

## Students' Perceptions in the Use of Web-Based Character Assessment: A View from Gender Perspective

Darmaji, Astalini, Dwi Agus Kurniawan\*, Febri Tia Aldila

Department of Mathematics and Natural Sciences Education, Jambi University, Indonesia

\*Corresponding email: [dwiagus.k@unja.ac.id](mailto:dwiagus.k@unja.ac.id)

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**Abstract: Perceptions in the Use of Web-based Character Assessment from Gender Perspective.**

**Objectives:** the purpose of this study is to determine the perception of the use of web characters based on gender differences. **Methods:** This study uses a quantitative method with a survey approach. Participants were eighth grade students of SMPN 6 Batanghari with a sample of 140 students. The data collection technique used a student perception questionnaire. Data analysis used descriptive statistics and inferential statistics in the form of t-test. **Findings:** The results of the study found that the value of Sig. (2-tailed) female students in grades A and B were 0.031 and 0.020 while the value of Sig. (2-tailed) male students in grades A and B are 0.033 and 0.021. Female students reported to have better perceptions than male students. **Conclusion:** Students have varied perceptions about web-based character assessment and female students' perception is better than others.

**Keywords:** Perceptions, web-based assessment, character, gender

**Abstrak: Persepsi Siswa dalam Penggunaan Penilaian Karakter Berbasis Web dari Perspektif Gender.** **Tujuan:** tujuan penelitian ini untuk mengetahui persepsi siswa pada penggunaan penilaian karakter berbasis web yang dianalisis berdasarkan perbedaan gender. **Metode:** Penelitian ini menggunakan metode kuantitatif dengan pendekatan survei. Partisipan merupakan siswa kelas delapan SMPN 6 Batanghari dengan sampel sebanyak 140 siswa. Teknik pengumpulan data menggunakan kuisioner persepsi siswa. Analisis data menggunakan statistik deskriptif dan statistik inferensial berupa uji-t. **Temuan:** Hasil penelitian menemukan bahwa nilai Sig. (2-tailed) siswa perempuan di kelas A dan B sebesar 0.031 dan 0.020 sedangkan nilai Sig. (2-tailed) siswa laki-laki di kelas A dan B sebesar 0.033 dan 0.021. Siswa perempuan dilaporkan memiliki persepsi yang lebih baik daripada siswa laki-laki. **Kesimpulan:** Siswa memiliki persepsi yang bervariasi tentang penilaian karakter berbasis web dan persepsi siswa perempuan lebih baik daripada yang lain.

**Kata kunci:** Persepsi, penilaian berbasis web, karakter, jenis kelamin

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## ■ INTRODUCTION

Continuous advances in science and technology allow people to enjoy a more comfortable way of life (Airlanda, 2018; Lin et al., 2019; Yu et al., 2005). Advances in technology have an impact on education in particular. Technology is very useful in learning because it gives learners the opportunity to learn in solving problems and is a consideration for teachers to develop the teaching and learning process (Garcia et al., 2020; Kola, 2017; Lyons & Tredwell, 2015; Naeyc & Frc, 2012; Russell et al., 2003). Furthermore, digital technology can be applied in schools to develop and improve the competence of human resources improvement in order to realize the success of students in education (Darmaji et al., 2020; Fauville et al., 2014; Hills & Thomas, 2019; Pilendia & Amalia, 2020).

Education is a series of processes in which some people with skills and skills play a role in educating others to understand the basic mechanisms in education (Aldila et al., 2020; Davies, 2017; Lynch, 2015; Veiga-Neto & Lopes, 2017). Education is the key to the development of technology that causes changes so that it can update its education system, educational philosophy, and curriculum (Aldila, Yuda, et al., 2020; Gezer, 2018; Reader & Freathy, 2016; Yun, 2016). The evolving structure and content of education over time has altered educational practices to make them more accessible (Deng et al., 2016; Dryden-Peterson, 2020; Li et al., 2014; Yan & Deng, 2018). One of the changes in educational practice which continues to evolve with the evolution of technology is the scoring system.

Assessments that play a central role in education are defined as the process for establishing what students know and are able to do in an effort to support teaching and learning in the classroom (Baird et al., 2017; Barber & Hill, 2014; Looney et al., 2017). The purpose of the assessment is to ensure the adaptation of teaching and learning

activities by describing, analyzing, and facilitating learning and measuring the learning outcomes so that it is very important to do (Bourke & Mentis, 2014; Ibarra-Sáiz et al., 2020; Laveault & Allal, 2016; Lopez & Pasquini, 2017). Assessment in learning is a complex thing that must be validated so that it can handle all aspects of assessment in an integrated manner (Black & Wiliam, 2018; Johnson et al., 2015; Schneider & Bodensohn, 2017). Assessment can ensure the relevance, effectiveness and continuity of learning, but the assessment process has changed over the past few years due to ongoing evaluations and modifications to teaching practices (Harker et al., 2019; Pereira et al., 2015; Wyatt-Smith et al., 2016). The assessment process has moved from a traditional paper-based assessment system to a technology-based assessment system called an electronic assessment.

Electronic assessment or e-assessment is the use of information technology in assessment activities that provide flexibility and ease of access for its users so that the assessment is more interactive (Callan et al., 2016; Mimirinis, 2018; Rodríguez-Gómez et al., 2014; Stowell & Lamshed, 2011). Electronic assessment plays a very important role which can cover the entire assessment environment along with the development of information and communication technology (Adesemowo et al., 2016; Lafuente et al., 2014; Whitelock, 2010). Electronic assessment is superior to paper-based assessment, this is due to several reasons, namely: (1) can be managed on demand; (2) there is an interactive room; (3) may include a large number of users; (4) can be combined with various multimedia; and (5) there is strategic and timely feedback (Bahar & Asil, 2018; Crisp, 2009; Jiao, 2015; Mostert et al., 2012; Singh & Wassermann, 2016). One practice of electronic assessment is online assessment.

Web-based assessments are increasingly popular for use, even replacing paper and pencil-based assessments as they are more synchronous and adaptive to use (Liu et al., 2017; Wongwatkit et al., 2016; Zheng et al., 2017). Web-based

assessments are widely used in education as a form of utilization of information and communication technology for assessment of student outcomes so as to increase motivation for adjustment and improvement of learning behavior (Liang et al., 2015; Widyastono, 2017; Yalman et al., 2014). Electronic assessment includes flexibility in time and place that allows students to receive assessment information instantly (direct feedback) (Cantillon et al., 2004; Deutsch et al., 2012; Wang, 2018). E-assessments that minimize time in assessment can be used for assessment in the cognitive realm and affective realms useful for obtaining information describing the behavior of learners (Astalini, Darmaji, et al., 2019; Astalini, Kurniawan, et al., 2019).

The development of student behaviour is very important because the principal result of an educational process is a change in behaviour, namely attitude and character. Strengthening the character is very important to realize the purpose of national education by applying religious values, honest, tolerant, disciplined, hard work, creative, independent, democratic, curiosity, national spirit, love of the homeland, respect for achievements, communicative, peace-loving, fond of reading, environmental care, social care, and responsibility (Permata & Mustadi, 2020; Permatasari & Anwas, 2019; Purnama, 2015). Education is able to shape the character of the nation because the character of education is a reflection of the character of students so as to produce a generation of character (Astuti & Mufrihah, 2019; Nuryana & Suyadi, 2019; Sopacua et al., 2020). Therefore, the assessment of the student's character is important to be done in order to know the success of learning by means of web-based character assessment which will then be known also how the student's perception of the assessment.

Perception is the process of capturing and inserting information into the human brain by the five senses because seeing, hearing or sensing a particular object will be related to the characteristics of personality (Darmaji et al., 2020; Darmaji,

Kurniawan, Astalini, & Nasih, 2019; Oh et al., 2019). Student perception of an item can be influenced by gender (Dharma, 2016; McGee & Guo, 2007). Gender is a form of culture that gives rise to differences in roles, functions, positions, behavioral rights and social responsibility between women and men formed by public beliefs (Taher & Hubeis, 2009). If gender is associated with the learning process, such as the assessment process, students' perception of the assessment will be influenced by gender (Setyaningsih et al., 2018). In addition, the use of electronic assessment on the Web will result in an interesting assessment process because students will feel comfortable using the Web (Purmadi & Surjono, 2016). Use of the website will increase student interest and motivation for learning (Sau et al., 2020).

According to the description, it is necessary to study to find out how students perceive the online assessment that has been prepared to support learning. Learning that implements assessments on the web will be more effective and efficient and there will be timely feedback (in real time). Learning that does not use web-based assessments will continue to use paper as a medium of assessment so that it is ineffective and inefficient, and cannot be accessed in real time. Therefore, this study will focus on analyzing students' perceptions of student personality assessment on the Web, according to the questions in this study, namely:

What is the student's perception of the use of student personality evaluations on the Web?

What are students' perceptions of gender differences in the use of online student character assessments?

## ■ METHODS

This research is a quantitative research based on a survey approach. Quantitative research has a paradigm of positivism in an action-based transformative agenda used for research on an object in the form of a particular population or sample (Cohen et al., 2007; Darmaji, Kurniawan, Astalini,

Kurniawan, et al., 2019; Tavakol & Sandars, 2014; Wright, 2014). Quantitative research emphasizes quantity and numbers and uses data in the form of likert scale with questionnaires as instruments for data collection (Indra et al., 2020; Rokhim et al., 2020; Zedko et al., 2017). Research using a quantitative approach is performed to measure data in the form of numerical data which is then analyzed for a research outcome.

The research instrument used is a student perception questionnaire that is included in the

online assessment as a data collection forum. Instruments become useful assessment tools for data processing and must go through validation first (Goh & Hu, 2013; Jang & Protacio, 2020; West, 2015). The questionnaire is a written statement which is useful in gathering data or information from respondents (Arikunto, 2006; Mauliza & Nurhafidhah, 2018; Sukerni, 2014). The questionnaire used in this study was adopted from (Puspaningtyas & Dewi, 2020), which consists of 30 statements as shown in Table 1.

**Table 1.** Research questionnaire

Sub Variable	Items
Subject matter	1, 2, 3, 4, 6, 7, 8, 9
Language	5, 10, 11, 12, 15, 16, 18
Appearance	13, 14, 17, 19, 25, 26, 27, 28, 29, 30
Benefit	20, 21 22, 23, 24

The results of the student perception questionnaire will be grouped into four four scales,

namely very bad, not good, good, and very good as shown in Table 2:

**Table 2.** Categories of students' perceptions questionnaire results

Interval	Score	Category
30.0 – 52.5	1	Very not good
52.6 – 75.0	2	Not good
75.1 – 97.5	3	Good
97.6 – 120.0	4	Very good

The population is the whole focus of the study and conclusions (Agung, 2011; Arisantiani et al., 2017; Lestari et al., 2017; Rediarta et al., 2014). The population in this study is all grade VIII students of SMPN 6 Batanghari which amounts to 4 classes with a population of 140 students in the 2020/2021 school year. In a study, populations and samples had a closely related relationship. The research sample is part of the population representing the entire population in the study so it is stated that the sample count is the number of populations (Astiti et al., 2017; Ayuni et al., 2017; Zedko et al., 2017). The research sample includes two classes, each of

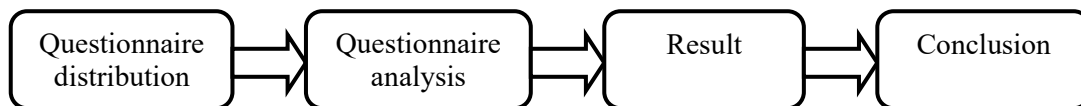
40 eighth grade students from class A and class B. The survey population and samples were collected using selected sampling techniques.

The sampling approach used in this study is a targeted sampling approach. Purposive sampling is a sampling technique with certain considerations or criteria in depth (Melesse & Mekonnen, 2020; Mustofa & Rusdiana, 2016; Sugiyono, 2013; Tegeh et al., 2020). Purposive sampling applied in this study is used to obtain research subjects based on special considerations, namely research needs or expected in research (Rahmawati & Anwar, 2020; Sugiyono, 2013; Susilawati et al., 2019,

2020). Purposive sampling criteria in this study are based on the basic ability to operate a laptop or mobile phone to learn which is seen based on the ICT value passed above completeness criteria.

The data analysis techniques used in this study are two types of statistics: descriptive statistics and inferential statistics. Descriptive statistics are used to analyze and present data by describing the data obtained (Anindyta & Suwarjo, 2014; Hartiyani & Ghufro, 2020; Margunayasa, 2014). Measurements on descriptive statistics are performed by calculating

mean, median, mode, maximum score, and minimum score (Marquezin et al., 2016; Paramita et al., 2019; Paramitha & Margunayasa, 2016; Quintela-del-Río & Francisco-Fernández, 2017; Shang, 2015). While inferential statistics are used to test hypotheses consisting of prerequisite testing (normality test and homogeneity test) and hypothesis testing (t-test) with testing criteria is  $H_0$  accepted when  $t_{hitung} < t_{tabel}$  and  $H_0$  are rejected if  $t_{hitung} > t_{tabel}$ , at a level of significance 5% (Astuti & Mustadi, 2014; Dewi et al., 2019; Lestari & Parmiti, 2020; Paramita et al., 2019; Zulfa & Haryanto, 2021).



**Figure 1.** The flowchart of the research carried out

■ **RESULT AND DISCUSSIONS**

The results of research or analysis of research data are used as guidelines for the development of web-based assessments in the future. The novelty of this study is that it compares students' perceptions of web-based student character assessments reviewed from gender differences. The perceptions that students have will be different from each other that can be caused by gender differences, so that gender plays a role in the modification attitudes and perceptions of students (Purnamaningsih & Ariyanto, 2016; Znajmiecka-Sikora & Sa<sup>3</sup>agacka, 2020). Different student perceptions

make the analysis of students' perceptions of student character assessment based on gender differences considered important to be done in order to see the differences in perception caused by gender differences.

**All Students' Perceptions**

This study aims to see the difference in perception of class A and B students towards web-based assessment. The description of the data of students' perception of class A and B towards the use of the web as a medium of assessment of students' character can be seen in Table 3.

**Table 3.** Description of the all students' perceptions

Class	Category	f	(%)	Mean	Median	Mode	Min	Max
Class A	Very Bad	0	0%	99.15	100	95	88	109
	Bad	0	0%					
	Good	19	47.5%					
	Very Good	21	52.5%					
Class B	Very Bad	0	0%	99.58	97	95	88	112
	Bad	0	0%					
	Good	21	52.5%					
	Very Good	19	47.5%					

Table 3 shows a description of the perceptions of all students from class A and class B. Students' perceptions of the use of web-based character assessment in class A with a total of 40 students indicate that as many as 19 students are in the good category with a percentage of 47.5%. Then, as many as 21 students were in the very good category with a percentage of 52.5%. In addition, the mean value is 99.15, the median value is 100, the mode value is 95, the minimum value is 88, and the maximum value is 109. These results indicate that class A has a very good perception of web-based character assessment. This can be seen from the results of the largest percentage in the very good category, namely 52.5% (21 of 40 students).

Furthermore, students' perceptions of the use of web-based character assessment in class B with a total of 40 students showed that as many as 21 students were in the good category with a percentage of 52.5% and as many as 19 students were in the very good category with a percentage of 47.5%. In addition, the mean value is 99.58, the median value is 97, the mode value is 95, the minimum value is 88, and the maximum value is 112. These results indicate that class B has a good perception of web-based character assessment. This can be seen from the results that the largest percentage is in the good category, namely 52.5%

(21 of 40 students).

Students' perceptions of the use of web-based character assessment in class A and class B showed good results so that it was a positive perception. Positive perceptions indicate that students give a good response by accepting and supporting the use of the implemented web-based character assessment. Positive perceptions arise because of the influence of support and motivation so that students accept, face and conquer all challenges (Anggoro, 2016). In line with Öz, (2014) which shows that students prefer web-based assessments and have a positive perception of the use of web-based assessments because of the ease of use. Assessments conducted online such as e-assessments are more supported by students because they help the learning process to be more efficient in terms of time (Sorensen, 2013).

Furthermore, a prerequisite test is conducted, namely a normality test (to find out if the data is distributed normally or not) and a homogeneity test (to find out if some population variants are the same or not). The results of normality and homogeneity test can be observed in Table 4.

Based on Table 4, in the One-Sample Kolmogorov-Smirnov Test, a significance (2-tailed) value of 0.077 was obtained. Because of

**Table 4.** Results of normality and homogeneity tests

One-Sample Kolmogorov-Smirnov Test			Test of Homogeneity of Variances			
		A	Levene Statistic	df2	df2	Sig.
N		40				
Normal Parameters <sup>a,b</sup>	Mean	99.15				
	Std. Deviation	6.229				
Most Extreme Differences	Absolute	.132	2.129	1	78	.149
	Positive	.122				
	Negative	-.132				
Test Statistic		.132				
Asymp. Sig. (2-tailed)		.077 <sup>c</sup>				

a. Test distribution is Normal

the Sig value. (2 tailed)  $0.077 > 0.05$  then the perception data of class A and B students to the assessment of the character of web-based students is distributed normally. While in the Test of Homogeneity of Variances obtained a significance value of 0.149. Because of the Sig value.  $0.149 > 0.05$  then the variant of the data perception of class A and B students to the character assessment of web-based students is homogeneous.

In a study, it is very important to check whether the sample used is normally distributed or not (Bayoud, 2019). This is supported by Nurhadisah et al., (2014) suggested that the data normality test aims to determine whether the data obtained are normally distributed or not. Normality of a data is a general assumption that is still used in statistical procedures (Psaradakis & Vávra, 2018). In addition, homogeneity test in a study is also very much needed. The homogeneity test of the data was carried out to see whether the two samples had the same variance or not (Murhamatillah et al., 2013). In line with Nurhadisah et al., (2014) stated that the homogeneity test was used to determine whether the data obtained were homogeneous or not and to identify the data obtained from the two classes having the same variance or not.

After knowing that the data is normally distributed and the data is homogeneous, then the hypothesis is tested. The hypothesis test used in this study is a t-test in the form of an independent sample t-test. The independent sample t-test was used to see differences in the perceptions of class A and B students on web-based character assessments. The results of the independent sample t-test showed that the value of Sig. (2-tailed) class A and class B of  $0.028 < 0.05$  so that there is a significant difference between the perceptions of students of class A and B on web-based character assessment. The t-test was used to determine the difference or

significance of the two groups (Afrida et al., 2015; Zulhelmi et al., 2017). The t-test is a statistical test used to test the truth of a hypothesis proposed by the researcher in distinguishing the average in two populations (Wati & Widiensyah, 2020). The independent sample t-test was conducted with the aim of knowing whether the two samples had a significant difference or not.

Based on the description of the results of the study, it can be known that there is a real difference between the perception of class A students and class B students to web-based character assessment. The perception of class A students is in the excellent category with a percentage of 52.5% while the perception of class B is in the good category with a percentage of 52.5%. It has the same percentage value, but within different categories. These differences in perception must be analysed in greater detail by gender. This is due to the value of Sig. (2-tailed) class A and class B show the same result of 0.028.

### **Perceptions of Students' from Class A with Gender Differences**

This study aims to look at the differences in perceptions of female and male students of class A to web-based assessment of students' character. The description of the data on the perception of class A female students towards the use of the web as a medium of assessment of students' character can be seen in Table 5.

Table 5 shows a description of the perceptions of all students from class A based on gender differences. The perception of female students on the use of web-based character assessment with a total of 22 students showed that as many as 8 female students were in the good category with a percentage of 36.4%. Then, as many as 14 female students were in the very good category with a percentage of 63.6%. In addition, the mean value is 101.05, the median value is 103.50, the mode value is 95, the

**Table 5.** Description of the perceptions of female students form class A

Gender	Category	f	(%)	Mean	Median	Mode	Min	Max
Female	Very Bad	0	0%	101.05	103.50	95	88	109
	Bad	0	0%					
	Good	8	36.4%					
	Very Good	14	63.6%					
Male	Very Bad	0	0%	99.83	95.50	88	88	109
	Bad	0	0%					
	Good	11	61.1%					
	Very Good	7	38.9%					

minimum value is 88, and the maximum value is 109. These results indicate that female students in class A have a very good perception of web-based character assessment. This can be seen from the results that the largest percentage is in the very good category, namely 63.6% (14 out of 22 students).

Furthermore, the perception of male students on the use of web-based character assessment in class A with a total of 18 students showed that as many as 11 male students were in the good category with a percentage of 61.1% and as many as 7 male students were in the very good category. with a percentage of 38.9%. In addition, the mean value is 99.83, the median value is 95.50, the mode value is 88, the minimum value is 88, and the maximum value is 109. These results indicate that male students in class A have a good perception of web-based character assessment. This can be seen from the results that the largest percentage is in the good category, namely 61.1% (7 of 18 students).

Student perceptions of the use of web-based character assessment in class A based on

gender differences showed good results. This good perception arises due to the ease of using web-based assessments. Online assessments have advantages such as reduced paper usage and fast data analysis. This is supported by Wang, (2018) argues that online assessment is superior because it is able to offer direct test corrections and allows students to receive assessment results quickly and accurately. Web-based assessment as part of online research is a technology-based assessment to assess student learning online. This online assessment can be used as a tool to assess the academic performance of students during the learning process (Iskandar et al., 2021).

Furthermore, a prerequisite test is conducted, namely a normality test (to find out if the data is distributed normally or not) and a homogeneity test (to find out if some population variants are the same or not). The results of normality and homogeneity test can be observed in Table 6.

Based on Table 6, in the One-Sample Kolmogorov-Smirnov Test, a significance (2-tailed) score of 0.134 was obtained. Because of

**Table 6.** Results of normality and homogeneity tests

One-Sample Kolmogorov-Smirnov Test		Test of Homogeneity of Variances			
	A	Levene Statistic	df2	df2	Sig.
N	40				
Normal Parameters <sup>a,b</sup>	Mean				
	96.83				



	Std. Deviation	5.8568354				
Most Extreme Differences	Absolute	.178	0.048	1	38	.828
	Positive	.098				
	Negative	-.178				
Test Statistic		.178				
Asymp. Sig. (2-tailed)		.134 <sup>c</sup>				

a. Test distribution is Normal

the Sig value. (2-tailed) 0.134  $\geq$  0.05 then the data of class A students' perception of the character assessment of web-based students is distributed normally. While in the Test of Homogeneity of Variances obtained a significance value of 0.828. Because of the Sig value. 0.828  $>$  0.05 then the variant of class A student perception data on web-based student character assessment is homogeneous.

All data collected and used in the study must be normally distributed (Sari et al., 2017). The data normality test aims to determine whether the data obtained are normally distributed or not (Nurhadisah et al., 2014). In line with Cahyaningsih et al., (2020) suggested that the normality test was conducted to determine whether the data were normally distributed or not. Normality of a data is a general assumption that is still used in statistical procedures (Psarakis & Vávra, 2018). The homogeneity test of the data was carried out to see whether the two samples had the same variance or not (Murhamatillah et al., 2013). In line with Septian, (2017) homogeneity test in a study is also very much needed. The homogeneity test of the data was carried out to see whether the two samples had the same variance or not

After knowing that the data is normally distributed and the data has been homogeneous, a hypothesis test is carried out. The hypothesis test used in the study is the t-test in the form of an independent sample t-test. The t-test was conducted to determine whether or not there was

a simultaneous effect between two variables (Aprilyanti, 2017). The t-test is a statistical test used to test the truth of a hypothesis proposed by the researcher in distinguishing the average in two populations (Wati & Widiyansyah, 2020). The independent sample t-test was conducted with the aim of knowing whether the two samples had a significant difference or not.

The independent sample t-test serves to see the difference between the perception of class A students towards web-based character assessment based on gender differences. The results of the independent sample t-test showed that the value of Sig. (2-tailed) female students were 0.031  $<$  0.05 and male students were 0.033  $<$  0.05. So, there is a significant difference between female and male students' perceptions of web-based character assessment in class A. The significance value (Sig 2-tailed) for female students is 0.031, which is smaller than the significance value (Sig 2-tailed) for male students by 0.033. The smaller the significance value indicates that the perception is more varied. Thus, it can be concluded that the perception of female students on the use of web-based character assessment in class A is more varied than that of male students.

### **Perceptions of Students' from Class B with Gender Differences**

This study aims to see the difference in perception of female students and male students of class B to web-based assessment. The

description of the data on the perception of class B female students towards the use of the web as a medium of assessment of students' character can be seen in Table 7.

**Table 7.** Description of the perceptions of female students form class B

Gender	Category	f	(%)	Mean	Median	Mode	Min	Max
Female	Very Bad	0	0%	98.59	96.50	95	88	108
	Bad	0	0%					
	Good	14	63.6%					
	Very Good	8	36.4%					
Male	Very Bad	0	0%	100.78	101	104	92	112
	Bad	0	0%					
	Good	7	38.9%					
	Very Good	11	61.1%					

Table 7 shows a description of the perceptions of all students from class B based on gender differences. Student perceptions of the use of web-based characters with a total of 22 students showed that as many as 14 female students were in the good category with a percentage of 63.6%. Then, as many as 8 female students were in the very good category with a percentage of 36.4%. In addition, the mean value is 98.59, the median value is 96.50, the mode value is 95, the minimum value is 88, and the maximum value is 108. These results indicate that female students in class B have good perceptions of web-based characters. This can be seen from the results of the largest percentage in the good category, namely 63.6% (14 of 22 students).

Furthermore, the perception of male students on the use of web-based characters in class B with a total of 18 students showed that as many as 7 male students were in the good category with a percentage of 38.9% and as many as 11 male students were in the very good category. with a percentage of 61.1%. In addition, get a mean value of 100.78, a median value of 101, a mode value of 104, a minimum value of 92, and a maximum value of 112. These results indicate that male students in class B have very good perceptions of web-based characters.

This can be seen from the results that the largest percentage is in the very good category, namely 61.1% (11 of 18 students).

Perception is a direct response obtained by students through sensing and is subjective, because it depends on the circumstances and abilities of each student. Perception of students is the perspective of students in concluding various information obtained as well as interpreting it so as to form a mindset towards various phenomena that occur. Perceptions of students in class B showed good and varied results. This was due to the use of web-based character assessment which facilitated the process of assessing student character. Web-based assessment as part of e-assessment has the advantage of good feedback ability that can be immediately conveyed to students (Howe, 2020). In line with Appiah & Van Tonder, (2019) shows that the advantages of e-assessment are flexibility in use so that it can be used anywhere and anytime, fast feedback, and easy access to assessment results. Then, Kundu & Bej, (2021)states that students' perceptions of e-assessments vary depending on gender, academic level, and economic conditions of students.

Furthermore, a prerequisite test is conducted, namely a normality test (to find out if

the data is distributed normally or not) and a homogeneity test (to find out if some population variants are the same or not). The results of the normality and homogeneity test can be observed in Table 8.

Based on Table 8, in the One-Sample Kolmogorov-Smirnov Test, a significance (2-tailed) score of 0.134 was obtained. Because of the Sig value. (2-tailed)  $0.314 > 0.05$  then the data of class B students' perception of the

**Table 8.** Normality and homogeneity test results

One-Sample Kolmogorov-Smirnov Test			Test of Homogeneity of Variances			
		A	Levene Statistic	df2	df2	Sig.
N		40				
Normal Parameters <sup>a,b</sup>	Mean	99.15				
	Std. Deviation	6.229				
Most Extreme Differences	Absolute	.211	1.095	1	78	.302
	Positive	.211				
	Negative	-.138				
Test Statistic		.211				
Asymp. Sig. (2-tailed)		.314 <sup>c</sup>				

a. Test distribution is Normal

character assessment of web-based students is distributed normally. While in the Test of Homogeneity of Variances obtained a significance value of 0.302. Because of the Sig value.  $0.302 > 0.05$  then the variant of class B student perception data on web-based student character assessment is homogeneous.

Normality and homogeneity are needed in quantitative research because they are requirements for data analysis. Normality test is conducted to find out whether the two classes come from a normally distributed population or not (Septian, 2017). Checking whether the sample used is normally distributed or not is very important in research (Bayoud, 2019). The normality test criteria is  $H_0$  is accepted if the value of sig.  $0.05$  and  $H_0$  is rejected if the value of sig.  $< 0.05$  (Sanusi et al., 2020). Then, homogeneity test is also an important thing in research. Homogeneity test is used to determine whether

the data obtained are homogeneous or not and to identify the data obtained from the two classes have the same variance or not (Nurhadisah et al., 2014).

After knowing that the data is normally distributed and the data has been homogeneous, a hypothesis test is carried out. The hypothesis test used in the study is the t-test in the form of an independent sample t-test. The t-test aims to determine whether the regression coefficient of each independent variable has a significant effect on the dependent variable (Eksandy, 2017). The basis of the t-test assumes that the residual value is normally distributed (Sari et al., 2017). The independent sample t-test was conducted with the aim of knowing whether the two samples had a significant difference or not.

The independent sample t-test serves to see the difference between the perception of class B students towards web-based character

assessment based on gender differences. The results of the independent sample t-test showed that the value of Sig. (2-tailed) female students were  $0.020 < 0.05$  and male students were  $0.021 < 0.05$ . Thus, there is a significant difference between female and male students' perceptions of web-based character assessment in class B. The significance value (Sig 2-tailed) for female students is 0.020 smaller than the significance value (Sig 2-tailed) for male students by 0.021. The smaller the significance value indicates that the perception is more varied. Thus, it can be concluded that the perception of female students on the use of web-based character assessment in class B is more varied than that of male students.

Students' perceptions of learning can be assessed according to gender (Anggoro, 2016). Gender is a useful concept in identifying male and female differences in terms of social, cultural and psychological aspect (Yuliani, 2019). Female students are more diverse in perception than male students because of factors that occur in learning and at home. In apprenticeship, students are viewed as behaving more politely than men. Moreover, women students have a greater interest in learning than men.

Students' perception of web-based character assessment may show a result of how the website is used in the assessment process. Student character assessments on the website may increase student interest in learning. The use of the website can train the independence and activeness of students online to support the learning process so as to produce a positive attitude of students in learning (Kurniawan, 2017). In addition, research on students' perception of student personality assessment will make the assessment process more complex because it is assessed for gender differences. For this research to form the basis for the future development of student personality assessment on the Web.

## ■ CONCLUSIONS

According to the results of the study, the students' perception of the evaluation of characters on the Web is more varied and higher than that of male students. The perception of class A and B students to web-based character assessments was equally well responded to, but the perception of female students was superior to the perception of male students. These differences in response may be examined on the basis of gender differences.

Students' perceptions of the application of web-based character assessment are positive perceptions. The perception of female students showed more positive results than the perception of male students on the application of web-based character assessment. Positive perception is a good perception towards the use of web-based character assessment. This is because a good web-based assessment process will support student character assessment as a forum for developing the learning process. Suggestions in this study are addressed to researchers and teachers. The results of this study are expected to be used as a reference for developing further research. Then for teachers, the results of this study are expected to be a reference in the future in designing a better web-based assessment process.

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