

The Application of the New Media a Review on Learning Media in the VUCA Era

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Abstract

In the face of the VUCA age, a generation with critical thinking, analytical and inventive thinking is required. As a result, the purpose of this research is to address the issues of the period of how new media as a digital age learning material for the VUCA era. Using the review materials, it is possible to conclude that in this VUCA era, new interactive learning media that may promote It is necessary for students to have analytical, critical, and creative thinking. Further research is planned to be able to create interactive learning material due to new media that includes discussion places for students and teachers.

Keywords: New Media, Learning, Vuca

INTRODUCTION

Organizations, businesses, and institutions have been forced to prepare for the VUCA Era due to the environment and technology's rapid changes. VUCA stands for Volatility, Uncertainty, Complexity, and Ambiguity. Volatility is the trait of being adaptable, uncertainty is the absence of certainty or the likelihood that it will happen at any time, complexity is the existence of complexity, and ambiguity is the presence of ambiguity. Innovations in technology are essential in the VUCA era.

The American military was the first to use the word VUCA to describe the geopolitical climate of the time. After the end of the cold war. The geopolitics in Afghanistan and Iraq were referred to as being in a "VUCA" situation by the US Army War College [1][3]. Then, many organizations use this word to indicate the rapid growth of technology that necessitates swift management transitions. Volatile, unexpected, and perplexing conditions define the VUCA age [4].

Adamson (2012) defines VUCA as a method for evaluating and preparing for changes in broad-scale circumstances and unpredictably occurring events. The VUCA



period had a significant impact on several spheres of human existence, including education [5]. Not just businesses that are affected by the existence of contemporary technology. But if institutes of learning don't immediately change and adjust, they run the risk of having their obligations in the field of education disturbed [3]. In order to improve educational quality, learning must be able to adapt to shifting conditions.

Economic uncertainty, accountability, globalization, and new technologies are the major problems facing education today. The complex, changing, and dynamic environment in which education takes place is succinctly described by the acronym VUCA. The ability of educational institutions to adapt to new knowledge, information, and model modifications should be improved. [6].

Having a social component, education is constantly changing to reflect the environment. When assessing the effectiveness of the educational process, a teacher must be able to select instructional strategies, models, tactics, and material based on the needs of the class and the times. Today's education must include knowledge, creativity, media literacy, and technology. The rapid development of technology must be kept up with by educators' proficiency and capacity to use educational resources that can be used to adapt to it.

Gagne claims that media are a variety of elements in the learning environment that might stimulate learning [7]. Media can help communicate ideas that cannot be expressed in words and give students the chance to engage directly with educational resources. According to several research findings, learning media can help students learn more effectively and accomplish their learning goals. Textbooks are one type of digital learning now being used by many educators as a teaching and learning resource. Textbooks are gradually being replaced by digital resources like e-books.[8].

Digital comics are only one of the many other learning media advancements that have been made. In order to give auditory and visual simulations that will boost students' motivation for learning, the digital comic media employed can be a blend of text, graphics, and instructional videos. The findings of earlier research show that using digital comics as a learning tool is quite possible.[9].

Educational video games (such as Economic Quiz) are another type of digital learning resource. This educational software comes on a CD and works on a desktop or laptop. Students can study independently at home using this instructional resource, which will improve their comprehension of the subject. The study's findings suggest that the creation of educational game-based learning media is both practical and efficient as a teaching tool [7].

Other digital learning materials, outside instructional games, can take the shape of Android-based digital handouts. This digital handout is presented as an Android application includes possible evaluations for multiple-choice questions. When students select the incorrect solution, feedback is given by emphasizing the material that needs to



be revisited. According to the study's findings, digital handout learning materials can help students understand concepts with appropriate media while also enhancing learning outcomes [10].

RESEARCH METHOD

Literature review or literature study is the research methodology utilized. This type of research is defined as the process of getting library data or research, in which the study items are investigated using various library information. Examples include Scientific journals, books, encyclopedias, newspapers, magazines, and other publications that analyze or critically review the knowledge, concepts, or discoveries contained in the literature are examples of academically oriented literature that formulates its theoretical and methodological contributions to a specific topic. To generate the literature review, searches are done about the study. [11], [12].

THEORETICAL FRAMEWORK

Era VUCA

A quadratic form of VUCA [2][11]. 1) Changes that occur frequently, quickly, and significantly yet whose duration may be unclear are referred to as volatility. dynamic, quick, and dramatic change in a situation where the difficulties could be erratic or unstable and their length might be unclear. 2) The inability to predict the future is used to explain uncertainty. The course of events and results in this scenario are unknown. When an event's nature is understood but its timing or outcome cannot be predicted, there is a lack of predictability in those situations and events. 3) Complexity is characterized as a complex state. Complexity is a situation with numerous interconnected components that overload information networks. Any combination of issues and organizational turmoil, where there are numerous interconnected components and factors, where some information may be available but is potentially overwhelming to digest, are all considered complex in this context. 4) Ambiguity is characterized as a lack of clarity. Ambiguity is a phenomenon or condition that has several possible interpretations. In this instance, ambiguity is defined a situation where the casual relationship is not at all clear and must face the unknown of the unknown, as the blurring of reality and bewildered meaning of the condition.

Media

The word "media" derives from the Latin word "medium," which meaning "intermediary" or "introduction." The Association for Education and Communication Technology (AECT) defines media as any medium used to disseminate information. According to the National Education Association, media are objects that are incorporated



into educational activities and have an impact on how well pupils learn [12]. Gagne claims that media are components that encourage students to learn efficiently in their school environment [13].

Learning media, according to Oemar (1986), are instruments, processes, and strategies used to enhance teacher-student engagement and communication during the educational process. The term "media" describes several elements that can be employed in a learner's environment to encourage learning [7]. Media can be used by students to interact directly with educational resources, which can help convey nonverbal messages. The term "learning media" refers to anything that can be used to communicate concepts (teaching materials) to arouse students' interests, focus, thoughts, and feelings during learning activities in order to fulfill learning objectives [15]. To accomplish the best learning objectives, effective learning media must satisfy several criteria, including the adequacy of learning content, convenience of use, and student appeal. [16]. Sadiman and others (2000) Learning materials can be categorized in a wide variety of ways depending on the viewpoint.

Depending on its makeup

- 1) Audio media, such as radio and sound recordings, are only audible or have sound as their only form of content.
- 2) Sound is absent from media that can only be viewed visually. Examples include pictures, slide films, transparencies, artwork, and more.
- Audio-visual media, or A/V media, is a category of media that includes both audio and visual components. Examples include video recordings, films of various sizes, sound slides, etc.

According to the range

- 1) Broadly and simultaneously accessible media, such as radio and television. With the use of digital media, students can research current events concurrently without needing a particular space.
- 2) Limited-coverage media, for example, slide films, movies, videos, and other similar formats.

Depending on the tricks or methods employed.

- 1) Formattable media, including films, slides, film strips, and transparencies. A unique projection device, such as a film projector, is needed for this kind of material.
- 2) Non-arrangeable media, such as images, photographs, paintings, radio, and so forth.

Economic Learning

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Because daily activities are researched and discussed in economics, learning about economics is crucial for social interaction. The word "economics" first arose in the Greek word Oikonomia, which meaning "home management." The word's etymology is composed of the Greek terms oikos, which means "home," and nomos, which means "rules, regulations, or laws." A vast range of subjects are covered by economics. Its primary goal is to comprehend how society distributes its limited resources [18]. The principles governing society's fundamental requirements are greatly influenced by economics. A person can learn how to correctly and sensibly control or control nominal values through economics study.

RESULT AND DISCUSSION

Economic Learning Media Development

The advancement of economic learning medium maintains up with that of technology. The classic teaching tool used by instructors was the blackboard. Teachers typically explain the learning material that needs to be taught, such as the material on national income and accounting, on the chalkboard if it involves economics and computations. The use of PowerPoint media is just one example of how learning media is constantly evolving. Power point is a popular tool that is used frequently in the teaching and learning process. Additionally, PowerPoint can be utilized for self-study and is relatively simple to post [13]. In her research, Kurniawati (2013) It should be mentioned that the accounting instructor in class at private University in Jakarta accompanied her power point presentation with the use of whiteboards, media cards, transaction records, and forms. The value of monopoly games for teaching accounting and economics has been demonstrated by similar studies. [15]

The teaching tools utilized in economics education are currently evolving. Consider the instructional materials for the basic accounting equation content. There have been numerous technological advancements in learning media. The ECCAPY (Educative Accounting Happy) media on trading companies modifying journal content is one of them. Media Escapee is an innovation that teachers can utilize to boost their students' passion for learning by switching out routine learning activities for ones that employ more imaginative, creative, and useful methods. [16].

Game Book Accounting is a different economic learning tool that professors use to help pupils understand the material through games. A book called Games Book Accounting has several entertaining games that teach readers how to know, comprehend, follow, and do. With the help of the Games Book Accounting medium, it is anticipated that learning will be able to be made more exciting and capable of developing students' interest, incentive, encouragement and a desire to always learn and understand the provided information [17].



Benefits and Drawbacks of Digital Learning Media

Learning resources built on Android have benefits and drawbacks. The benefits of android-based learning resources include: 1) Easy usability, aesthetic appeal, and simplicity; 2) Learning is possible anywhere; and 3) Studying offline or without an internet connection. The flaws include the following:

- 1) The learning media software requires an Android device with good enough specifications to function properly.
- 2) The product only covers a certain topic's worth of information.

E-books as learning tools, however, have both benefits and drawbacks [18]. The benefits include the following:

- 1) Because information is already stored on a phone, tablet, or laptop, it cannot be separated or made to appear otherwise, making it easier to identify.
- 2) Easy clipping for the required pages, which can be marked up and annotated.
- 3) E-books are less expensive than traditional or common books. This is the main argument in favor of e-books over traditional books.
- 4) E-books are better for the environment. We have conserved paper by employing electronic books. Additionally, we conserve ink as e-books don't use any at all.
- 5) The e-book delivery or download mechanism is quicker than the conventional book distribution system, which takes days.
- 6) Multilingual and simple to copy or publish.

The following are e-books' drawbacks:

- 1) Requires software to open it, such as on a computer or other device.
- 2) Reading on a computer screen strain and irritates the eyes because they are not adapted to it.
- 3) Not all electronic book formats have strong security measures.
- 4) There is a culture of piracy because many are too lazy to purchase and utilize the full version and instead prefer the cracked version.
- 5) Rarely read due to the excessive number of files on the CD and hard disk. Documents are piling up, making people sluggish to read them.

Examples of Digital Economy Learning Tools

Digital comics are one of the learning tools for economics that are currently being developed. In 2020, Rahmatullah and others for the 2019–2020 academic year, Rahmatullah et al. (2020) created in classes management and finance, digital comic books were used as a teaching tool to discuss global economic cooperation. The results of this

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study point to the likelihood of adopting digital comic learning material as a teaching method. Because the media that students generate can increase their engagement and interest for learning economics and materials related to international economic cooperation, digital comics have a favorable influence on students.

There are disparities in how consuming picture media affects student learning accomplishment, according to several research findings [19][22]. Students that According to the average value of student learning, students who follow the learning process using digital comic media have better learning successes than students who use standard image media achievement. Students may find it easier to understand economic concepts and may get more enthusiastic about learning thanks to digital comics. This is consistent with research by Sukmanasa et al. (2017), which found that using digital comics as a learning tool can boost students' motivation in taking part in the learning process.

Interactive learning media based on Android is another type of digital economics teaching tool in addition to digital comics. In his research, Wahyono (2019) used a development process adapted from a modified 4D model to create interactive learning media based on Android. An interactive learning tool for development operations that were conducted resulted in an Android that was legitimate and appropriate to be used for accounting subject matter as an information system and basic accounting equations. Learning about economics is more effective in classes that use Android-based interactive learning media than it is in classes that don't.

E-modules are yet another learning resource for the digital economy. For class finance and management, Wijayanti & Ghofur (2021) created instructional materials for the e-module Bank and an Android-Based Payment System. Student from finance. Because students can use an Android smartphone as a learning tool and learn according to their own learning methods, the e-module media is interactive and can help students understand concepts better. Students can learn autonomously and without time restrictions by using e-module media, which allows them to study anywhere. This has a positive effect on Android-based learning. According to Dewi et al.'s (2018) research, learning using e-module media has a high level of understanding achievement because it offers opportunities for learning at each person's own pace, is independent, and engaging because it includes exercises. Students learn the content more effectively since there is individual practice available.

CONCLUSION

The VUCA era is an unstable, confusing state that breeds uncertainty. Technology and industrial advancements are major factors. The VUCA period had a significant impact on many aspects of human life, including education. The usage of learning media that can be employed by educators to respond to technological improvements in learning media that have an impact on improving learning success in achieving learning goals must keep up with the rapid development of technology. The environment of the learner may contain a variety of media that can stimulate learning. Learning media can help students achieve their learning goals by improving learning success. We can observe that many educators are currently implementing the teaching and learning process using digital learning media, one of which is textbooks that are starting to be replaced by digital products. The development of economic learning media keeps pace with technological advancements. The blackboard was a popular instructional tool in the past. Digital learning tools for economics are currently available in a variety of formats, from Android-based media to digital comics and e-modules.

REFERENCES

- Advances in Economics, Business and Management Research, volume 192 Digital Berbasis Android," J. Pendidik. Ekon. Undiksha, vol. 12, no. 1, pp. 15–28, 2020.
- [2]. S. Stein, "Reimagining global citizenship education for a volatile, uncertain, complex, and ambiguous (VUCA) world," *Glob. Soc. Educ.*, pp. 1–14, 2021.
- [3]. C. Potsangbam, "Adaptive Performance in VUCA Era-Where is Research Going," Int. J. Manag., vol. 8, no. 6, pp. 99–108, 2017.
- [4]. P. Hendrarso, "Meningkatkan Kualitas Sumber Daya Manusia di Perguruan Tinggi menuju Era VUCA: Studi Fenomenologi Pada Perguruan Tinggi Swasta," in *Prosiding Seminar STIAMI*, 2020, vol. 7, no. 2, pp. 1–11.
- [5]. H. Aribowo and A. Wirapraja, "Strategi Inovasi Dalam Rangka Menjaga Keberlanjutan Bisnis Dalam Menghadapi Era Volatility, Uncertainty, Compelxity, Dan Ambiguity (Vuca)," *J. Ilmu Manaj. dan Akunt. Terap.*, vol. 9, no. 1, pp. 51– 58, 2018.
- [6]. A. W. Wahyuni *et al.*, "Sosialisasi Pentingnya Mengasah Kemampuan Berpikir Kritis Bagi Guru Matematika di Era VUCA," *Community Educ. Engagem. J.*, vol. 2, no. 1, pp. 24–29, 2020.
- [7]. R. E. Waller, P. A. Lemoine, E. G. Mense, C. J. Garretson, and M. D. Richardson, "Global higher education in a VUCA world: Concerns and projections," *J. Educ. Dev.*, vol. 3, no. 2, p. 73, 2019.
- [8]. N. A. Sriwahyuni, "Pengembangan Media Pembelajaran Game Edukasi Pada Mata Pelajaran Ekonomi Kelas X IIS SMA Laboratorium Universitas Negeri Malang," J. Pendidik. Ekon. (Economic Educ. Journal), vol. 9, no. 2, 2016.
- [9]. D. Effendi and A. Wahidy, "Pemanfaatan Teknologi dalam Proses Pembelajaran Menuju Pembelajaran Abad 21," in PROSIDING SEMINAR NASIONAL PROGRAM PASCASARJANA UNIVERSITAS PGRI PALEMBANG, 2019.
- [10]. D. Rahmatullah, E. Suryani, F. Fatmawati, A. Merdekawati, and F. Yahya, "Pengembangan Media Pembelajaran Komik Digital Pada Materi Kerjasama Ekonomi Internasional Mata Pelajaran Ekonomi Kelas Xi MIPA SMA Negeri 1 Plampang Tahun Pelajaran 2019/2020," Indonesia. J. Teach. Educ., vol. 1, no. 4, pp. 179–186, 2020.
- [11]. D. P. A. Pratama and N. C. Sakti, "Pengembangan Media Pembelajaran Handout



- [12]. M. I. Farisi, "Pengembangan Asesmen Diri Siswa (Student Self-Assessment) sebagai Model Penilaian dan Pengembangan Karakter," Artik. disampaikan pada Konf. Ilm. Nas. "Asesmen dan Pembang. Karakter Bangsa" HEPI UNESA, 2012.
- [13]. N. Syaodih, "Metode penelitian pendidikan," Bandung *PT. Remaja Rosdakarya*, 2009.
- [14]. N. Hidayati, "Analisis Penggunaan Media Pembelajaran Pada Mata Pelajaran Ekonomi Materi Akuntansi Kelas Xi Ips Di Sma Negeri 1 Gedangan Sidoarjo," *J. Pendidik. Akunt.*, vol. 1, no. 3, 2013.
- [15]. N. Kurniawati, "Analisis Tentang Penggunaan Media Pembelajaran pada Mata Pelajaran Ekonomi Materi Akuntansi Kelas XI IPS Di SMA Negeri 22 Surabaya," J. Pendidik. Akunt., vol. 1, no. 3, 2013.
- [16]. E. (Universitas N. P. Cerya, "Penggunaan Media Berbasis Permainan Monopoli dalam Meningkatkan Prestasi Belajar Mahasiswa Pada Mata Kuliah Pengantar Akuntansi 1," *J. Inov. Pendidik. Ekon. ISSN 2302-898X*, vol. 5, No 2, no. Media Pembelajaran, p. Hal 35-45, 2014.
- [17]. F. P. Istiqomah and R. I. Aghni, "PENGEMBANGAN MEDIA 'ECCAPY' BERBASIS ANDROID PADA KOMPETENSI DASAR JURNAL PENYESUAIAN PERUSAHAAN DAGANG SEBAGAI UPAYA MENINGKATKAN MOTIVASI BELAJAR," J. Pendidik. Akunt. Indones., vol. 18, no. 2, pp. 62–76, 2020.
- [18]. N. Umami and M. I. N. Adha, "Pengembangan Media Pembelajaran Games Book Accounting Untuk Meningkatkan Motivasi Mata Pelajaran Akuntansi Dasar Materi Siklus Akuntansi," J. Pendidik. Ekon., vol. 14, no. 1, pp. 15–24, 2021.
- [19]. Khairrani, "E-Book sebagai media pembelajaran di masa depan," 2019.
- [20]. F. Martin and J. Ertzberger, "Here and now mobile learning: An experimental study on the use of mobile technology," *Comput. Educ.*, vol. 68, pp. 76–85, 2013.
- [21]. C. Su and C. Cheng, "A mobile gamification learning system for improving the learning motivation and achievements," *J. Comput. Assist. Learn.*, vol. 31, no. 3, pp. 268–286, 2015.
- [22]. T. Mößle, M. Kleimann, F. Rehbein, and C. Pfeiffer, "Media use and school achievement– boys at risk?" Br. J. Dev. Psychol., vol. 28, no. 3, pp. 699–725, 2010.
- [23]. F.-R. Kuo, C.-C. Hsu, W.-C. Fang, and N.-S. Chen, "The effects of Embodimentbased TPR approach on student English vocabulary learning achievement, retention and acceptance," *J. King Saud Univ. Inf. Sci.*, vol. 26, no. 1, pp. 63–70, 2014.
- [24]. E. Sukmanasa, T. Windiyani, and L. Novita, "Pengembangan Media Pembelajaran Komik Digital Pada Mata Pelajaran Ilmu Pengetahuan Sosial Bagi Siswa Kelas V Sekolah Dasar di Kota Bogor," JPsd (Jurnal Pendidik. Sekol. Dasar), vol. 3, no. 2, pp. 171–185, 2017.



- [25]. H. N. Wahyono, "Pengembangan Media Pembelajaran Ekonomi Interaktif Berbasis Android Sebagai Upaya Peningkatan Aktivitas dan Hasil Belajar Siswa," *Gulawentah J. Stud. Sos.*, vol. 4, no. 2, pp. 74–77, 2019.
- [26]. K. Wijayanti and M. A. Ghofur, "Pengembangan Media Pembelajaran E-Modul Bank Dan Sistem Pembayaran Berbasis Android Untuk Peserta Didik Kelas X," *J. Pendidik. Ekon.*, vol. 14, no. 1, pp. 1–14, 2021.
- [27]. S. Dewi, H. Sitompul, and E. Napitupulu, "PENGEMBANGAN E-MODUL PEMBELAJARAN EKONOMI SMA," J. Teknol. Inf. Komun. DALAM Pendidik., vol. 5, no. 2, pp. 111–125, 2018.