



## INDONESIAN STUDENTS' EXPERIENCES IN STUDYING FOREIGN LANGUAGE USING TECHNOLOGY

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### Abstract

The existence of technology in education has impact tremendously in learning. This greatly facilitates the experience of students in order not to be monotonous and boring. The usefulness of the media learning app is very accepted by the public because it allows users, especially for Students. Advantages in the use of media applications can add new knowledge to a lesson. To facilitate the learning experience of the student, to learning to speak German can use the app Quizizz. Features. Quizizz is very easy for students to understand and explore a learning material. This research was conducted by interviewing 10 students of education German language ever use the app Quizizz with the aim to see the opinion of the experience of students who learn using the application. Based on the results of this research, many of the students of the educational program of the German language, said that the experience of learning with the application quizizz is very easy to understand the material of the German language and is also very effective in explore and evaluate his understanding.

**Keywords:** experience of Indonesian students, learning German, Technology, quizizz

### Abstrak

Keberadaan teknologi dalam pendidikan memiliki dampak yang sangat besar dalam pembelajaran. Hal ini sangat memudahkan pengalaman siswa agar tidak monoton dan membosankan. Kegunaan aplikasi media pembelajaran ini sangat diterima oleh masyarakat karena memudahkan pengguna khususnya Mahasiswa. Keuntungan dalam penggunaan aplikasi media dapat menambah pengetahuan baru pada suatu pelajaran. Untuk memudahkan pengalaman belajar siswa, untuk belajar berbicara bahasa Jerman dapat menggunakan aplikasi Quizizz. Fitur. Quizizz sangat memudahkan siswa untuk memahami dan mendalami suatu materi pembelajaran. Penelitian ini dilakukan dengan mewawancarai 10 mahasiswa pendidikan bahasa Jerman yang menggunakan aplikasi Quizizz dengan tujuan untuk melihat pendapat pengalaman mahasiswa yang belajar menggunakan aplikasi tersebut. Berdasarkan hasil penelitian ini, banyak dari mahasiswa program pendidikan bahasa Jerman mengatakan bahwa pengalaman belajar dengan aplikasi quizizz sangat mudah untuk memahami materi bahasa Jerman dan juga sangat efektif dalam menggali dan mengevaluasi pemahamannya.

**Kata kunci:** pengalaman siswa Indonesia, belajar bahasa Jerman, teknologi, quizizz

### INTRODUCTION

The increasing technology of this modern, multicultural world can be applied to the educational world as a more sophisticated and sophisticated facility to expedite the learning process. Technological use has been shown to increase a child's interest in learning because of the more attractive look that will help keep his children from becoming saturated during the lessons.

The meaning of the learning technology is a modern-day designed application or media that is used as theory and practice in learning, as a source of learning. Today much of the technology used in education is information technology. Instructional technology is about systems and procedures that lead to a desired result rather than devices, machines, computers, or other artifacts. Based on the foregoing, educational technology can be defined as a system utilized to facilitate learning and thus achieve the intended goals. A critical strategy for current educational setups is to adapt information technology to the needs and desires of learners.

The advancement of technology undoubtedly brings about changes in daily life, including those in the realm of education. There is some dispute regarding the educational usage of technology. To begin, technology has the potential to boost learning. One of the ways technologies can be used in education is as instructional media, such as multimedia interactive. Multimedia interactive is a medium comprising of images, sounds, and video elements that are presented to learners under computer control, allowing them to not only view images and hear voices but also produce active responses. The reaction has an effect on the speed and sequence with which the educational materials are presented. According to several research, , the utilization of interactive multimedia can improve student study results. However, if the use of technology is incompatible with learning or if the teacher lacks control over the use of technology throughout the learning process, the technology can backfire. Numerous independent analyses of tests conducted in Israel, Germany, the Netherlands, and Columbia schools found no correlation between computer use levels and final study results, or even the opposite (Angrist and Lavy, 2002, Lauven et al. 2003, Fuchs and Woessmann, 2004, Barrua- Osorio and linden, 2009 in Selwyn, 2011). The second point is that technology has the potential to improve education. As previously stated, if technology can improve learning, it will also improve education. However, technologies such as computers have the potential to magnify social inequality. For an informed learner who is comfortable with computer operation, he or she can readily use it to aid in their studies and so get the most out of it. While the student who is unfamiliar with computers will focus on how the computer runs rather than on the subject that should be learned, the student who is familiar with computers will focus on how the computer operates.

Providing way for students to voice their learning experiences and the learning assessments in the study space that support technology is proving to be successful in informing the design of curriculum and the development of future study rooms. Insights from students suggest that learning like this significantly facilitates pedagogical changes and spawns' active collaboration and learning. Though the resident's learning style and use of space are different, the physical aspects, technologies, and learning communities from space are far greater than any challenge. Collaborative learning identification as the experience of students in this room informs future teachers to utilize and incorporate collaborative learning activities in a similar teaching room. These studies provide insights that are helpful to those who plan and build the study. Such space designers need to recognize the challenge and how to maximize the costs to enable collaborative learning opportunities to the best possible. Compared with the utility and capability of this space, the physical limitations and technologies reported in student feedback are minimal and some can be easily overcome. The study examines the student's experiences from the study space that support this visceral technology, which can effectively inform the student improvement steps and the academic experience of mixed learning. The findings suggest that students consider the technological and physical abilities of the learning room to increase and facilitate collaborative and direct, learning and developing competence presentations.

Some studies have explored students' experience rather focus on the use of students' learning technology (Ellis, 2016). On the research of Verdonck, m., Greenaway, r., Kennedy-Behr, a., & Skew, e (2018), technology has been proven to be successful in informing the design of curriculum and the development of future study rooms. Insights from students suggest that learning like this significantly facilitates pedagogical changes and spawns' active collaboration and learning. Though the resident's learning style and use of space are different, the physical aspects, technologies, and learning communities from space are far greater than any challenge. They explore the students' experiences from the study space that support this visceral technology, which can effectively inform the student improvement steps and the academic experiences of mixed learning. The findings suggest that students consider the technological and physical abilities of the learning room to increase and facilitate collaborative and direct, learning and developing competence presentations.

The aim of the study was to see how far a student's level of understanding could go with a measurable using a quizizz application. The study was conducted with German - language students at Medan state university with as many as 10 participants. It is hoped that this study will enable us to learn how the student experience of learning German using technology. Data collection is done by means of a method of interviewing via the telephone through whatsapp.

## **LITERATUR REVIEW**

### ***TECHNOLOGY IN EDUCATION***

Technology is a product of the development of science, which is happening in the world of education. Therefore, appropriate that education itself also utilize technology to help implement learning. Digital technology is now being used in educational institutions as a tool for supporting learning, either as a tool of information (which is a tool for accessing information) or as a tool for learning activities and tasks).

Here is where information technology and education have opened the globe's eyes to a new world, a new market, and a world without borders. Technology is a human invention. Therefore, it is natural to have a negative deficiency or consequence. Apart from its beneficial aspects, technology in education has some drawbacks. There are numerous viewpoints on the use of technology in education. Internet technology is directly responsible for altering daily living patterns, including work, information access and sharing, purchasing, meeting with others, and preserving and arranging existing social interactions. The Internet enables people to interact without regard for time or space constraints. Additionally, the Internet makes it simple to study or seek a distance education. However, it cannot be denied that it has the potential to alter society's social fabric, such as making an individual more individualistic and apathetic toward their situation. Technology has significantly affected the three major spheres of social life: production, consumption, and communication. Speaking and communicating are two skills that are taught in the educational system. If learners are taught via the Internet or interactive media, their communication skills will be harmed, as they will be interacting only with machines.

Systemic techniques must be employed to explain education, as the world of education has grown fashionable in the modern global era. Future schools and educational institutions should focus on teaching pupils how to learn. Technological developments are also being used in various institutions of education in various countries to learn the motives of students, the same is the case from Tokyo university. David examined the use of tablet computer to see or reexamine a student's ability to speak English and to see the effects of a student's study motivation. The research suggests that by using the tablet, students become motivated to study more and they respond favorably to the review of their appearance they see through the tablet.

With technology, education has become something new that it makes us not doubt that belong to our system of education has changed because of technology that continues to grow. Now we can prepare students for lifelong learning those who need a new approach to education that combines technology increasingly as part of a student's everyday life. It is widely recognized that a comprehensive education serves as a springboard to personal success. This started students on a path of lifelong learning that prepared them for success in an ever-changing world. Individuals can expand their minds and embrace new ideas and opportunities through education and, if they are capable, build a better life for themselves and their community. Students also require the flexibility to connect and collaborate with people wherever and whenever – to communicate information in a way that is far more dynamic and interesting. In addition, it is also necessary to consider the impact of education play in a competitive economy, in which the first local industry is now competing in a global scale.

### ***QUIZIZZ AS THE MEDIA IN TEACHING***

A teacher should provide educators with education and skills that include not only survival skills but critical, constructive, innovative and characterless thinking skills. At online (online) study, optimization in long-distance communication does not go away with the use of cell phones, tablets, or laptops and Internet connections that can be used as part of the learning activities. This presents a challenge for teachers to remain able to create fun, exciting and active learning and still achieve the purposes of learning.

Learning Media is used to assist in the learning process and to ensure that learning objectives are met. Learning Media is defined as a tool, both physical and non-physical, that teachers use to more effectively and efficiently convey material to students. As a result, learning

materials are more readily accepted by students as a whole and encourage students to learn more (2012) (Musfiqon). When learning media are used appropriately throughout the learning process, they can serve as a tool to aid in making the learning process more effective and efficient. Additionally, media of learning will increase students' motivation, which is consistent with the statement made by Sanaky (2009) that the benefits of learning media include the following: (a) By utilizing media of learning, the learning process will be more interesting, motivating students to learn; (b) Can clarify the learning material, allowing students to easily comprehend it. The material is not only presented orally to avoid boredom, but also more effectively and efficiently; and (d) Students listen to the teacher deliver the material while engaging in a variety of learning activities such as observing, doing, and demonstrating. Featured learning media can help promote experiential classrooms that encourage students' involvement in their education.

There so many of the learning media that has been presented, which can be applied by the teachers, one of which is a media-based learning game, of course also can be used as a means of conveying the material in the learning process, namely to measure the understanding of students during the get of the material that has been taught. Quizizz itself, is an educational game that is the nature of narrative and flexible, in addition to can be utilized as a means of conveying the material, Quizizz can also be used, as media evaluation of learning interesting and fun. Learning activities at home certainly can easily become a tedious activity for students. So, with the ease of access instructional media now, educators can use, then develop a media evaluation through the application of Quizizz, so it can achieve the goal of education.

There are some researchers who found out about a quiz app in improving the students' reading ability. Quizizz is an assessment tool online as a classroom activity multiplayer fun that allows all students to practice along with computers, Smartphones, and I Pad. Researchers used the medium of this application because the media this app is a kind of learning model (Ju, 2018). Media Quizizz has the advantage that the questions presented in the media Quizizz has no time limit, students are taught to think in a precise and quick in work on the problems that exist in the media Quizizz. Another advantage that there is on the media Quizizz is the answer of the question that there will be displayed with the color and image as well as look at the computer educators (as operator) and in the learners will be changed automatically in accordance with the order of the questions presented.

Quizizz is one of digital games is an activity the class multiplayer, which allows all learners can practice together with your computer, iPad, tablet, and Smartphone. It also has an iOS app, Android apps, and Chrome apps for students (May, Ju, and Adam, 2018). A wide variety of studies related to the utilization of the application Quizizz, shows the benefits that are obtained, illustrating that the Quizizz can improve the competence of each student and their expertise. Utilization of learning media Quizizz, is one of the efforts to accommodate the problems of learning media in Indonesia that can't be applied in the conventional with the other learning-based Information Technology and Computers. Game Quizizz can help encourage the learning motivation of students and improve learning outcomes.

Therefore, how students can obtain information through applications Quizizz and students can collaborate with friends and share with the teacher. So, the Students have motivation about the benefits of using a media application Quizizz to collaborate with your friends.

Based on the explanation already explained, it can be concluded that the Quizizz is a media-based learning educational game which contains an interactive quiz. Quizizz can be used in learning activities such as holding a pretest, posttest, and exercises, strengthening of the material to measure the understanding of students, remedial, homework and so forth. Unique selection of answers Quizizz there are pictures and colors are varied.

## **METHODS**

Study interviews were conducted with how to communicate to the participants used via Telephone through WhatsApp with the purpose to see how the perception of students when working on using the app Quizizz. Given questions about how their convenience using the app Quizizz to work on the problems. Consists of 10 short-answer questions to see how the opinions of those about it. So the outcome of the interview is expected to explore, experience, opinions of the participants in accordance with what is felt by them.

The interview is very useful to convey a story behind the experience of participants. The interviewer can look for in-depth information about the topic. Interviews may be beneficial as a follow-up to certain questionnaire respondents, for example, to elicit additional information about

their responses. (1999, McNamara) Qualitative interview research aims to describe and interpret central themes in the subject's life world. The primary objective of an interview is to ascertain the meaning of the speaker's statements (1996, Kvale).

### Data Analysis

Research data collection was conducted by interview via Telephone; the question shaped the interview to see the opinion of participant. The question generally divided into two parts: (1) background information of the participants; (2) how the application Quizziz used as a measure of understanding of the learning German Language. In the second part with the question of what device is used to open the app Quizziz, what material is suitable to be applied to put a quizziz. Interviews were conducted with 10 participants where each participant will be contacted via Telephone using a whatsapp application, and duration carried out for 10-20 minutes for each participant. This interview is used to analyze the opinion of students of the educational program of the German Language in a University in Indonesia about how to use the app quizziz as a measuring tool to assess the level of their understanding of the learning German Language. At the end of the questions, participants need to give their opinions using English. After the questionnaire answered by the participants, the researcher will collect, and then groups the results of their answers and then make a conclusion.

The qualitative method was applied in this study. According to David Williams (1995) qualitative research is an effort to researchers collect data that is based on a natural background. Of course, because it is done in a natural or natural, the result of his research was also scientific and can be accounted for.

The study of this interview is to involve students in semester sixth study in a state university in northern Sumatra, Indonesia. Students who become participants in this study are done through private chats via telephone. Table 1 presents the demographic data descriptive, including gender, age, and occupation.

**Table 1. Profile of participants**

Participants	Gender	Marital status	Age	Occupation
Student 1	Female	Single	20	German Student
Student 2	Female	Single	20	German Student
Student 3	Female	Single	20	German Student
Student 4	Female	Single	21	German Student
Student 5	Male	Single	20	German Student
Student 6	Male	Single	20	German Student
Student 7	Female	Single	21	German Student
Student 8	Female	Single	21	German Student
Student 9	Female	Single	21	German Student
Student 10	Female	Single	20	German Student

In this study, the researchers interpret the interview data, interpret every word and sentence that conveyed by the participants, communicating the views, opinions, or viewpoints of the participants of via Telephone. The interview aims to get more meaningful data. The researcher read the interview data repeatedly so easy to make a result and discussion to find the answers related to the title created by the researchers. Then the researchers interpret the results of the interview and interpret every word and sentence that is answered by the participant.

## RESULTS AND DISCUSSION

Learning activities are the most fundamental activities in the entire educational process. This means that educational attainment depends to a large extent on how the process of teaching learning is professionally designed and practiced. As in the present by utilizing the technology, especially in the laptop and the internet is very helpful in the teaching and learning process.

In an effort to improve the quality of education one is utilizing the technology in the process of teaching and learning that is oriented on the interest of students and facilitate the need for the development of cognitive, effective and psychomotor. Technology is a system that can facilitate educators and learners learn more widespread, and also varies. Through the facilities provided by the system, students can self-study, anytime and anywhere without being limited by time and space. Material that they can learn also more varied, not only in the form of presentation of the word, but can be richer with variation of text, visual, audio, film and animation.

Experts of educational technology argue that the main role of educational technology is to help improve the efficiency of wisdom in the teaching and learning process. The application of educational technology in education should make the process of education in general and teaching and learning process in particular more efficient, more effective and provide a positive added value.

On the plus side, anyone can develop the habit of learning at any age. Technology provides tools that motivate students to learn the lessons easily. The study found that students who choose to use a specific application is experiencing an increase in retention and academic performance. For this reason, students get more benefits when they are using technology to learn their tasks compared to traditional methods such as reviewing notes, study group and read the textbook. One of the learning with the application, the application is the result of the development of technology. Many kinds of applications with all the functions. One of the only apps to learn. Learning app that is focused in this study is the applications Quizizz.

The results of the interviews have been conducted via Telephone by focusing the theme of Learning the German language with An Quizizz get a wide variety of good response. It is seen from a wide variety of positive response from the respondents that almost 100% said application Quizizz good and beneficial in learning the German language, especially their use in the state of distance learning.

From the results of the interview answers it can be said that the application is preferred because it has a variety of supporting features such as images, audio and there are also memes that do not make learning boring. Not only that, respondents also said that in the application we can also choose material when we want to learn, we also repeat the question several times. There are so many benefits if we often repeat working on questions, one of which is increasing vocabulary in German, then we will be trained and easy to remember in learning Grammaticals.

*By remotely like this, we really need the app-the app can help in learning, is not intended to replace the atmosphere in the classroom but should the application can make us more active in the learning the German language and one of the applications that I most prefer is Quizizz with all of its features.(student 2)*

### **Application Quizizz Interesting and can Help Increase Understanding in Learning the German Language**

In Quizizz is there a feature that gives five types of questions, namely multiple choice, check box, fill in the blanks, election/survey, and open ended/essay. To survey and open ended/the essay itself, Quizizz is not doing the assessment directly because the system is not able to assess. But at the end of the session the question we will know what the score or value that we can. In-app Quizizz also have solved by utilizing the features of the insert pictures and audio. In Indonesia is still rare utilizing the features of the audio, but the audio can make the matter more interesting and interactive. In the learning the German language is very important to learn the audio, especially when learning Hörverstehen (listening comprehension) because in a few words the German language writing and the way (Aussprache) could be different, especially in the mention of the word using the Umlaut (ä, ï, ü, ö).

*With the audio in the Quizizz so I can find out the mention of a few words that use the umlaut, and said that using ei, eu, as well as a word that uses ß turns are double s or ss. After that I could follow its pronunciation as well as can help me in memorizing the vocabulary of the German language.(student 5)*

### **Feel Challenged While Working on the App Quizizz**

Each question in the application Quizizz has duration of time that is created by teachers and lecturers. The participants who answer the questions will feel challenged while working on a matter that has been provided. In such an application can also create a class or integrated with Google Classroom. There are two options, i.e. make the grade directly in Quizizz or import Google Classroom. The advantages are if already integrated with Google Classroom is that we can directly assign the quiz without copy paste, link or code the game first. After the session to answer questions completed on display in the computer or laptop teacher will appear the names of the participants who answered the question as well as the score obtained in a composed. Then by looking at it, teachers can determine and assess where participants can and can't yet.

A rating system that either will be able to give you an idea about the quality of learning so as to help teachers plan a learning strategy. For the students themselves, the system of assessment that will either give you the motivation to always improve its ability.

Here are the steps of assessment with quizizz: first, the preparation of learning by creating an account and about in quizizz by going to [www.quizizz.com](http://www.quizizz.com) then sign up, enter your google account or email. Select the role as (the makers of matter)/the teacher and complete data, click the open quiz creator fill in the name of the quiz and then make a question, answer options, and set the correct answer, "Question preview" will display a matter that has already been made, can add new questions and click finished when you are finished, select grade or grade levels how, the subject or subjects, click finish and create the quiz. Show quiz directly in the classroom or for a homework, setting the quiz and click proceed. Second, the implementation of learning by giving the quiz to participants by means of click the live game, question and answer options can be mixed and set the time. Ask the participants to click [join.quizizz.com](http://join.quizizz.com) in the browser HP each to work on the problems you can also click the application quizizz has been installed via play store by entering the game code and their name. Participants who have joined will be visible on the laptop screen of the host (the makers of matter)/teacher.

Data and statistics are the result of the work of the participants can be downloaded and used by the teacher as assessment data. This quiz could be the work of the house (PR) for the participants and has a limit of a maximum of two weeks in the process. The quiz can also be played by the participants anytime and anywhere as well as does not exceed the specified time limit. At the end of the job attendees can find out the rankings obtained from all participants are working on it. Participants also found out about and right answer of the question that has been done as well as can't be cheating, because of the problems given to the participants with one another has been scrambled.

*I really feel challenged while answering to choose article a noun, on the matter of the giving of the image glasses German glasses are Brille. Every noun in German has articles der, die or das, But when it's a matter of who is responsible has a duration then quickly I choose the article die. (student 8)*

*When I was in the in-app Quizizz with my friends, I am very ambitious to get the highest rating or ranking first, I want to get score the highest in comparison with my friends. (student 4)*

### **A Great app to use in the Pandemic Covid-19**

Distance learning is requiring the application should be able to help students in learning. The application can be facilitator in helping educators to improve his understanding, although with no face to face directly. Application Quizizz very could be the application which helps the learners to learn and help educators to teach, to give the matter, the material as well as the value against learners.

*Application Quizizz is an application that is present should be introduced to the generations that will come, in addition to the contents that attract a lot of benefits that I can. Not only teachers, there is also a lecturer application I use Quizizz to give us a pop quiz. Means this app is very recommendation to the pursuer and the students while doing distance learning. (student 7)*

### **CONCLUSION**

It can be concluded respondents said application Quizizz is very beneficial in learning the German language. The application is preferred because it has a wide range of supporting features such as pictures, audio and also there are memes that don't make learn to be bored. Not only is this feature alone that is favored by the respondents, there are many options of material contained in this application. In Quizizz is there a feature that gives five types of questions, namely multiple choice, check box, fill in the blanks, election/survey, and open ended/essay. It is very useful and beneficial for students, students, or anyone accessing to learn German with fun in the future now that the pandemic covid-19.

### **References**

Basuki, Y. & Hidayati Y. (2019). Kahoot! or Quizizz: the Students' Perspectives. [https://www.researchgate.net/publication/334358438\\_Kahoot\\_or\\_Quizizz\\_the\\_Students'\\_Perspectives](https://www.researchgate.net/publication/334358438_Kahoot_or_Quizizz_the_Students'_Perspectives)

- Budhwar, K. (2017). The Role of Technology in Education. in IJEAST. 208, 2455-2143, (55-57). <https://www.ijecast.com/papers/55-57, TESMA208, IJEAST.pdf>
- Campbell, J. M. (1974). Satellite Technology for Education Distribution. <https://doi.org/10.2190/V65V-ERKR-HA38-WWGD>
- Chapelle, C.& Sauro , S. (2017). Introduction to the Handbook of Technology and Second Language Teaching and Learning. (1-9). <https://doi.org/10.1002/9781118914069.ch1>
- Kern, R. (2014). Technology as Pharmakon: The Promise and Perils of the Internet for Foreign Language Education. <https://doi.org/10.1111/j.1540-4781.2014.12065.x>
- La Velle, Linda B. & Nichol, J. (2002). Editorial: Intelligent Information and Communications Technology for education and training in the 21st century. 31(2):99 - 107. <https://doi.org/10.1111/1467-8535.00140>
- Mathers, N. F. & Hunn , Amanda (2000). Using Interviews in a Research Project. [https://www.researchgate.net/publication/253117832\\_Using\\_Interviews\\_in\\_a\\_Research\\_Project](https://www.researchgate.net/publication/253117832_Using_Interviews_in_a_Research_Project)
- Puspitarini, Y. D., & Hanif, M. (2019). Using Learning Media to Increase Learning Motivation in Elementary School. Anatolian Journal of Education, 4(2), 53-60. <https://doi.org/10.29333/aje.2019.426a>
- Ratheeswari, K. (2018). Utilizing Information and Communication Technology for Education and Development. Journal of Applied and Advanced Research 3(S1):45 <https://doi.org/10.1177/034003520102700306>
- Rivera, G. M. (2007). Multiple-Language Program Assessment: Learners' Perspectives on First- and Second-Year College Foreign Language Programs and Their Implications for Program Improvement. Foreign Language Annals 40(4):569 - 583. <https://doi.org/10.1111/j.1944-9720.2007.tb02881.x>
- Rodríguez, J. C. (2018). Redesigning technology integration into world language education. <https://doi.org/10.1111/flan.12328>
- Son, J.B. (2018). Technology in English as a Foreign Language (EFL) Teaching. <https://doi.org/10.1002/9781118784235.celt0448>
- Wang, C. (2010). Toward a Second Language Socialization Perspective: Issues in Study Abroad Research. Foreign Language Annals 43(1):50 - 63. <https://doi.org/10.1111/j.1944-9720.2010.01059.x>
- Zhang, R. & Zou, D. (2020). Types, purposes, and effectiveness of state-of-the-art seltechnologies for second and foreign language learning. <https://doi.org/10.1080/09588221.2020.1744666>