

Measurement of blended learning E-school applications using user experience questionnaires

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Abstract: The research objective was to measure e-school User Experience in supporting blended-learning during the Covid-19 Pandemic. The method used is User Experience Questionnaires (UEQ). The sample was determined based on purposive sampling. The questionnaires were distributed to 30 teachers at the Class I Palembang Special Guidance Institute for Children (LPKA) Primary School, namely: 10 each SDN 25 teachers, 10 teachers at SMPN 22, and 10 teachers at SMAN 11 Palembang. The sample for SDN 25 students is 30 students. The results of UEQ measurements for "Sekolah Induk" students show a). SDN 25 e-school web, on a scale of attractiveness, clarity, and accuracy are categorized as "above average" while the scale of efficiency, stimulation, and novelty are categorized as "good". b). SMPN 22 e-school web, on a scale of attractiveness, clarity, and efficiency is categorized as "above average" while the scale of accuracy and stimulation is categorized as "good". For the novelty scale in the "Excellent" category. c). SMAN 11 e-school web, on the scale of attractiveness, efficiency, stimulation, and novelty was categorized as "good" while clarity and accuracy were categorized as "above average". For the novelty scale in the "Excellent" category. Meanwhile, "Sekolah Induk" teachers feel that the e-school web, on a scale of attractiveness, clarity, efficiency, accuracy, and novelty is categorized as "above average". Another scale, stimulation, was categorized as "below average". So, the adapted e-school web as a whole has been able to support Blended-Learning during the Covid-19 Pandemic, although improvements still need to be made.

Keywords: e-school, UX, UEQ, Blended-Learning, Covid-19

INTRODUCTION

The Class I Palembang Institute for Special Development for Children (LPKA) is a pilot LPKA in Indonesia that has succeeded in implementing filial schools with the same standards as "Sekolah Induk" in collaboration with the Education Officer, the City Government of Palembang, and the Provincial Government of South Sumatra. LPKA Class I Palembang provides formal education (filial school) at the SD, SMP, and SMA levels. Currently, the "Sekolah Induk" are SDN 25, SMPN 22, and SMAN 11 in the Palembang area.

Filial e-school has been able to assist LPKA school management in providing academic services that can better support education delivery. Researchers also developed a system adapted from filial e-school which also helped SDN 25, SMPN 22, and SMAN 11 in online learning during the Covid-19 Pandemic. During the Pandemic, students interact with teachers using several applications such as classrooms, video conferencing, telephone or live chat, zoom, or via WhatsApp groups. The use of blended learning in schools is still not optimal even though blended learning is an integrated system that makes it easier for school management to monitor learning activities, especially during the pandemic and some schools are still scheduling face-to-face meetings while complying with health and social distancing protocols. According to (Thorn, 2003) that what happens in conventional classrooms where educators and students meet face to face, with online learning that can be accessed anytime and anywhere.

The Blended Learning strategy can improve students' Learning Independence and Critical Thinking abilities, and can improve student Learning Achievement (Sari, 2013). The results of the study (Farihah, Masri, & Sugiarti, 2016) show that there is an effect of the Blended Learning model on motivation and learning outcomes of class X students of SMA Negeri 1 Pitfeedua (studies on the subject matter of the periodic system of elements). The results of the study (Sutisna, 2013) concluded that the blended learning model was effective in increasing the learning

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independence of students. The results of the study (Fitriana , 2017) show that: 1.students interact actively in learning with the blended learning model, 2.most students are satisfied with the blended learning model because blended learning is classified as a learning model that is actively involved in activities or learning, 3.blended learning class learning outcomes with 60% online learning activities higher than with 40% of online activity. Research (Jusuf , 2017) which examines the application of blended learning in programming algorithm courses is compiled using games available on web code.org with a wide selection of games that students can choose according to their preferences.

The “learn from home” policy on the causes of the COVID-19 disaster has had a serious impact on 68 million students and 3.2 million teachers (CNN Indonesia, 2020). The application of blended learning in teaching and learning activities can be a solution to increase the learning independence and creativity of students in learning. In addition, blended learning is expected to improve students' cognitive abilities so that learning outcomes can be achieved properly. There are many benefits obtained by implementing online learning, namely: 1. Increasing student motivation, 2. Digital school portfolios to be effective and efficient, 3. Adding insights and thinking insights, 4. Fostering a spirit of togetherness, 5. Being a measuring tool for applied learning concepts compared to other countries, 6. Stimulates independence and provides entrepreneurial motivation for students (Clark, 2008) (Ali, 2005) (Febrianty, Hadiwijaya , & Octafian , 2020). Based on research results (Munthe , Brata , & Fan , 2018) it is known that application features are important to increase value. In terms of adaptability, ease of access is paramount. Visually appealing design is an essential element of desire. On the other hand, easy-to-learn applications are the main thing for usability element. The results obtained in this study are the level of positive impressions of attractiveness, perspective, efficiency, dependence, stimulation, and novelty (Sularsa , Prihatmanto, & Nugroho, 2015).

The results of the research by (Octafian , Febrianty, & Hadiwijaya , 2020) show the difference in UEQ between “Sekolah Induk” teachers and LPKA students regarding the use of filial e-school, it was found that filial e-school gave a slightly higher impression to “Sekolah Induk” teachers compared to students. This research is a continuation of applied research conducted by researchers, wherein the second year the researcher implemented e-school (<http://eschoolsdn25.com> , <http://eschoolsmpn22.com>, <http://eschoolsman11.com>) which was adapted from filial e-school with the link address <http://e-schoolinglpkapalembang.sumselprov.go.id>.

LITERATURE REVIEW

Blended Learning

According to (Bersin , 2004) Blended learning is the combination of different training media (technologies, activities, and types of events) to create an optimum training program for a specific audience. The term (blended) means that traditional instructor-led training is being supplemented with other electronic formats. In the context of the book blended learning programs use many different forms of e-learning, perhaps complement instructor-led training in other live formats.

Applies blended learning to the Accounting Education Study Program. The results of his research concluded that the blended learning strategy succeeded in increasing learning independence by 72.8% (Sari , 2013). The results of the study (Sahin , 2010) also stated that students' learning abilities were getting better after blended learning was applied. (Simarmata , Djohar , Purba , & Djuanda , 2016) show the results of the implementation of the blended learning model can be applied well because it can improve student learning outcomes. Blended Learning is learning that combines face-to-face learning and e-learning (Torrao S., 2007). (Whitelock D. & Jelfs A., 2003) provides several definitions of blended learning, namely: 1. a combination of traditional learning with a web-based learning approach, 2. a combination of media and tools in an e-learning environment, 3. a combination of several learning approaches, and the use of learning technology.

Previous research developed face-to-face learning that is combined with online/offline learning and is structured using the Edmodo platform (Banggur , Situmorang R., & Rusmono, 2018). Research (Jusuf , 2017) which examines the application of blended learning in programming algorithm courses is compiled using games available on web code.org with a wide selection of games that students can choose according to their preferences. The difference in this study from previous research is the emphasis on inclusive entrepreneurship education by applying a blended learning-based learning model with more complete content and involving outsiders to contribute to the system as resource persons/experts/volunteers/stakeholders.

In its application, blended learning combines various physical and virtual sources with an approach as shown in Table 1 below:

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Table 1
Blended Learning Approach

Live face-to-face (formal)	Live face-to-face (informal)
Instructor-led classroom Workshops Coaching/monitoring On-the-job (OTJ) training	Collegial connections Work teams Role modeling
Virtual Collaboration / synchronous	Virtual collaboration/ asynchronous
Live e-Learning classes E-mentoring	E-mail Online bulletin boards Listservs Online communities
Self-paced learning	Performance support
Web learning modules Online resource links Simulations Scenarios Video and audio CD/DVDs Online self-assessments Workbooks	Help System Print job aids Knowledge databases Documentation Performance/decision support tool

Source: (Rosset, Dougllis, & Fraze, 2003)

User Experience

User experience is not only about how a product or service works, but the user experience is also about how users interact with the service or product. Is the experience while using user-friendly, simple, easy to understand, and whether the interaction is effective and efficient while using the product (Garret, 2011) User Experience is the perception and response of users as a reaction to the use of a product, system or service (ISO 924-210, 2010). So that User Experience is what users feel when using a product.

User Experience Questionnaire (UEQ)

The main goal of the UEQ is a fast and direct measurement of UX. User Experience Questionnaire is a user experience measurement method developed by Dr. Martin Schrepp. UEQ is understood as the user's overall impression when he interacts with a product that includes both pragmatic and hedonic aspects (Rauschenberger, 2013). The questionnaire was designed for use as part of a normal usability test, but also as an online questionnaire. For online use, it must be possible to complete the questionnaire quickly, to avoid participants not finishing it. So a semantic differential was chosen as item format since this allows a fast and intuitive response (Schrepp et al, 2017).

The following is an explanation of UEQ containing 6 scales consisting of 32 items (Schrepp, 2018) which include: 1. Attractiveness: How attractive is a product as a whole. 2. Perspicuity: How easy a product to use. 3. Efficiency: How fast the user completes the task. 4. Dependability: Contains whether the interaction can be controlled by the user. Contains whether the interaction can be controlled by the user. 5. Stimulation: How well a product motivates users. 6. Novelty: How innovative and creative a product is. Attractiveness is a standalone aspect. Perspicuity, Efficiency, and Dependability are aspects of pragmatic quality (goal-directed), while stimulation and novelty are aspects of hedonic quality (not goal-directed). Traditional methods often focus on usability criteria, which roughly correspond to the concept of usability goals or pragmatic quality. Newer approaches are increasingly paying attention to subjective reactions, as well as emotional aspects of the user experience, which can be included in the concept of user satisfaction as outlined in ISO 9241-11. This criterion is also referred to as user experience goals, or as an aspect of hedonic quality (Laugwitz, 2008). The attractiveness scale has 6 items and another scale has 4 items. Attractiveness is a pure valence dimension. Perspicuity, Efficiency, and Dependability are pragmatic quality aspects (goal-directed), while Stimulation and Novelty are hedonic quality aspects (not goal-directed) (Hassenzahl, 2001).

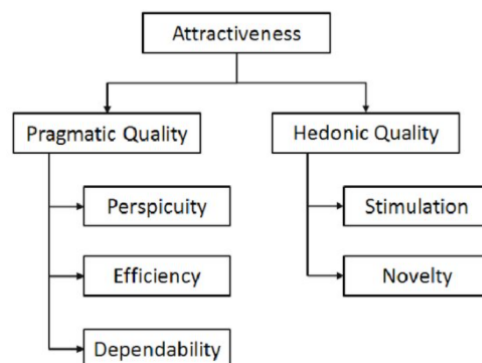


Fig. 1 Assumed scale structure of the UEQ

*name of corresponding author



UEQ can be used for several scenarios, namely scenarios used to compare user experience levels between two products, test the user experience of a product, and determine areas of improvement (Schrepp, 2018). User Experience Parameters as in Figure 2:

	1	2	3	4	5	6	7		
menyusahkan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	menyenangkan	1
tak dapat dipahami	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	dapat dipahami	2
kreatif	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	monoton	3
mudah dipelajari	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	sulit dipelajari	4
bermanfaat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	kurang bermanfaat	5
membosankan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	mengasyikkan	6
tidak menarik	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	menarik	7
tak dapat diprediksi	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	dapat diprediksi	8
cepat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	lambat	9
berdaya cipta	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	konvensional	10
menghalangi	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	mendukung	11
baik	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	buruk	12
rumit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	sederhana	13
tidak disukai	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	menggembirakan	14
lazim	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	terdepan	15
tidak nyaman	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	nyaman	16
aman	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	tidak aman	17
memotivasi	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	tidak memotivasi	18
memenuhi ekspektasi	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	tidak memenuhi ekspektasi	19
tidak efisien	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	efisien	20
jelas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	membungkan	21
tidak praktis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	praktis	22
terorganisasi	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	berantakan	23
atraktif	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	tidak atraktif	24
ramah pengguna	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	tidak ramah pengguna	25
konservatif	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	inovatif	26

Fig. 2 Parameters of the UEQ Questionnaire

METHOD

This research was conducted in several stages, starting with a literature study, determining aspects of analysis, data analysis and processing, analysis and discussion, and drawing conclusions and suggestions, as shown in Figure 3 below:

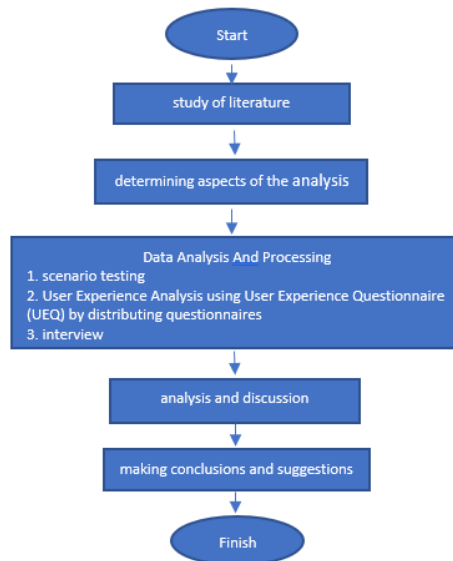


Fig. 3 Research Flow

While the stages for the research framework using UX measurement with the UEQ method are presented in Figure 4.:

*name of corresponding author



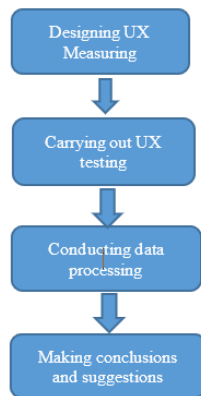


Fig. 4 Research Framework Using UX

The object of this research is the LPKA Class I Palembang “Sekolah Induk”, namely: SDN 25, SMPN 22, and SMAN 11 Palembang. Because of this, all of the “Sekolah Induk” implemented an e-school web system adapted from the e-school filial LPKA Class I Palembang. The method used in this research is the UEQ method. By determining the sample based on purposive sampling. The questionnaire was distributed to 30 teachers at LPKA Class I Palembang “Sekolah Induk”, each of 10 SDN 25 teachers, 10 teachers at SMPN 22, and 10 teachers at SMAN 11 Palembang. The sample for SDN 25 Palembang students was 30 students consisting of class VI, V, and VI. The sample for SMAN 11 Palembang students was 30 students consisting of class X, XI, and XII. The sample for SDN 25 Palembang students was 30 students consisting of class VI, V, and VI.

RESULT

UEQ testing is carried out on all facilities, features, applications, and information included in the User Experience starting from seeing how the web looks, its advantages and disadvantages. The scope of UX is very broad, it cannot only be related to the content or appearance. The tested e-school web objects are the following:

- E-school at SDN 25 Palembang with URL access, namely <http://eschoolsdn25.com> using a web browser
- E-school at SMPN 22 Palembang with URL access, namely <http://eschoolsmpn22.com> using a web browser.
- E-school at SMPN 22 Palembang with URL access, namely <http://eschoolsman11.com> using a web browser

This web e-school contains features including teacher, student, active curriculum, semester, schedule, and master. There are three types of users who can log in to the three e-school websites, namely: school coordinators, teachers, and students. The following are some of the views on the e-school web:



Fig. 5 Profile page of SDN 25 Palembang

The SDN 25 Palembang school profile page display lists “Sekolah Induk”’s identity consisting of the NPSN, school name, status, a form of education, school address, name of the school principal, and who is responsible as school coordinator.

*name of corresponding author



Fig. 6 Profile page of SMPN 22 Palembang

The profile page display for SMPN 22 Palembang also consists of the same entry items.



Fig. 7 Profile page of SMAN 11 Palembang

The profile page display for SMAN II Palembang also consists of the same entry items.

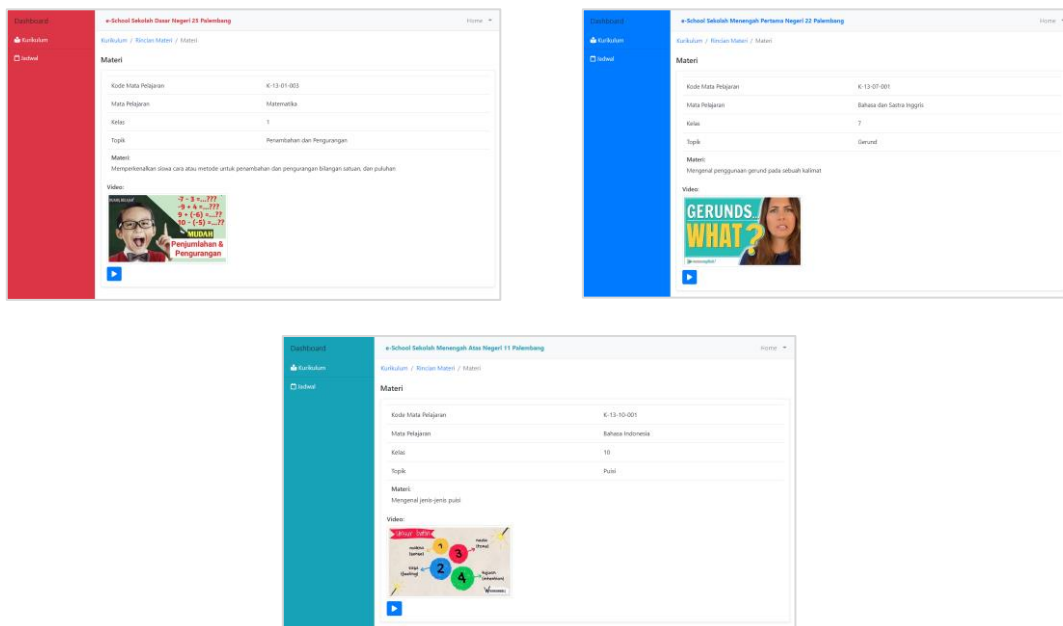


Fig. 8 Display of material pages for each “Sekolah Induk” (SDN 25, SMPN 22, and SMAN II Palembang)

The material page display contains the same items in each "Sekolah Induk", namely: Subject code, subject name, class, topic, and an explanation or description of the subject matter as well as presenting learning videos.

DISCUSSIONS

The sample consisted of student and teacher representatives from each “Sekolah Induk” (SDN 25, SMPN 22, and SMAN 11 in the Palembang region). There were 90 student respondents (30 SD, 30 SMPN, 30 SMAN) and 30 teachers from the “Sekolah Induk” (10 teachers representing each “Sekolah Induk”). User Experience (UE)

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measurement results were obtained from questionnaires given to respondents, both students, and teachers of “Sekolah Induk” who had used e-school. UEQ itself has 26 question components and 7 answer options, namely: attractiveness, Perspicuity, efficiency, Dependability, simulation, and novelty.

UEQ Measurement Results on Students SDN 25 Palembang

The following is a graph of the KPI (Key Performance Indicator) measuring UEQ for 30 respondents of SDN 25 Palembang, for Class VI, V, and VI. The following is a graph of the importance ratings of KPIs from the UEQ test results:

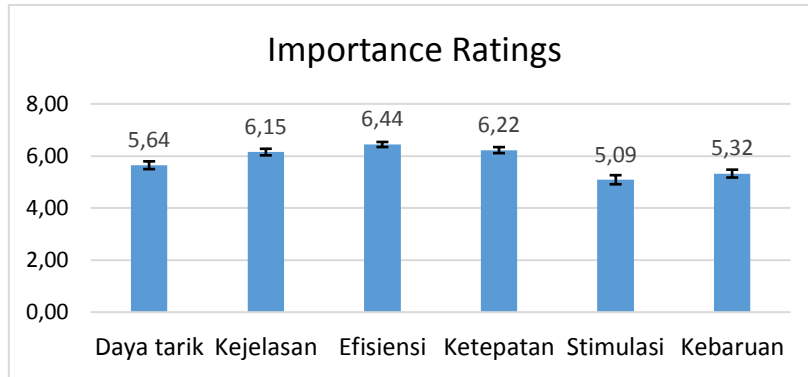


Fig. 9 KPI (Key Performance Indicator) of SDN 25 Palembang e-School website (Source: compiled from UEQ, 2020)

The following is a benchmark graph from SDN 25 Palembang as a result of implementing the LPKA Class I Palembang filial e-school website:

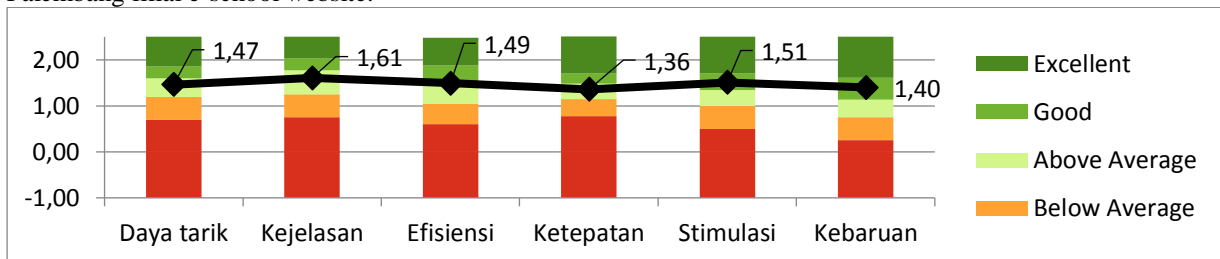


Fig. 10 Benchmark of SDN 25 Palembang e-School website (Source: compiled from UEQ, 2020)

SDN 25 Palembang e-school web, on a scale of attractiveness, clarity, and accuracy is categorized as "above average". While the other scales, namely: efficiency, stimulation, and novelty are categorized as "good". The following is the average result of UEQ measurements obtained from the questionnaire given to SDN 25 Palembang students as the “Sekolah Induk” compared to the benchmark:

Table 2
Average Scale of UEQ e-School SDN 25 Palembang

Scale	Mean	Comparison to benchmark	Interpretation
Attractiveness	1,59	Above average	10% of results better, 75% of results worse
Perspicuity	1,53	Above Average	25% of results better, 50% of results worse
Efficiency	1,55	Good	10% of results better, 75% of results worse
Dependability	1,37	Above Average	25% of results better, 50% of results worse
Stimulation	1,41	Good	10% of results better, 75% of results worse
Novelty	1,41	Good	10% of results better, 75% of results worse

Source: compiled from UEQ, 2020

UEQ Measurement Results on Students SMPN 22 Palembang

The following is a graph of KPI (Key Performance Indicator) measuring UEQ for 30 respondents of SMP Negeri 22 Palembang for Class VII, VIII, and IX. The following is a graph of the importance ratings of KPIs from the UEQ test results:

*name of corresponding author



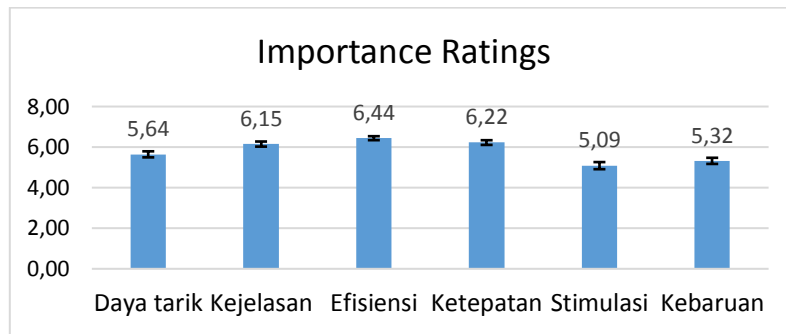


Fig. 11 KPI (Key Performance Indicator) website for e-School SMPN 22 Palembang (Source: compiled from UEQ, 2020)

The following is a benchmark graph from SMPN 22 Palembang as a result of implementing the LPKA Class I Palembang filial e-school website:

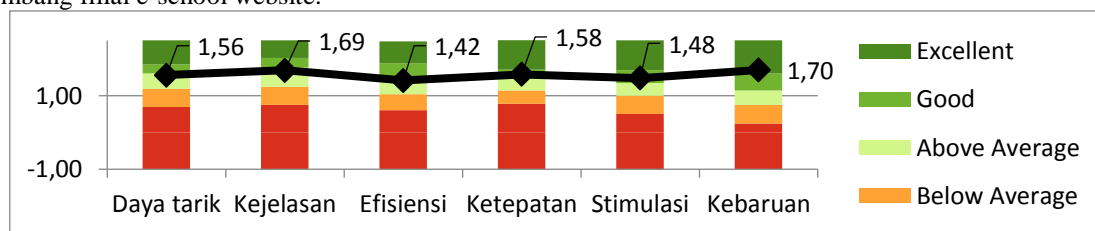


Fig. 12 Benchmark of the e-School website at SMPN 22 Palembang (Source: compiled from UEQ, 2020)

Web e-school SMPN 22 Palembang, on a scale of attractiveness, clarity, and efficiency is categorized as "above average". While the other scales, namely: accuracy and stimulation are categorized as "good". For novelty scale in the "Excellent" category. The following is the average result of UEQ measurements obtained from the questionnaire given to students of SMPN 22 Palembang as the "Sekolah Induk" compared to the benchmark:

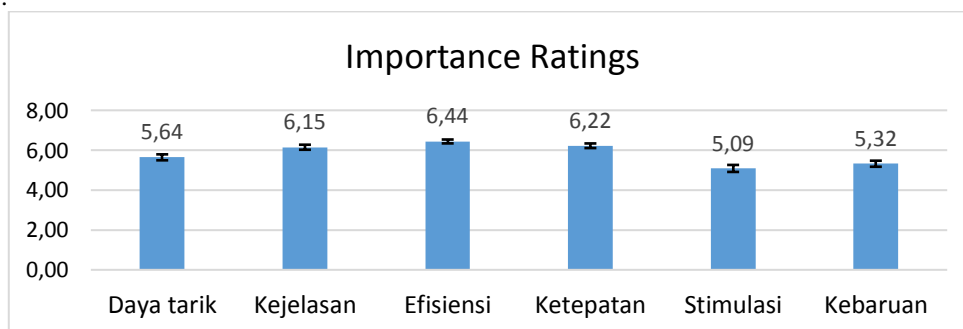
Table 3
Average Scale of UEQ e-School SMPN 22 Palembang

Scale	Mean	Comparison to benchmark	Interpretation
Attractiveness	1,56	Above average	10% of results better, 75% of results worse
Perspicuity	1,69	Above Average	25% of results better, 50% of results worse
Efficiency	1,42	Above Average	25% of results better, 50% of results worse
Dependability	1,58	Good	10% of results better, 75% of results worse
Stimulation	1,48	Good	10% of results better, 75% of results worse
Novelty	1,70	Excellent	In the range of the 10% best results

Source: compiled from UEQ, 2020

UEQ Measurement Results on Students SMAN 11 Palembang

The following is a graph of KPI (Key Performance Indicator) measuring UEQ for 30 respondents of SMA Negeri 11 Palembang for Class X, XI, and XII. The following is a graph of the importance ratings of KPIs from the UEQ test results:



*name of corresponding author



Fig. 13 KPI (Key Performance Indicator) website for e-School SMAN 11 Palembang
(Source: compiled from UEQ, 2020)

The following is a benchmark graph from SMAN 11 Palembang as a result of implementing the LPKA Class I Palembang filial e-school website:

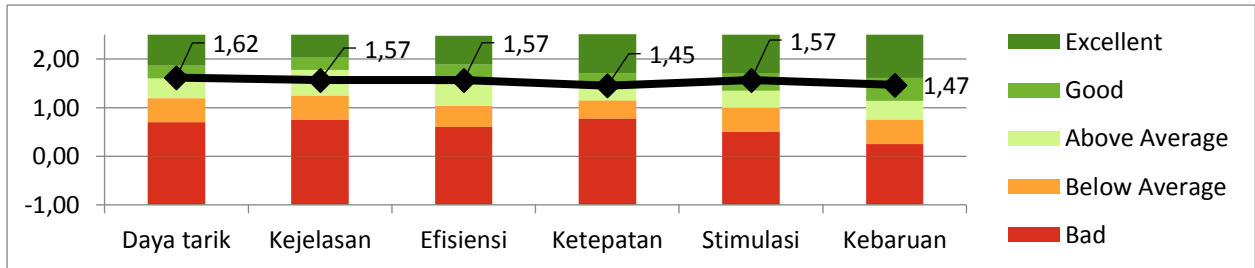


Fig. 14 Benchmark of the e-School website at SMAN 11 Palembang (Source: compiled from UEQ, 2020)
Web e-school SMAN 11 Palembang, on a scale of attractiveness, efficiency, stimulation, and novelty are categorized as "good". While the other scales, namely: clarity and accuracy are categorized as "above average". The following is the average result of UEQ measurements obtained from a questionnaire given to students of SMAN 11 Palembang as a "Sekolah Induk" compared to benchmarks:

Table 4
Average Scale of UEQ e-School SMAN 11 Palembang

Scale	Mean	Comparison to benchmark	Interpretation
Attractiveness	1,62	Good	10% of results better, 75% of results worse
Perspicuity	1,57	Above Average	25% of results better, 50% of results worse
Efficiency	1,57	Good	10% of results better, 75% of results worse
Dependability	1,45	Above Average	25% of results better, 50% of results worse
Stimulation	1,57	Good	10% of results better, 75% of results worse
Novelty	1,47	Good	10% of results better, 75% of results worse

Source: compiled from UEQ, 2020

The following are the measurement results with 30 teachers as respondents consisting of 10 teachers from SD Negeri 25, 10 teachers from SMP Negeri 22, and 10 teachers from SMA Negeri 11 Palembang.

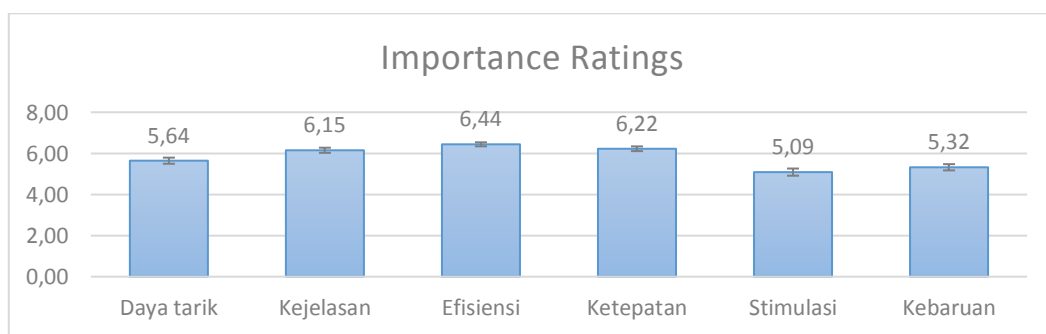


Fig. 15 KPI (Key Performance Indicator) website e-School (Source: compiled from UEQ, 2020)

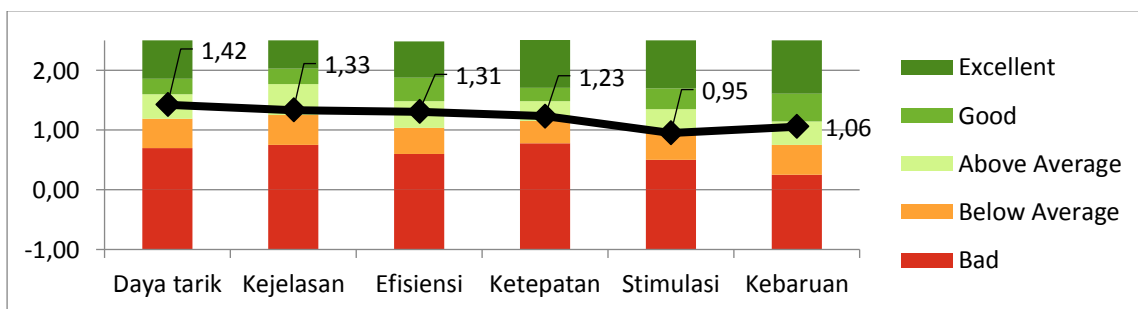


Fig. 16 Benchmark website e-School (Source: compiled from UEQ, 2020)

*name of corresponding author



The web e-school, on the scale of attractiveness, clarity, efficiency, accuracy, and recency was categorized as "above average". The other scale, stimulation, is categorized as "below average". The following are the results of the average UEQ measurement obtained from a questionnaire given to "Sekolah Induk" teachers compared to benchmarks:

Tabel 5
Rata-Rata Skala UEQ e-School

Scale	Mean	Comparisson to benchmark	Interpretation
Attractiveness	1,42	Above average	25% of results better, 50% of results worse
Perspicuity	1,33	Above Average	25% of results better, 50% of results worse
Efficiency	1,31	Above Average	25% of results better, 50% of results worse
Dependability	1,23	Above Average	25% of results better, 50% of results worse
Stimulation	0,95	Below Average	50% of results better, 25% of results worse
Novelty	1,06	Above Average	25% of results better, 50% of results worse

Source: compiled from UEQ, 2020

Based on the results of the UEQ comparison between student respondents and teachers at the "Sekolah Induk" on the use of e-school, it was found that the filial e-school gave a slightly higher impression for students compared to teachers. The average results of the UEQ questionnaire for all users of the filial e-school system indicate that the stimulation and novelty aspects are perceived to be higher than the other four aspects. The measurement results can be used as recommendations for improvement on the e-school web. In subsequent studies, the testing process of test respondents should be carried out simultaneously to obtain more optimal test results.

For the scale of stimulation and novelty of the LPKA Class I Palembang filial e-school website, it is still rated low by both the students of the main school and by the users of the website. This is because the website does not yet have greater benefits and/or attractiveness that can motivate users to often use it in addition to routines for teaching and learning activities in schools. This means that some additional features are still needed to enrich user insights, such as: Virtual collaboration such as online bulletin boards and/or online communities. Online bulletin boards are needed by students and teachers to get updated information about announcements from schools, announcements from teachers, and others. Online Communities are needed by students in order to communicate with other students related to carrying out group assignments, as well as teachers, it will make it easier for them to communicate with other teachers related to teaching and learning activities. This refers to the completeness of the live-face-to-face (informal) in the completeness of the Blended Learning Approach (Rosset, Dougliis, & Frazee, 2003).

Meanwhile, related to novelty, the LPKA Class I Palembang filial e-school website still emphasizes the efficiency and effectiveness of teaching and learning activities. The system has not presented novelty so that it still seems to be overcoming the main problem, namely in online learning during the Covid-19 Pandemic. Therefore, it is necessary to develop a system, for example connecting with live chat and student dashboards that are connected to the recapitulation of the values obtained by students and what assignments have been collected or not by the student concerned, likewise, the unavailability of learning games that can refresh the mind and can make the atmosphere less monotonous or boring. Not yet supporting the results of research (Jusuf, 2017) which shows an influence on the application of blended learning which provides a variety of game choices that students can choose according to their preferences.

CONCLUSIONS

The results of UEQ measurements on "Sekolah Induk" students show that: a). web e-school SDN 25 Palembang, on the scale of attractiveness, clarity, and accuracy are categorized as "above average" while the scale of efficiency, stimulation, and novelty are categorized as "good". b). web e-school SMPN 22 Palembang, on the scale of attractiveness, clarity, and efficiency are categorized as "above average" while the scale of accuracy and stimulation are categorized as "good". For novelty scale in the "Excellent" category. c). Web e-school of SMAN 11 Palembang, on a scale of attractiveness, efficiency, stimulation, and novelty is categorized as "good" while clarity and accuracy are categorized as "above average". For novelty scale in the "Excellent" category. Meanwhile, what "Sekolah Induk" teachers feel about the e-school web, on a scale of attractiveness, clarity, efficiency, accuracy, and novelty are categorized as "above average". Meanwhile, the other scale, stimulation, is categorized as "below average". So in other words, the web-adapted e-school from the LPKA Class I Palembang filial e-school as a whole has been able to support Blended-Learning learning during the Covid-19 Pandemic, although improvements still need to be made. The limitation of this research is that specifically for research that requires respondents of various kinds of personas/segments as in this study (elementary, junior high, and high school students at the "Sekolah Induk") it is suggested to approach/prepare pre-research so that respondents can more

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freely share experiences of interaction with the object of research. Besides, it is necessary to measure the back end to determine the performance of the e-school web.

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