani, D. R., & Purwanto, S. E. (2020). Hubungan Antara Kepercayaan Diri dengan Hasil Belajar Matematika Berdasarkan Gender. *JKPM (Jurnal Kajian Pendidikan Matematika)*, 6(1), 141–148.
- Sugihartono, D., Harahap, F., Setiawati, F. A., & Nurhayati, S. R. (2007). *Psikologi pendidikan*. Yogyakarta: UNY press.
- Sugiyono. (2013). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.
- Sumar, W. W. T. (2015). Implementasi kesetaraan gender dalam bidang pendidikan. *Jurnal Musawa IAIN Palu*, 7(1), 158–182.
- Sumargo, B. (2020). *Teknik sampling*. Unj press.
- Syahputra, E. (2013). Peningkatan kemampuan spasial siswa melalui penerapan pembelajaran matematika realistik. *Jurnal Cakrawala Pendidikan*, 3(3).
- Weiss, R. P. (2001). Gender-biased learning. *Training & Development*, 55(1), 42.
- Yulia, I. B., & Putra, A. (2020). Kesulitan Siswa Dalam Pembelajaran Matematika Secara Daring. *Refleksi Pembelajaran Inovatif, Vol. 2, No. 2, 2020*, 2(2), 327–335.