

Analysis of The "Ruangguru" Application in Improving Children's Creativity in The Era of Covid19Pandemic

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Abstract.

This study will further analyze the role of the ruangguru in providing learning media that is very helpful in developing children's creativity in the era of the Covid-19 pandemic. In contrast to other studies, this study presents user responses to the ruangguru application, which represents a success and a failure. The research model is a sentiment analysis. Sentiment analysis is used to analyze the user responses of the ruangguru application through the review column on the Google Play Store website. The data taken consisted of two, primary and secondary data. Primary data is in the form of response to 501 users of the Ruangguru application in the comments column from 08-12 May 2020. Meanwhile, secondary data is in the form of research results that are in accordance with this research, such as journal articles, books, and other scientific writings. To collect primary data, the authors used the scraping method with the help of the ScrapeStorm application. Not only that, the author also uses the manual method by checking the comments one by one. The results showed that positive comments about ruangguru reached 430, negative comments reached 57, and mediocre comments reached 14. Of the 430 positive comments, 345 showed an increase in children's creativity in certain lessons.

Keywords: sentiment analysis, scraping, ruangguruapplication

I. INTRODUCTION

Humans in this century have come to an alarming point. Where the case of the crowd has become a scary thing. This symptom is marked by the emergence of the covid-19 outbreak or what is often referred to as the corona virus. This virus has been able to change the face of the world, from living in peace to be extra careful now. The glorification of the spread of the corona virus is arguably very fast. Millions of people have died. Countries such as America, Spain, Italy and France are the ranks that contribute the most to the death toll [1]. Not only that, the cruelty of the virus is like a crook, coming suddenly without any sign. Spread all over the world. There are only about 15 countries that have not contracted the virus, including Tajikistan, Turkmenistan and North Korea [2]. The spread of the virus has made medical experts, clergymen, scientists, and scientists perform ijtihad according to their respective knowledge. There is no other goal, only to break the chain of spread of the virus.

The spread of the virus also reached Indonesia. As stated by President Joko Widodo for the first time on 2/03/2020, that two Indonesian women aged 31 years and 64 years have tested positive for the corona virus [3]. This kind of situation demands the government to take quick steps. Social distancing is a decision issued by the government, based on the consensus of medical experts. This kind of restriction has an effect on various sectors, including the education sector. On 15/03/2020 the government issued a mandate for all schools to be closed. And this is fully supported by the Minister of Education and Culture (Mendikbud), Nadiem Makarim [4]. The closed school created new problems for education actors. Because students who are supposed to be

studying, now have to stay at home in order to obey government regulations and break the chain of spreading the virus.

This kind of situation demands online learning, either using social media or using a platform that is specifically for the teaching and learning process. This online learning is a manifestation to continue to affirm and realize the noble ideals of the nation, namely to improve capabilities and form a dignified national character and civilization in order to educate the nation's life [5]. Usually, the teaching and learning process in Indonesia is through schools. According to Judith Chapman and David Aspin, schools have an important role in realizing lifelong learning through collaboration between schools, parents and the society [6]. Online learning is expected to replace the position of schools with the variety of methods and features presented, even though the obstacles are actually very complex and different, when compared to usual. But whatever it is, online learning is the only thing education actors can do, so that students can still learn, even from their homes.

Whether we realize it or not, if after the government closes schools, there is no solution instead of the teaching and learning process, then we can be sure that students will only stay at home and spend a lot of time to playing. It is unfortunate, if the study time is almost non-existent, it is replaced by playing time. This kind of scene has a negative impact on the ability and creativity that a student has, because there is no time to hone these two things. Hamdan Sugilar in his research said that the ability to think creatively does not develop properly, if a student does not actively take part in teaching and learning activities [7]. In that sense, the ability, science, and creativity will decline, if not trained properly. Often, it is found that many students forget the lessons they are learning. Even though it was still two days ago. In a matter of two days they can forget, how about a month, and what if there are no teaching and learning activities at all. This question reflects the concern of many people when their children are getting stupid, because there is no teaching and learning process.

Online learning activities are the perfect solution, to get rid of all these worries. This learning is strongly supported by the government. There are many tutoring platforms that work with cellular telecommunication companies such as Telkomsel, XL, Indosat, and Tri, so that when accessed they do not have to pay the slightest fee. One of them is the *ruangguru* tutoring application [8]. This application is very familiar to the ears of many Indonesians. He offers a lot of material and activities, ranging from material for elementary school children to material or question grids for entering certain universities. *Ruangguru*, which was founded in 2014 by Adamas Belva Syah Devara as CEO and Muhammad Iman Usman as CPO, has been trusted by more than 15,000,000 students and more than 300,000 teachers in Indonesia [9]. This tutoring, which is said to be the number one in Indonesia, really won the trust of the Indonesian president. There are many achievements pinned on the application, starting from UNICEF Youth Innovation Forum 2015 - Innovation to Watch, Google Launchpad Accelerator 2016 - Awardee, Bubu Awards 2016 - Indonesia's Best Education Web, MIT Solve-Solver of MIT, Rice Bowl Startup Awards 2016 - Best Social Entrepreneur for TechStartup, and other awards.

This platform is actually PT. Ruang Raya Indonesia which focuses on non-formal education. Partnering with 32 provincial governments and 236 city and district governments [10], *ruangguru* develops online-based learning services, as follows: *ruangbelajar* (learning using video and question exercises), *ruangbelajar plus* (interactive study group with live streaming, tutor standby and other features), *ruang les* (private study with the best teacher) *brain academy* (a combination of offline and online tutoring with the best teachers), *ruang les online* (where to consult questions with reliable online tutors), *ruanguji* (online tryout), *ruangbaca* (where to read materials and study tips), *skill academy* (online courses for improve technical and soft skills), and *sekolah online* [11]. From this it is very clear, that the purpose of the *Ruangguru* application is to help the country to educate generations of the nation. *Ruangguru* not only targets students, but also teachers, where they can also hone their skills through a variety of features. This technology-based learning is considered capable of improving the quality of students, teachers, and the quality of Indonesian education.

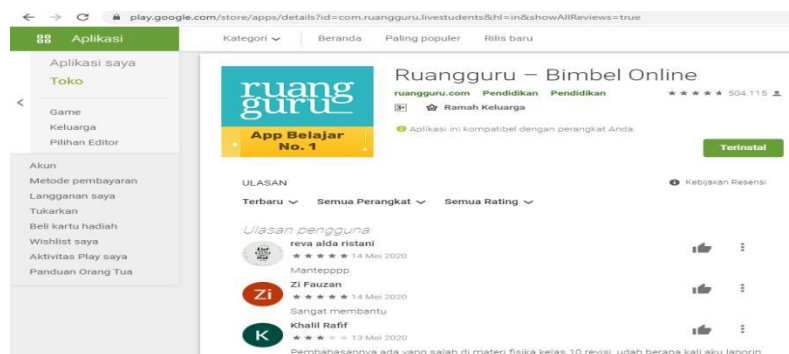
There are many journals that discuss the *Ruangguru* application. However, from the many journals, the authors took two journal samples with the title: *Analisis Sentimen Review Aplikasi Ruangguru Menggunakan*

Algoritma Support Vector Machine and Analisis Sentimen dan Topic Modelling dalam Aplikasi Ruangguru. As read by the author, the two journals are the closest to the research being written. In analyzing review sentiment, the first journal takes data from the Google Play Store website, namely 2000 review text data. To classify the data, a support vector machine algorithm is used. After that, it is followed by the testing phase. At this phase, using a combination of sharing training data and test data, as well as *k-fold cross-validation*. The results showed that 90% of public sentiment towards the Ruangguru application tended to be positive [12]. At the same time, the second journal focuses on sentiment and topic modeling. In its research, this journal uses sentiment analysis to obtain accurate data. Data obtained from the youtube site. More precisely, the ruangguru video comments on youtube. The comments seen are from various levels: SD, SMP, and SMA. There are about 2,287 comments obtained. After that, the data was cleaned and there were 412 comments left. Data collection with a vulnerable time of three weeks, namely from 4/11/2019 to 25/11/2019. The results of this study indicate that for SD level, positive sentiment comments were 180 people and negative sentiments were 2 people. For SMP level, positive sentiment was 84 people and negative sentiment was 12 people. Meanwhile, for the SMA level, positive sentiment was 113 people and negative sentiment was 20 people [13].

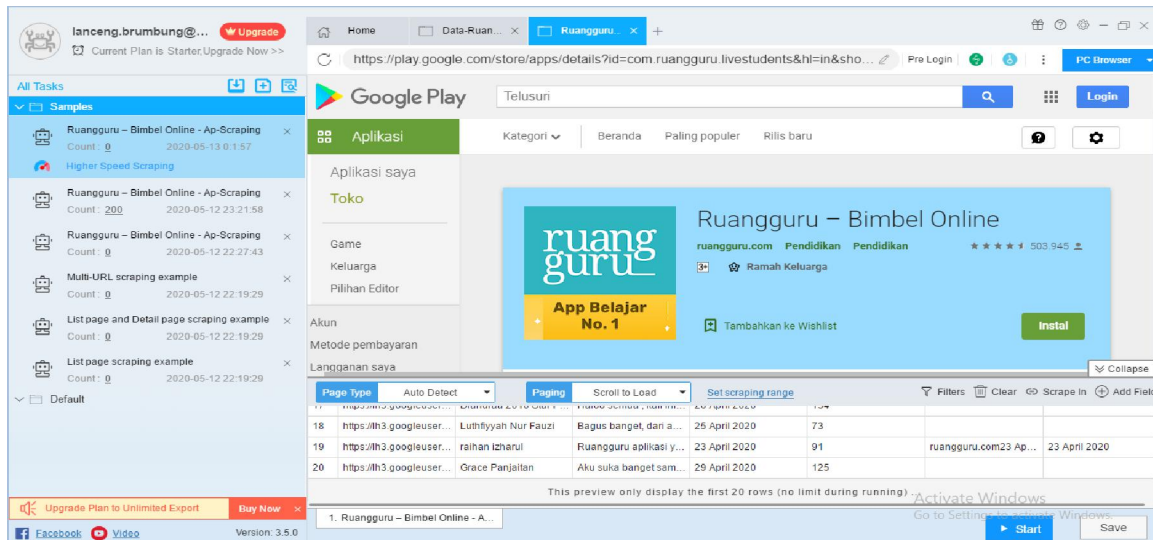
From the above exposition, the authors in the study, try to provide an assessment of the ruangguru application through analysis based on customer satisfaction responses. This response will later determine whether the ruangguru is good or not in improving the creativity of students or learners during these circumstances. When referring to Kotler and Keller's opinion, customer satisfaction is the state of a person's feelings based on the comparison between the final product and customer expectations. Customer satisfaction is closely related to the post usage of something. The comments that come out of the customer show how satisfied the customer is with something. The purpose of this study was to present data about the ruang guru application in improving children's creativity during the Covid 19 pandemic.

II. METHODS

The word of method refers to the way in which we approach problems and seek answers. In the social sciences, this term applies to how research is carried out [14]. In this study, the authors used the sentiment analysis research method. This sentiment analysis is called opinion mining, opinion extraction, sentiment mining, subjectivity analysis, affect analysis, emotion analysis and mining reviews. But the most popular are sentiment analysis or opinion mining. This analysis method is used to analyze a person's opinions, sentiments, evaluations, judgments, attitudes, and emotions for an entity such as products, services, organizations, personalities, issues, events, topics, and attributes of all of them [15]. The word of sentiment itself is in the form of information that is on the web containing facts and opinions. Sentiment represents personal perception of something [16]. This method is also used to assess a non-language feature, such as only signs or symbols [17]. In this study, sentiment analysis was used to analyze the user responses of the ruangguru application through the review column on the Google Play Store website, so that later the user's response could be accurately known after using ruangguru.



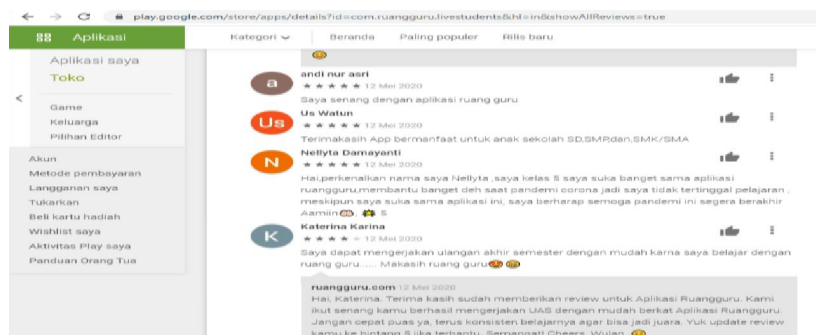
There are two kinds of data sources in this research: first, primary and secondary. Primary data is in the form of user responses of the ruangguru application as many as 501, which are obtained in the review column on the Google Play Store website. Taking comments is only from May 8-12, 2020. Meanwhile, secondary data is in the form of journals and information on the internet. In collecting primary data, the authors use scraping method. To facilitate the scraping process, the authors use the ScrapeStorm application, so that the data taken is truly accurate. It is not enough to stop there, the authors are still checking manually by reading the comments one by one. Meanwhile, for secondary data, the authors only search for a number of journals and information deemed relevant to the research title.



III. RESULTS AND DISCUSSION

Based on the data obtained by the scraping process, the sample is processed to arrive at the final phase, namely the conclusion. Sample data is a response in the form of comments from ruangguru application users. In analyzing the data, the author used the manual method, namely by reading one by one from all the responses that have been obtained. The 501 user responses, by the author, are labeled as positive comments, mediocre comments, and negative comments. From the results of these three labels, we will find the number of each, which represents their response to the ruangguru application.

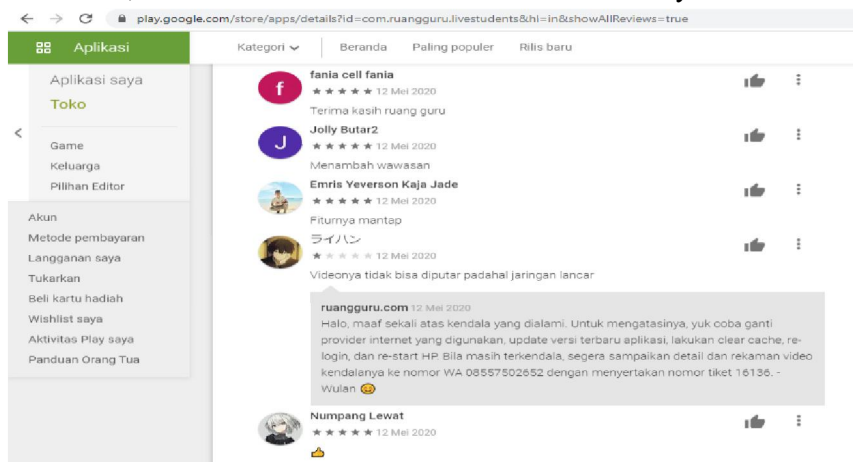
First the label positive comments. In this labeling, the author is not based on the number of stars given by each user, but purely on comments that have a positive effect on them. Included in this category of positive labeling are comments that really represent a positive impression and there are no other frills. Positive comments but there are still nuances of input and complaints, the authors put them in the negative comment label. So in positive comments these are purely positive comments. In this positive comment, the responses given by the average user are thanks, because the ruangguru application really helps users learn and develop creativity and knowledge. In addition, there are also thanks because the ruangguru application can give prizes for its achievements and several other comments.



The second, mediocre comment labels. In this second type of label, basically, the author is also a bit confused to give a name, because the comments do not represent mediocrity. Included in this label category are comments that do not understand what they mean, such as only mentioning the name of a person named Hendra, and questions about how to use the Ruangguru application, which are asked by people who have never used the application before but have already installed it.



Third is the negative comment label. This comment represents the user's dissatisfaction with the ruangguru application. Their dissatisfaction on average is only about system problems, for example because it cannot be opened, cannot be installed, the video cannot be played, the correct answer given is the wrong answer and so on. There is also because the issue of prices set by the ruangguru for certain groups is still arguably expensive. In addition, on this label, four comments were found which were cynical because the CO of the ruangguru application was taking advantage of his status as a special staff of the president. However, on this label, there are no comments that say that the Ruangguru application makes people even more stupid. There is only a problem like what is described above. Departing from the results of manual analysis conducted by the author, positive comments reached 430, mediocre comments reached 14, and negative comments reached 57. Of the 430 positive comments, 345 showed an increase in children's creativity in certain subjects.



Analysis of The ruangguru Application in Improving Children's Creativity in the Pandemic Era

The ruangguru application as an application that is engaged in the tutoring sector certainly always provides a variety of very interesting learning methods, making it possible to print output that has sufficient capabilities. This application, when referring to Rosenberg's opinion, is a representation of learning from the classroom to anywhere and anytime, from paper to online, and from physical facilities to network-shaped facilities [18]. The learning provided by the ruangguru application is not only an interesting method, but also the teachers who teach are those who really have good abilities in their respective fields. In this way, it is not

impossible, if the ruangguru has provided many different colors in improving ability and creativity in certain lessons.

Based on the results of the research that has been done, it can be said that Rungguru is still able to have a very positive impact on those in elementary to high school education, even in the midst of the Covid-19 pandemic. From the scraping data, there were 345 positive comments that led to increased creativity in certain lessons, as shown in the following table:

No	Subjects	Description	Result
1	Mathematics	There are 202 comments which all point to positive things. Their comments are more method based. Where the method used by the ruangguru application is easy and quickly digested by students. For example, ruangguru is able to simplify mathematical formulas that are difficult to understand.	At first they had great difficulty understanding the problems in mathematics, especially the very difficult formula problems. With ruangguru, they were able to answer some math problems that were initially difficult. Automatically, the value obtained for mathematics subjects is higher than before.
2	Biology	There are 55 positive comments on this subject. In addition to explanations about biology, ruangguru provides a variety of questions that are very helpful in understanding students in understanding biology	Be able to better understand and understand biology material, and have a positive impact on values for biology lesson.
3	Sociology	There are 49 comments which show that the room is very helpful for students to understand sociology lessons.	Students have a better understanding than before, even in the midst of the Covid-19 pandemic.
4	Unknown	There were 39 positive comments that were not found to lead to what lesson.	If we look at their comments, they really feel the benefits of ruangguru, because it can provide the needs of students to learn in certain lessons

IV. CONCLUSION

From the results of the discussion above, it can be concluded that the ruangguru application is still very effective in developing students' creativity and knowledge in the midst of a pandemic, which will end someday. With the various features offered, ruangguru can properly advocate all existing content. Although it is inevitable, sometimes there are mistakes. When referring to the numbers obtained on each label, positive responses outnumber negative responses and mediocrity. Even in that negative response, the majority of responses from users are only system or technical issues. That means, the ruangguru application is very good for the teaching and learning process to take place. Another thing, which also attracts ruangguru, is the teachers and tutors who are

truly competent in their respective fields. And this at least can spark the desire of many people to join and use the application.

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