

ICT (Instruction Computer Technology) Based PKN and IPS Learning Designs in Elementary Schools

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Abstract

The learning process that is usually carried out in schools or what is often referred to as the conventional learning system is now seen as less effective. In the current era of globalization, ICT (Information and Communication Technology) is a requirement that is used as the basis for determining the quality and effectiveness of the learning process. Designing ICT-based IPS-Civics learning can help teachers or students in the learning process so that knowledge and learning materials can be conveyed to students properly. This research was obtained and collected through literature studies, which were carried out by literature review and from searches carried out on the internet via Google. ICT-based learning media, namely learning media in which all electronic components consist of hardware and software as well as all activities related to data processing, retrieval, collection (acquisition), processing, storage, dissemination, and presentation of information/data using computers and telecommunications. While the various ICT-based learning media include: computer technology, multimedia, telecommunication, and computer network technology. The function of ICT in learning media is as a tool in learning media, learning facilities/places, as a source of learning, and as a means of increasing professionalism. The purpose of this research is to make it easier for teachers to develop learning designs that use information technology so that learning becomes less monotonous and more creative, especially in Social Studies and Internship learning which is often considered boring by students, using ICT-based learning designs will attract more students' attention keywords: Learning Design, Civics, and Social Studies, ICT (Instruction Computer Technology).

Keywords: Learning design, civics, social studies, ICT

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Introduction

The learning process that is usually carried out in schools or what is often referred to as a conventional learning system is now seen as less effective. When technology development is very fast, intelligence, concepts of brain power, and creativity, this technological development has an impact on weaknesses in conventional or teacher-centered learning systems. In conventional learning systems, the process of transferring knowledge or the process of providing the information is carried out through a blackboard which is used as the main facility, and the teacher is used as an information center or only the teacher can convey information (teacher-centered). In the current era of globalization, ICT (Information and Communication Technology) is a requirement that is used as the basis for determining the quality and effectiveness of the learning process. According to Dryden and Vos, in education that has proven successful, learning materials are less important than self-image. Therefore the education system that will be implemented in the future prioritizes how to increase student enthusiasm and passion for learning (how students learn). (Hamid & Hadi, 2020)

Many methods can be used to increase student interest and enthusiasm for learning. Methods and approaches that can be used to increase student enthusiasm and interest are by utilizing information and communication technology (ICT) in the learning process. Suryadi concluded that the community's need to utilize technology in the learning process is one of the reforms in the learning process. In addition to helping learning conditions that are suitable and active for students, the important role of information and communication technology in the learning process is to provide a set of tools and media, which are used to simplify and speed up student work, as well as provide skills in using technology. (Riaddin et al., 2022)

The rapid advancement of technology and science has had a major influence on the conditions and circumstances of human life, science and technology have affected the scope of human life, one of which is education, namely the PKN and social studies learning process. The correct implementation of the PKN and IPS learning processes is learning activities that increase interest or motivation, as well as student activities in the learning process. (Handayani et al., 2022)

The impact of the influence of technology that can be seen today is that the information we get in the field of education will be used to improve the learning process, especially in learning IPS and PPKN material. The development of technology affecting teachers aids in the process of teaching material to students. At this time teachers are required to have skills or skills in using or creating a learning media that will be used in the learning process. According to Suryani (2016), learning media is referred to as a teacher's tool when teaching and as a means of carrying messages from learning resources to students whose recipients of messages are used in the learning process. (Handayani et al., 2022)

The use of learning aids or media in the world of education has become a necessity that must be taken by every teacher. In general, educators more often design and use conventional learning media that only require the active participation of one party. The benefits of ICT learning media are found in the results of Puspitasari's research which found that ICT-based learning media has in Indonesian language learning including (1) Attracting students' attention, (2) Learning becomes fun, (3) Learning becomes easier, (4) Provides more knowledge to students and (5) Facilitate communication. (Muslih, 2016)

In the teaching and learning process, we can see material that has a meaning that is difficult for students to understand and understand and beyond the experience of students in the environment, therefore it will be a little difficult to teach it back to students. For example, material about past events that are only written in words in a book sometimes contains abstract words. Concrete things should be needed to be explained to students such as the use of pictures, videos,

and even animations that can be shown to children. The goal is to attract children's attention to learning by using their senses. (Zahwa & Syafi'i, 2022)

We can know the meaning of learning design from various points of view. This relates to theories and strategies in the learning development process and how to apply or implement them in the classroom. Besides that, it can also develop the level of teacher skills in compiling, processing, implementing, and evaluating students by designing a product. The purpose of this design is basically to contain a series of steps that are arranged in as much detail as possible to improve the quality of children's learning in the learning process. The problem that is found in reality today is the lack of ability that teachers have in designing an IT-based learning media. In addition, it is also caused by supporting tools that are not available in the use of this media in the classroom. And not all agencies have the availability of these tools. Therefore there must also be supporting and supporting factors from various parties to realize and realize this. In addition to the skills and knowledge possessed. In this article, we as writers will discuss and explain in detail the IT-based Social Sciences and Civics learning designs in elementary schools. It explains learning design, instructional media, IT-based learning media, IPS, and Civics learning designs in elementary school and examples of IT-based learning media or using applications. All of these things will be explained in the results and discussion. So that with this explanation it can be an insight for the reader to increase knowledge, skills, creativity, motivation, results, and so on. Designing IT-based Social Sciences-Civics learning can help teachers or students in the learning process so that knowledge and learning materials can be conveyed to students properly. In addition, the learning that students go through becomes meaningful and easy to understand, and the material is long stored in the child's memory, even what he has received can be implemented in his life. (Handayani et al., 2022)

The purpose of this study is to make it easier for teachers to develop learning designs that use information technology so that learning becomes less monotonous and more creative, especially in Social Studies and Internship learning which is often considered boring by students, using ICT-based learning designs will attract more students' attention.

Methodology

This research is included in qualitative research. because the data is interpreted by the author by providing an overview and interpretation of the understanding found by the author, the reality in the field. This research is included in qualitative research. Qualitative research is said to be a study conducted to understand an event experienced by a person or subject which is the main key to research, where the data obtained from the subject will be described or interpreted in the form of written words and then poured into a paragraph or even from someone's speech and from the attitude that becomes the center of observation (Wulandari, D.T., & Sayekti, 2022). Sedangkan pendapat menurut Sugiyono (2017) berpendapat bahwa metode penelitian kualitatif termasuk ke dalam penelitian naturalistik karena penelitiannya dilakukan pada kondisi yang alami dan objek yang berkembang apa adanya (Giarti, 2016).

The research data was obtained and collected through a literature study, which was carried out using a literature review and from searches carried out on the internet via Google. Another opinion is that a literature study is an activity that contains steps in finding reading material which is done by browsing the literature, reading and taking notes from technological sources, and managing the material. The data collected in this article is by searching and exploring various journals on the internet. These references are also obtained through books and journals that have been published. Sources of data that will be implemented indirectly are obtained by going into the field. Therefore, the literature study is said to be a research method, to be able to collect and analyze data sources to be worked on in the form of research reports. In this literature study, look for relevant theoretical references. (Habsy, 2017)

Results and Discussion

Learning Design

Learning Design The word design comes from English, namely design, in the Big Indonesian Dictionary it can be interpreted as framework, shape, design, motif, pattern, model, arrangement, purpose, and construction. In Arabic, design is defined as *Kashmir*, namely the technique of organizing something (learning) in a way that is by the provisions of the curriculum which forms the basis of learning. The understanding of learning design above implies that design is an activity that demands professionalism and competence because someone can't design learning properly and correctly if they do not have the appropriate education and experience. That way, designing requires sufficient knowledge, experience, and observation of the symptoms and characteristics of the problem (Hafizah Rahmah Hasibuan, 2019)

In the learning process, tools are needed to support learning so that it is more interesting and so that students can easily understand the learning material. By designing or designing learning attractively, it will be preferred by students, where at this time technology is increasingly sophisticated that can be utilized by various groups. The design itself can be said as a design framework or procedure for developing a product. We can design a product or application by following certain steps (HIDAYAT, 2021). Learning can be said as a learning process when students change from not knowing to know. The goal is to help students get good learning output by following directions and being meaningful for the students themselves (Djamaluddin & Wardana, 2019) Another purpose of this learning is a process of mutual relations between all elements and subjects in the class, which will become the main controller and control in the class. As long as the learning takes place, the elements in learning, namely the teacher and students become the main actors for the realization of predetermined goals. Learning is not only an activity of transferring/providing knowledge from teacher to students but a continuous, sustainable process, changing the mindset of students, increasing students' knowledge, and making students children with character and the pride of the nation. (Haris, 2013). Conclusion Learning is said to be a series of activities that occur between educators in explaining material to students which are also associated with a particular learning environment so that eventually there is a behavior change. The word learning design can contain the meaning of a series of activities in planning, processing, producing, and even creating learning activities to achieve something that has been determined by linking to the characteristics of students as the intended subject so that learning success can be increased (S.Putrawangsa, 2019).

The learning design contains steps previously designed by the teacher which must then be carried out in teaching the material to students to produce good output. The work step has several stages, starting from analyzing needs, establishing plans, developing, implementing, and finally evaluating what has been made. Learning design in general contains procedures for the development and preparation of educational programs that aim to increase learning. Learning design on the other hand is also said to be a process carried out by the teacher to improve and increase student output in learning by developing teaching materials and creating interesting learning activities according to their needs and portions. The learning design includes the development of teaching materials, activities for developing learning strategies, trials, and evaluation of all learning activities. The teacher must have skills in learning design, besides that the teacher must have experience, skills, and knowledge about the application of this learning design. In some of the explanations that have been presented, it can be understood that learning design is an activity in designing and developing products to support the learning process so that it becomes directed and understood by students. Where this design must be followed by several work steps to create an interesting learning design.

Definition of Learning Media Using ICT

Gagne (1992) gives the notion that media is a variety of components that can attract students' attention to learning, this is in the environment around them. Meanwhile, Heinich, Molenda, and Russel (1982) stated that: Media is delivery in communication such as films, television, diagrams, printed materials, computers, and AECT (Association of Education and Communication Technology, 1977) instructors, media as things that It is used to send information and messages. NEA (National Education Association) media is a type of communication that is printed, visible, audible, and other supporting tools. Briggs (1985): "Media is all tools that are physically present giving messages and enticing students to learn". From some of the explanations above it can be concluded that the media is used to convey messages and can generate thoughts, and build enthusiasm, attention, and students' desires so that they can encourage the learning process in students. Learning media are media that are useful during learning, including teacher props in teaching as well as means of carrying messages from learning sources to recipients of learning messages (students). As a presenter and distributor of messages, learning media can in certain cases represent the teacher in presenting learning information to students. If the media program is well designed and described, then the function will be used by the media even in the absence of a teacher. To further agree that what is meant by learning media, is not only physical objects, but everything that has been filled with learning material, someone will likely use it to learn to gain knowledge, and skills or change attitudes. Some examples of instructional media include traditional media (blackboards, textbooks, handouts, modules, teaching sheets, LKS, real objects, OHP slides, video or film tapes, teachers, etc.), mass media (newspapers, magazines, radio, television, cinema, etc.), and new ICT-based learning media (computers, CDs, DVDs, interactive videos, internet, multimedia systems, video conferencing, etc.). From the above understanding, it can be understood that ICT-based learning media is a device that is a source of student learning information in the form of information and communication technology. In other words, this media is a means of distributing information, namely hardware, software, network systems, and computer and telecommunication infrastructure so that data can be spread and accessed globally. So it can be concluded that ICT-based learning media is learning media for all technologies related to retrieval, collection (acquisition), processing, storage, dissemination, and presentation of information/data using computers and telecommunications. (Rahman, 2018).

Types Of ICT-Based Learning Media

ICT or ICT includes all technologies that are useful for storing, processing, displaying, and conveying information in the communication process. This technology includes Computer technology, both hardware, and software. This includes a processor (data processor), data/information storage media (hard disk, CD, DVD, flash disk, memory, memory card, etc.), recording device (CD Writer, DVD Writer), and input device (keyboard, mouse). , scanners, cameras, etc.), and output devices (monitor screens, printers, LCD projectors, speakers, etc. Computer-based learning media can be called computer-assisted learning (computer-assisted instructional/CAI). The use of computers as interactive learning media can be realized in various forms, including computer-assisted learning (CAL) programs, computer conferencing, electronic mail or electronic mail (e-mail), and multimedia computers which are then called interactive learning multimedia. Learning through CAI is offline, so its use does not depend on access to the internet. This computer-assisted learning program utilizes all the capabilities of computers, consisting of a combination of almost all media, namely: text, graphics, graphics, images, photos, audio, video, and animation. All of these media will convergently support each other and merge into one media with extraordinary capabilities. the advantage of computer media is its ability to facilitate student interactivity with learning resources (content) on computers (man and machine

interactivity). Multimedia technology, media used by digital cameras, video cameras, sound players, video players, etc. Multimedia means the combination of various media or at least consisting of more than one media. Multimedia is also defined as a computer equipped with a CD player, sound card, and speakers with the ability to process motion pictures, audio, and graphics in high resolution (Sutopo, 2012). Telecommunications technologies such as cell phones and facsimiles. Communication technology is currently developing very advanced. Now it's not only in the form of cell phones and facsimiles, but various kinds, such as mobile phones, e-mail, Facebook, Twitter, and so on (Rusman, 2012). Computer network technology consists of hardware such as LAN, internet, wifi, and others. In addition, it also consists of supporting software or network applications such as WEB, e-mail, HTML, Java, PHP, database applications, and others. (Suryani, 2016).

ICT Functions In Learning

All efforts have been made by the world of education to improve the quality of education, especially the quality of learning through the use of ICT. Besides being used as a tool for solving human problems, ICT is used to support learning processes that are believed to be able to (Elang Krisnadi, 2009): 1. improve the quality of learning 2. differentiate access to education and learning 3. reduce education costs 4. answer the necessity of participating in ICT, and 5. add ICT skills (ICT skills) that students need when working in the future Strategies for using ICT in learning include (1) ICT as a tool or learning media, (2) ICT as a learning facility/place, (3) ICT as a source of learning, and (4) ICT as a means of increasing professionalism. ICT as a learning tool or media Utilization of ICT in learning in this context supports the theory of socioconstructivism, namely students get learning experiences together with other students or through relationships with experts with ICT-based communication media. The latest development is the use of ICT in an integrated manner in learning that combines various skills and functions of ICT in the teaching and learning process. ICT as a learning facility/place At present, learning activities can not only be carried out in the classroom or library. The development of ICT (especially the Internet) has provided the possibility of creating virtual classes in the form of e-learning, where a teacher can manage the learning process and students can carry out learning activities as they do in class. With e-learning, learning activities such as reading learning materials, working on questions and assignments, discussing with peers and teachers, conducting all experiments in the form of simulations, and other ICT as a means of increasing professionalism. The development of ICT makes it easy for teachers to increase professionalism. In addition to improving their skills in using ICT and using it to support and improve the quality of learning, teachers can also increase their insight and knowledge, both up-to-date field knowledge, knowledge of the latest learning theories and learning methods, research results in the field of science and educational research by other researchers. In addition, by utilizing ICT teachers can communicate with colleagues and experts to discuss the learning problems they face.(Novita et al., 2019)

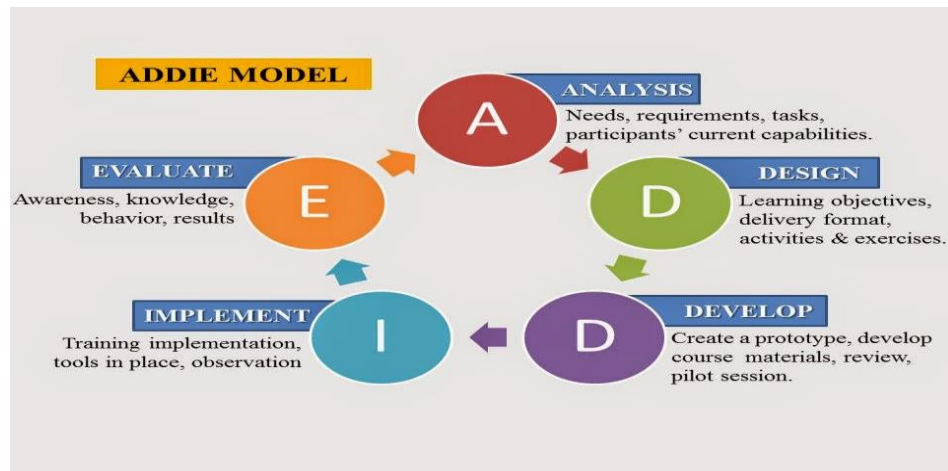


Figure 1. Stages of ADDIE model development

Example of an IT-based Historical Learning Multimedia Development Model Adapted and Modified from the ADDIE Model The use of the ADDIE model in the development of multimedia products for learning is well-known (Alazam et al., 2012) lists ADDIE as a method for developing multimedia applications. The ADDIE model is also used for developing multimedia-based websites (Peterson, 2003), as well as other multimedia-based learning applications (Arkun & Akkoyunlu, 2008), (N. Subang, 2013). The following are the stages in processing and presenting historical learning material into ICT-based media. Collect sources that contain material according to the topics to be taught based on the curriculum or competencies to be achieved. The selection of these sources can consider the content, level of readability, and integrity of the author. These sources can be in the form of books, magazines/journals, images, audio, video, or sources on the Internet. Create a media outline (content structure) design and the order in which the material is presented and the form of interaction by the expected learning flow. The forms of interaction that can be chosen include drill and practice, tutorials, games, simulations, exploration, discovery, and problem-solving. Select appropriate materials from the sources that have been collected and briefly present the contents of each topic in simple and communicative language, supplemented by illustrations/visualizations in the form of pictures, graphs, diagrams, photos, animations, or audio videos. Inside gives visualization of textual material, media developers need to pay attention to visuals requirements (Yuliana, 2022) visible (easy to see): clear, high level of legibility, high resolution/graphic sharpness, contains one meaning Interesting: content of the message according to needs learner (audience), look good and attractive so as to generate curiosity, maintain the continuity of the process of communication/interaction/learning Simple (simple): focused message, choice of words/letters/pictures does not change the meaning of the message, language and appearance is straightforward Useful (useful) : in accordance with the needs of the learner (audience) and the learning objectives and learning outcomes desired Accurate (accurate): the contents of the message have the right meaning, according to the field of knowledge, the delivery is accurate, based on sources that can be accounted for Legitimate (valid/true) / logical): the contents of the message are correct, arranged logically, follow scientific rules, and make sense Structure (structured): a series of messages delivered systematically, in logical and easy-to-understand sequences. ICT-Based Learning Media Development Tools The tools needed to develop ICT-based learning media include hardware and software. Hardware can be computers, scanners, speakers, microphones, CD-ROMs, DVD-ROMs, flash drives, memory cards, digital cameras, video cameras, and so on. Learning media development software is very diverse, ranging from general software to special media development software. Here are some examples of software and its uses. MS Word: can be used to create textual displays (in the form of writing) or

images MS PowerPoint: can be used to create presentation slides, can display text, sound, animation, and video, and create interactive media with its hyperlink facilities. MS Excel: data sheet processing software, that can be used to create media in the form of graphics, as well as to create simulations. Software for drawing and processing images such as MS Paint, Corel Draw, etc.

Conclusion

From the discussion above it can be concluded that ICT-based learning media is learning media in which all electronic components consist of hardware and software as well as all activities related to data processing both manipulation, retrieval, collection (acquisition), processing, storage, dissemination, and presentation of information/data using computers and telecommunication. While the various ICT-based learning media include: computer technology, multimedia, telecommunication, and computer network technology. The function of ICT in learning media is as an aid in learning media, learning facilities/places, as a source of learning, and as a means of increasing professionalism. There are many ICT-based media development models to choose from. It takes intention and seriousness to develop this learning media to the fullest. This presentation is in the form of a theoretical description. So that it can be used as a reference for the development of IT-based historical learning media.

References:

- Alazam, A., Bakar, A. R., Hamzah, R., & Asmiran, S. (2012). *Teachers ' ICT Skills and ICT Integration in the Classroom : The Case of Vocational and Technical Teachers in Malaysia*. 3(December), 70–76. <https://doi.org/10.4236/ce.2012.38b016>
- Djamaluddin, A., & Wardana. (2019). Belajar Dan Pembelajaran. In *CV Kaaffah Learning Center*.
- Giarti, S. (2016). Manajemen Kurikulum Dan Pembelajaran Berbasis Ict. *Satya Widya*, 32(2), 117. <https://doi.org/10.24246/j.sw.2016.v32.i2.p117-126>
- Habsy, B. A. (2017). Seni Memahami Penelitian Kuliatif Dalam Bimbingan Dan Konseling : Studi Literatur. *JURKAM: Jurnal Konseling Andi Matappa*, 1(2), 90. <https://doi.org/10.31100/jurkam.v1i2.56>
- Hafizah Rahmah Hasibuan, dkk. (2019). Desain Pembelajaran Ppkn Di Kelas Rendah Mi / Sd Fakultas Tarbiyah Dan Ilmu Keguruan Institut Agama Islam Negeri (Iain). 1–14.
- Hamid, A., & Hadi, M. S. (2020). Desain Pembelajaran Flipped Learning sebagai Solusi Model Pembelajaran PAI Abad 21. *Quality*, 8(1), 149. <https://doi.org/10.21043/quality.v8i1.7503>
- Handayani, F., Yulianti, N., & Erita, Y. (2022). Desain Pembelajaran IPS dan PKn Berbasis Teknologi Informasi di Tingkat Sekolah Dasar serta Penggunaan Media Teknologi Informasi dalam Proses Pembelajaran. *Jurnal Basicedu*, 6(1), 767–781. <https://doi.org/10.31004/basicedu.v6i1.2034>
- Haris, A. (2013). Peranan Pendidik dalam Pembelajaran Berbasis Teaching Factory di Sekolah Menengah Kejuruan. *Kiat Bisnis*, 5(2), 159–174.
- HIDAYAT, D. T. (2021). Pengembangan Media Pembelajaranpai Dan Budi Pekerti Berbasis Komik Dengan Pendekatan Saintifik Pada Materi Keteladanan *Repo.Iainbatusangkar.Ac.Id*. [https://repo.iainbatusangkar.ac.id/xmlui/bitstream/handle/123456789/23482/1635838387260_Deby Taufik Hidayat 1902031002_compressed \(1\).pdf?sequence=1](https://repo.iainbatusangkar.ac.id/xmlui/bitstream/handle/123456789/23482/1635838387260_Deby%20Taufik%20Hidayat%201902031002_compressed%20(1).pdf?sequence=1)
- Muslih, M. (2016). Pemanfaatan Media Pembelajaran Berbasis ICT pada Lembaga Pendidikan Non-Formal TPQ. *Dimas: Jurnal Pemikiran Agama Untuk Pemberdayaan*, 16(2), 215. <https://doi.org/10.21580/dms.2016.162.1090>
- Novita, L., Windiyani, T., & Fazriani, R. (2019). Pengembangan Media Pembelajaran Berbasis

- Ict Pada Subtema Bersyukur Atas Keberagaman Untuk Siswa Kelas Iv Sekolah Dasar. *JPPGuseda | Jurnal Pendidikan & Pengajaran Guru Sekolah Dasar*, 2(2), 82–86. <https://doi.org/10.33751/jppguseda.v2i2.1451>
- Rahman, A. (2018). Desain Model dan Materi Pembelajaran Berbasis Teknologi Informasi. *AL-ISHLAH: Jurnal Pendidikan Islam*, 16(2), 128–143. <https://doi.org/10.35905/alishlah.v16i2.743>
- Riaddin, D., Juhaeva, F., Lessy, D., & ... (2022). Pelatihan Desain Media Pembelajaran Berbasis ICT. *Mangente ...*, 1(2), 223–233. <https://jurnal.iainambon.ac.id/index.php/PN/article/view/2734>
- S.Putrawangsa. (2019). Design Research Sebagai Framework Desain Pembelajaran. In *Penerbit Sanabil, Mataram Indonesia* (Issue August).
- Suryani, N. (2016). Pengembangan Media Pembelajaran Sejarah Berbasis It. *Sejarah Dan Budaya : Jurnal Sejarah, Budaya, Dan Pengajarannya*, 10(2), 186–196. <https://doi.org/10.17977/um020v10i22016p186>
- Wulandari, D.T., & Sayekti, I. C. (2022). Jurnal basicedu. *Jurnal Basicedu*, 6(4), 5877–5889. <https://doi.org/10.31004/basicedu.v5i4.1230>
- Yuliana, Y. G. S. (2022). Internet-Based Learning Media in the Digital Era of EFL Learning in English Education Master Program (S2 Be)”. *Journal of English Educational Study (JEES)*, 5(1), 57–66. <https://doi.org/10.31932/jees.v5i1.1491>
- Zahwa, F. A., & Syafi'i, I. (2022). Pemilihan Pengembangan Media Pembelajaran. *Jurnal Penelitian Pendidikan Dan Ekonomi*, 19(01), 61–78. <https://www.journal.uniku.ac.id/index.php/Equilibrium>.