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## Quality assessment of vocational school libraries using the WebQual 4.0 technique

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#### **ABSTRAK**

**Pendahuluan.** Penelitian ini bertujuan untuk menilai kualitas website perpustakaan sekolah menengah kejuruan (SMK) dan mengindentifikasi faktor yang mempengaruhi kualitas website perpustakaan.

**Metode penelitian.** Penelitian ini menggunakan metode kuantitatif dengan populasi seluruh siswa dari tiga SMK di Yogyakarta. Pengumpulan data menggunakan kuesioner dengan sampel sebanyak 357 siswa.

Data analisis. Analisis menggunakan WebQual Index (WQI) and Importance Performance Analysis (IPA).

**Hasil dan Pembahasan.** Penelitian ini menemukan kualitas website perpustakaan dengan nilai QWI 0.87 pada website perpustakaan SMKN 1 Bantul, nilai 0.85 pada website perpustakaan SMKN 1 Godean, dan 0.81 untuk website perpustakaan SMKN 2 Yogyakarta. Berdasarkan sudut pandang pengguna website, kualitas website perpustakaan SMKN 1 Bantul memiliki kualitas terbaik dibandingkan website lainnya pada penelitian ini. Enam faktor yang mempengaruhi kualitas website diantaranya pengalaman positif pengguna, informasi terpercaya, keamanan data pribadi, fitur personalisasi, kemudahan komunikasi dengan pengelola website dan informasi pengelola website.

**Kesimpulan.** Secara umum, kualitas website perpustakaan sekolah menengah kejuruan di Daerah Istimewa Yogyakrta sudah baik dalam tiga aspek: *usability*, kualitas informasi dan *service interaction quality*.

Kata kunci: website perpustakaan; kualitas website; analisis WebQual; perpustakaan sekolah

## **ABSTRACT**

*Introduction.* The purpose of this study is to assess the quality of the vocational school library websites and to determine the factors that influence the websites' quality.

**Data Collection Methods.** This paper used a quantitative method with a population of vocational high school students in Yogyakarta. A questionnaire was used to collect data from 357 students from three schools.

**Data Analysis**. WebQual Index (WQI) and Importance Performance Analysis (IPA) data analysis approaches were used.

Results and Discussion. This study discovered a WQI score of 0.87 on the library website of SMKN 1 Bantul, 0.85 on the library website of SMKN 1 Godean, and 0.81 on the library website of SMKN 2 Yogyakarta. According to user views, the quality of the library website of SMKN 1 Bantul is high. The result showed that users considered six factors, these were positive website experience, reliable information offered by the website, personal data security, personalization features, ease of communication with the website manager, and website manager information.

**Conclusion.** In general, the quality of the Yogyakarta vocational high school library website is good in three areas: usability, information quality, and interaction service quality.

**Keywords:** library website; website quality; WebQual analysis; school library

## A. INTRODUCTION

Information and communication technology development encourages organizations and institutions to have a website as a source of information. Most organizations provide web-based services to get closer to their consumers or audiences. Garett et al. (2016) explain that the website is a tool to provide organizational information or services to the public, a form of information transparency, and a digital branding tool for the organization. Through the website, organizations can reach audiences quickly and efficiently disseminate information. Another role of the website is that it can provide services to users online, provide information quickly, and be accessed anytime and anywhere (Napitupulu, 2017; Shia et al., 2016). Educational institutions, schools, have now started optimizing the website's role as an information medium. The school website provides educational information to get closer and provide experience school stakeholders (Taddeo & Barnes, 2016). This provides users with simple access to information both inside and outside of school (Niazi & Kamran, 2016). Directly, the content on the website may provide timely information while also forming a positive image of the institution (Arina, 2018).

The school library is one of the institutions that also uses the website as a user service. Mierzecka and Suminas (2018) divide library website functions into five categories based on a user-centric approach. These functions consist of supporting the use of digital and conventional collections; promoting libraries as a gateway for locating information in libraries; education; and optimizing library images. Thus, the library website is expected to expand and carry out the additional role of the library. End-users of library websites are often library users such as students, students, researchers, senior users, library employees, and others. As a result, the library website must be chaotic and designed to pique the curiosity of users (Kous et al., 2020). Furthermore, the library website is intended to meet user expectations, such as being simple to use, efficient, and enjoyable for website users (Okhovati et al., 2017). This underscores the need of libraries paying attention to website quality in order to meet customer expectations. As a result, the library website can run smoothly.

Napitupulu (2017) explains that on a website, quality is a crucial factor that must be considered that leads to website content because a website is like an image of an institution in cyberspace. Research conducted by Pamungkas et al. (2019) mentions that the quality of the website is the essential element that is seen and assessed by users so that it allows users to visit again. Therefore, it is important to focus on the content that will be presented on a website so that the information presented can be helpful for users.

Research result: Giao et al. (2020) explained that the quality of the website affects the satisfaction of website users. Furthermore, a good website quality also affects trust, user convenience, and lovalty. Various aspects affect the quality of a website, such as design, security and privacy, customer service, and reliability. However, another study found that the quality of the website did not match user expectations because of an unattractive appearance, long difficulties website access. and communicating with institutions (Arifin et al., 2015). This is particularly important to consider because user expectations are essential to the existence of a website. Furthermore, customer satisfaction with the information gained from the websites they visit influences the success of the website (Subiyakto et al., 2016).

Previous research studies related to website design, as conducted by Cirelli & Long (2020), which focused on medical library website design, a survey of website usability by Conrad & Stevens (2019) and Igbal & Warraich (2012). and research on website information content 2021), website (Wani, user behavior (Shevchenko, 2020), and user experience (Desmarais & Louderback, 2020). These previous studies focused on different aspects of library websites. Almost all studies examine the context of academic libraries and public libraries. According to the findings of these studies, the quality of the website is a deciding factor in the use of digital library services. Websites can be one of the primary sources of information for users. As a result, the quality of all components of the website will make it easier for users to access library services. So far, academic library websites have been the focus of website quality study (Fitriah et al., 2020; Loanardo et al., 2022; Wulandari et al., 2021).

On the other hand, school libraries that already use the website must also pay attention to the quality. The quality of the library website will be an input for library managers or management to provide optimal digital services. A good-quality library website shows that all components of the library's digital information are well managed and meet user expectations. Moreover, using the website in the school context can help create a positive image of the school as a means of school promotion and a tool to introduce the school's profile to the public (Hia et al., 2020).

This study compares the quality of school library websites in the Special Region of Yogyakarta. Schools in the scope of this study are vocational high schools with the assumption that more innovations are produced by schools and that they have information technology majors. This study chose three vocational high school library websites because, based on initial observations, there were only three SMK libraries that already had websites independently. In addition, this study also identifies and analyzes the factors that influence the quality of the school library website. This research contributes to looking at the quality of school library websites in Indonesia, especially Yogyakarta, which focuses on vocational high school libraries. The limitation of this study is to analyze only three qualities of library websites in the scope of vocational high schools.

#### **B. LITERATURE REVIEW**

A website or site is a number of web pages with related topics, sometimes accompanied by images, videos, or other types of files. Rahayu et al. (2018) explain that there are several versions of the WebQual model where each version is used in different studies that are adapted to the population and research needs. First, WebQual 1.0 consists of four dimensions: usefulness; ease

of use; entertainment; and interaction. This first version of WebOual is strong in the information quality dimension but weak in service interaction. Second, WebQual 2.0 is divided into three parts: website quality, information quality, and service interaction. In WebQual 2.0, the interaction aspect was developed by adopting service quality. Third, WebQual 3.0 was tested to identify three dimensions of website quality: usability, information quality, and service interaction quality. Fourth, WebQual 4.0, obtained from the development of WebQual versions 1 to 3 and also adapted and developed from ServOual. WebOual 4.0 consists of 3 dimensions: usability, information quality, and interaction quality.

Furthermore, WebQual 4.0 consists of the following components:

# 1. Information Quality

Information quality is the quality of the content contained on the site, whether or not the information is appropriate for user purposes such as accuracy, format, and relevance. Information quality includes accurate information: reliable information: up-todate/latest information relevant to the topic of discussion; easy-to-understand information; very detailed information; and information presented in an appropriate design format.

## 2. Interaction Quality

Interaction quality is the level of service interaction experienced by users as they progress through the site, as represented through trust and empathy. Issues like as transaction and information security, product delivery, personalisation, and contact with site owners are examples.

## 3. Usability

Usability is the site's quality, appearance, ease of use, navigation, and image presented to the user. This criterion is very influential because a website's appearance or design is a major factor in influencing visitors. With an attractive design, ease of use, and navigation, visitors will be happy to visit it. They will also find it easy to obtain the information needed.

WebQual can be used to assess the quality of several websites, including internal company websites (intranet) and external websites. The user's impression is divided into two parts: the perceived service quality (actual) and the amount of expectation (ideal). The WebQual tool was created primarily to evaluate website quality in the context of a business school. With the advancement of similar research, the usage of WebQual for website quality analysis is becoming more prevalent in a variety of settings of internet services.

The library website is a product of technological developments that are part of today's library services (Meilita, 2020). The existence of a library website functions as a virtual space that collects, organizes, and presents information owned by the library (Kumar & Bansal, 2014). The library website can provide information to users. It will then provide satisfaction if it meets users' needs, especially from the quality of the information presented (Ashab, 2017). The library website's quality is deemed necessary. It has a significant impact on the library's image (Fitriah et al., 2020), as well as being a factor that can build customer loyalty (Siagian & Cahyono, 2014).

## C. RESEARCH METHODS

The quality of the vocational high school library website was determined using quantitative approaches in this Ouantitative approaches and instruments are used in the research stages. Furthermore, this study employs the Webqual 4.0 technique, which is one method for assessing the quality of a website based on user perceptions. This method was chosen since Webqual is used to assess the quality of websites. In addition, "webgual" refers to a strategy or technique for determining website quality based on end-user perceptions. Since 1998, this strategy has been evolving in tandem with the advancement of information technology. Furthermore, this study employs an Importance Performance Analysis (IPA) approach to identify service provider aspects that need to be improved and prioritized. IPA is a basic technique for identifying the aspects of a product or service that need to be

improved so that the product or service's quality can be enhanced. IPA displays information about service elements that determine customer satisfaction and loyalty, as well as a graph that combines the measurements of perception and satisfaction.

This study was conducted in Yogyakarta's state vocational high schools (SMKN), which already have their own library website. This study uses three vocational high schools as samples: SMKN 2 Yogyakarta, SMKN 1 Godean, and SMKN 1 Bantul. The population in this study comprised of roughly 4,847 students from the three vocational institutions. The distribution of students is seen in the Table 1.

To determine the sample of respondents for this study, a multistage sampling procedure is used. Because the community is relatively homogeneous and vast, the respondents in the study are those who meet the research criteria: students from sample schools who have used the school library website. The selection criteria for the first sampling stage, using the purposive sampling technique, are pupils who have utilized the school library website. The sampling process was carried out in the second stage utilizing a proportionate random sampling technique. The proportion of pupils from each school was utilized to conduct a random sampling of students who had used the school library website.

The sample for each school is determined using Krejcie and Morgan's formula to obtain a proportional sample from each sample. From a total population of 4,847, a sample of 357 was drawn. Each school was sampled: SMKN 2 Yogyakarta (168 students), SMKN 1 Godean (73 students), and SMKN 1 Bantul (116 students).

Furthermore, the quality of the school library website will be revealed and studied in this study, which is broken down into several sub-variables to be studied, namely: demographic data of respondents; frequency and expectations of respondents on the quality of the library website; use of library website; the quality of information on the library website; and the quality-of-service interactions on the library website. The questionnaire used in this

study is broken into three sections. The first section has five questions about respondent information. The second section includes three questions about respondents' frequency, views, and expectations about the library website. The final section includes up to 23 research questions tailored to the WebQual instrument (indicators provided in the appendix). This survey employs a four-point rating scale, which means that each question has five possible answers, ranging from 1 "strongly disagree" to 4 "strongly agree." The following table 2 depicts the grid for this study questionnaire.

In this study, data was collected using an online questionnaire via Google Form, which the respondent completed. While gathering data from the three schools identified, Microsoft Excel software is used to help categorise the information gathered so that it can be used effectively. The method is divided into two stages: demographic analysis and inferential statistical analysis.

In the first stage, the researcher analyzed the demographic data of respondents using Microsoft Excel-based on gender, age, school origin, class, and major. Then, the intensity of using the website and the perception of the quality. In the second stage, the researcher analyzed the reliability, validity, and gaps of the distributed questionnaire results by using IBM SPSS. Furthermore, the researcher analyzed the data obtained as an assessment of the quality of the website by using the Webqual Index analysis (WQI) and Importance Performance Analysis (IPA).

# D. RESULTS AND DISCUSSION School Library Website Quality

The mean of importance (MoI), maximum score, and weighted score were calculated in this study to obtain the webqual index score. The Mean of Importance (MoI) is the average of all questionnaire items. A high MoI indicates that the statement is important to the respondent. The maximum score is calculated by multiplying the MoI by the greatest score on the significance scale or Likert scale. Furthermore, the weighted score is calculated by multiplying the mean of importance (MoI) by the average raw data of the

respondents (level of approval). The score of the webqual index (WQI) is used as an assessment to see the quality of a system such as a library website. The WQI score is obtained from the quotient between the total weighted and maximum scores.

The Webqual Index (WQI) is a score based on evaluation results that serves as a measure or benchmark for a system's quality (Aryadita et al., 2017). The three schools' WQI scores are listed below.

According to the findings of this investigation, the aggregate maximum score is 312.13. In terms of the greatest score per library website, SMK Negeri 1 Bantul's library website scored 271.71 with a WQI of 0.87. Furthermore, the SMK Negeri 1 Godean (264.10 with a WQI of 0.85), and the SMK Negeri 2 Yogyakarta (253.56 with a WQI of 0.81).

Based on user perceptions and expectations, the importance-performance analysis (IPA) results can be utilized to improve the quality of each school's library website. The findings of this study are displayed in a fourquadrant diagram with an x-intercent (perception) of 3.37 and a v-intercept (expectations) of 3.29 calculated from the average of all respondents' responses. Quadrant I of the four quadrants explains the level of high expectations but low user perceptions. The quality of the school library website is described as good in Quadrant II because user expectations and perceptions are high. Quadrant III user expectations and perceptions describe low website quality user expectations and perceptions. Quadrant IV, on the other hand, has low expectations but high perception.

According to students' impressions as website users, the SMK library's website quality in the Special Region of Yogyakarta is generally good. According to the findings of this study, the WQI score on the P3 indicator in the three schools had the lowest usability score. The three schools' WQI scores were 0.79, 0.82, and 0.86, for a total of 0.82. This metric measures how easy it is to interact with the website. The website interface is closely related to the ease of interaction element. According to Rochmawati (2019), the user interface (UI) is not only

concerned with the aesthetic of the website but also with the ease with which website users interact with the system. Putu et al. (2020) emphasize that the user interface is critical since it pertains to the interaction between the user and the design. According to Joo (2017), the user interface (UI) is the interaction between the system and the user that occurs through commands or when running the system, inputting data, and consuming system content. As a result, the user interface on the school library website must be considered for the ease of website visitors.

Meanwhile, the highest WOI score in this aspect is the P9 indicator, with a score of 0.85, 0.89, and 0.90, or an average of 0.88. The P9 indicator relates to students' positive experiences accessing the school library website. Hardiansyah et al. (2019) also state that experience (UX) is an important component of the website because it is related to user interaction. UX refers to the overall experience associated with the perceptions, reactions, and behaviors that users feel and think through the direct use of a system, product, content, or service (Kim & Cho, 2016). This is one of the components that contribute to the success of a website (Rahmayani, 2020). However, UX is subjective because the user's views and thoughts when engaging are influenced by the UI as a liaison between the user and the system (Wiwesa, 2021). In order to give a remarkable experience for website visitors, school libraries will need to build an appealing user experience in the future.

Furthermore, the three institutions' average WQI score on the quality of information on the library website (information quality) is 0.84. The KI12 indicator is the lowest on all school websites; it indicates that the website contains up-to-date information. According to Ashab (2017), the library website provides users with important information, including up-to-date information. It was also emphasized that the librarian's job with the library website is to update information on a regular basis so that the information accessible is up to date. Meanwhile, Nugrahayu (2017) explains that high website quality is obtained if the website performs well,

is consistent, and is kept up to date. In addition, the library must be able to offer services and information via an up-to-date website.

Meanwhile, the KI11 indication had the highest WOI score in terms of information quality, with a mean score of 0.87. This indicates that the website gives trustworthy information. The credibility of the website affects the trustworthiness of the information. According to Kriscautzky and Ferreiro (2014), information credibility is related to user trust. Organizations must have trust in order to create and maintain long-term connections (Gustafsson et al., 2021). Rachmawati et al. (2019) noted that trust is essential for both businesses and customers. According to the findings of this survey, students already have a high level of trust in the material provided on the school library website. It is also connected that the school manages the library website so that the school can account for the available information.

The third part of this study is service engagement on the library's website. The reputation and services accessible on each school's library website are the focus of this investigation. The average WQI score in this aspect is 0.83, with the IL17 indication having the lowest detail. The scores on IL17 in the three schools were 0.75, 0.77, and 0.84, with a mean score of 0.78. This indicates that the library website is well-liked by students. The school library website is not well-known among vocational students. This finding is correlated with the low number of students visiting the school library website. The website's popularity becomes important in the context of marketing and the utilization of information. The higher the popularity of a website, the more the website will be in demand and used as a reference because the information and services provided can benefit users (Bernal-Jurado et al., 2021).

Meanwhile, the IL19 indicator had the highest mean score of 0.87, and the WQI values were 0.83, 0.91, and 0.89, respectively. This indicator pertains to the safety of personal information when accessing the library's website. According to Gultom and Harahap (2015), website security is critical in design. According to Metasari et al. (2014), website

managers must address the security of information on their websites. In this study, it was discovered that users, particularly students, believe that the security of personal data is assured when visiting the website. Furthermore, the website necessitates a login menu for students.

The results of the analysis show that the library website of SMK Negeri 1 Bantul has the best quality compared to the other two libraries, based on the answers given by the respondents to the questionnaire. The quality of a website will be better if the WQI score is close to 1 (Hafiz, 2017). Thus, based on the WQI score and the max score on each library website, the three library websites can have a large enough space to develop library website infrastructure to meet the wishes and expectations of users and website users.

# **School Library Website Quality Factors**

According to the findings of this study, various parameters play a role in evaluating the quality of the library website for users. This metric is generated from an examination of the MoI score, particularly the markers in Quartile 3. Significant indicators have an impact on the quality of the school library website in this study, as evidenced by the MoI score in table 4. Indicators are classified into three quartiles: low (Q1), middle (Q2), and high (Q3). In this study, important indicators are those with values in the upper quartile. The quartile scores are organized as follows.

Six indications are crucial and have an impact on consumers. The first component is the excellent experience people get when they visit the library's website. According to Alhasanah (2014), the quality of a website is determined by numerous factors, one of which is an appealing website design. The website's design will provide users with a nice experience. Thus, the impression of library website visitors will affect their perception of the quality of the website. This is also one of the WebQual indicators. The second factor is the dependability of the website's information. Libraries serve as reliable sources of information for users. The library website, as a digital representation of the library,

is also intended to give reliable information to its users. Website visitors will rely on the information available on the website as their source of information. Libraries are considered necessary to provide other sources of information other than information about collections such as the findings in this study. Information can be in the form of services, news and other related information.

The third factor is personal data security. According to Setiaji (2011), the rise of cyberspace necessitates security controls, particularly for web administrators. The use of the operating system for servers, password security, webmail, SQL dumps, and other components all contribute to website security. Yuwinanto (2015) adds that there are procedures that web administrators and users must take to protect their privacy and build trust. The following step is to put guidelines or standard operating procedures in place to limit the amount of personal information acquired and the function of privacy policies that demand identity disclosure. Furthermore, trust is incorporated into service design, whether through system management design to prioritize user priority, providing a control mechanism for disclosing personal information and its use, and being skeptical in online activities to ensure that the information provided does not harm the user.

The power to customise is the fourth factor. According to Oberoi et al. (2017), web personalization is the process of personalizing online pages depending on user preferences. This feature is required on a website or system in order for people to readily find the information they require. Simultaneously, Amin (2016) defines customization as a type of service supplied to website visitors to tailor applications and information based on their interests, responsibilities, and needs. Personalization is required for library websites in order to give users with convenience when viewing information on the websites.

The fifth and sixth factors are information about website managers or developers and ease of communication with other website managers or libraries. Each library's website details on the contact and address are attached. This will make it easier for users or website visitors to communicate with the library manager and the website itself. This finding is supported by the opinion of Fadillah (2013) that there are several benefits of a website managed by a school. namely as an electronic communication medium for school residents and a medium for delivering information. The existence of this information will help users if they encounter obstacles or face trouble when using the website, even to get assistance related to library services. Thus, library website managers need to add communication features with users such as live chat during library hours, as well as providing information about library managers and website managers on the web.

#### E. CONCLUSION

For establishing digital services in the current school library, the quality of the library website must be a priority. The quality of the library website will provide users of digital services with a digital experience and impression. According to students' impressions as online users, the website of the Vocational High School library in Yogyakarta's Special Region is of good quality. Based on the comparison results of the three library websites in this study, the library website at SMKN 1 Bantul has the highest WQI score when compared to other school library websites. While the IPA research on the library website discovered that the SMKN 2 Yogyakarta library website was in quadrant III, or user expectations and perceptions of low website quality, six elements are crucial that have an impact on Indicators include the enjoyable experience visitors have when accessing the library website, the website's factual information, and the protection of personal data. The personalization function and information about website administrators, as well as the simplicity of communicating with website managers, are two more factors. This research has implications for library website managers, especially school libraries to manage websites and develop school library websites as a digital tool for libraries. This study recommends further research on the management of the school library website, the use of the school library website for students, and content analysis and design on the school library website.

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## **FIGURE LIST**

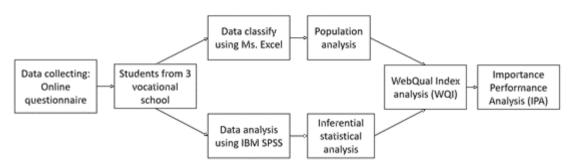


Figure 1. The data analysis procedure



Figure 2. The results of the Importance-Performance Analysis of the Library Website

## **TABLE LIST**

Table 1. Distribution of SMK Students

No	School	Number of Students
1	SMKN 2 Yogyakarta	2.285
2	SMKN 1 Bantul	1.576
3	SMKN 1 Godean	986
	Total	4.847

Source: Primary data processed in 2021

Table 2. Questionnaire Grid

No	Sub Variable	Aspect	Code	Questions
1	Demographic Data	Identity	D	2
		Educational background		2
2	Frequency of use and expectation of website quality	The intensity and perception of the website	F	3
3	Library websites usage	Ease and appearance of the library website	P	9
4	Information quality	Website content quality	KI	7
5	Service interaction quality	Library website reputation and services	IL	7
Sources: Questionnaire questions processed by		Number of questions		30

the researcher

Table 3. WQI Score

Indicator	M.I	M C	SMK Negeri 2 Yog	yakarta	SMK Negeri 1 G	Godean	SMK Negeri 1	Bantul
Indicator	MoI	Maximum Score	Weighted Score	WQI	Weighted Score	WQI	Weighted Score	WQI
P1	3,38	13,52	11,16	0,82	11,46	0,85	11,72	0,87
P2	3,34	13,35	10,88	0,81	11,20	0,84	11,75	0,88
Р3	3,30	13,18	10,39	0,79	10,87	0,82	11,39	0,86
P4	3,35	13,39	10,70	0,80	11,24	0,84	11,76	0,88
P5	3,33	13,31	10,68	0,80	10,87	0,82	11,65	0,88
P6	3,37	13,49	10,99	0,81	11,24	0,83	11,86	0,88
P7	3,43	13,72	11,44	0,83	11,91	0,87	12,07	0,88
P8	3,40	13,59	11,15	0,82	11,72	0,86	11,89	0,88
P9	3,49	13,95	11,90	0,85	12,43	0,89	12,52	0,90
KI10	3,41	13,63	11,24	0,82	11,75	0,86	11,95	0,88
KI11	3,46	13,83	11,56	0,84	12,20	0,88	12,26	0,89
KI12	3,33	13,30	10,77	0,81	11,13	0,84	11,36	0,85
KI13	3,31	13,25	10,80	0,81	11,08	0,84	11,51	0,87
KI14	3,41	13,66	11,19	0,82	11,81	0,86	12,10	0,89
KI15	3,30	13,18	10,69	0,81	11,02	0,84	11,36	0,86
KI16	3,34	13,35	10,83	0,81	11,28	0,84	11,43	0,86
IL17	3,40	13,62	10,27	0,75	10,49	0,77	11,46	0,84
IL18	3,37	13,49	10,99	0,81	11,32	0,84	11,82	0,88
IL19	3,44	13,77	11,40	0,83	12,47	0,91	12,20	0,89
IL20	3,54	14,14	11,29	0,80	11,87	0,84	12,19	0,86
IL21	3,49	13,96	11,02	0,79	11,43	0,82	11,79	0,84
IL22	3,46	13,83	11,09	0,80	11,48	0,83	11,72	0,85
IL23	3,40	13,61	11,13	0,82	11,85	0,87	11,93	0,88
		312,13	253,56	0,81	264,10	0,85	271,71	0,87

Source: Data analyzed by the researcher (2021)

Table 4. Quartile score

Quartile	Score
Q1	3.34
Q2	3.40
Q3	3.44

Source: Data analyzed by the Researcher