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VARK For Digital Educational System In 21st Century

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Abstract

The research aimed to 1) examine the digital media exposure, visual, aural, read/write, and kinesthetic (VARK) learning preferences, and digital literacy skills of university, the faculty of economics students. 2) promote digital literacy among students using the VARK learning preferences were developed. A combination of multiple research methods, including quantitative, qualitative, and experimental approaches, was employed. The quantitative research utilized questionnaires to collect data from 400 students. For the trial of the digital literacy learning package, a sample of 40 students was selected. Various tools were employed, including questionnaires, recording forms, observation forms, interview forms, the digital learning package itself, evaluation forms, and test forms. The questionnaire used in the study demonstrated a Cronbach's alpha coefficient of 0.80, indicating good internal consistency. The quantitative data collected was analyzed using descriptive analysis techniques, including frequency, percentage, mean, and standard deviation. Furthermore, the qualitative data was subjected to content analysis to derive meaningful insights. The findings of the study indicated that the economics students extensively utilized smartphones, computers, and tablets such as iPads for various purposes, including accessing YouTube, playing online games, and engaging with Facebook. They also used digital media platforms to watch movies, listen to music, and interact with social media. On average, the students had approximately two years of experience in using digital media. Furthermore, they spent an average of three hours per day engaging with digital media after finishing classes. During weekends, they primarily used digital media in the mornings. In terms of their learning preferences, the majority of the samples exhibited a physical activity learning preference, while their digital literacy skills were assessed to be at a moderate level. The guideline to promote digital literacy among economic students with the VARK learning preferences consisted of three main components: a) Guideline for Professors: This guideline provided recommendations and strategies for professors to enhance digital

literacy among learners. It included techniques for incorporating digital tools and resources into lectures, designing interactive activities to engage learners, and fostering critical thinking skills in the digital realm. b) Guideline of Knowledge Management: This guideline focused on promoting digital literacy through effective knowledge management techniques. It outlined methods for organizing and accessing digital information, utilizing online databases and resources, and fostering information literacy skills specific to the field of economics. c) Guideline of Digital Media Design and Production: This guideline aimed to develop digital literacy skills through the creation and utilization of digital media. It provided guidance on designing and producing digital content relevant to economic studies, such as infographics, presentations, and videos. It also emphasized the importance of media literacy and responsible digital communication. By following these guidelines, learners with a VARK learning preferences can enhance their digital literacy skills, enabling them to thrive in the digital age and effectively navigate the digital landscape within their field of study.

Keywords: Digital, Educational System, Literacy Skills, VARK Learning Preferences

Introduction

The dynamic nature of educational administration in Thailand has consistently undergone transformation, possibly attributable to a confluence of internal and external factors influencing societal dynamics. The ever-evolving landscape of educational administration in Thailand has continuously experienced substantial changes, which can potentially be attributed to the intersection of both internal and external factors shaping societal dynamics [1]. Internal factors emanate from the imperative to foster prosperity and modernization within the society. With regard to external factors, stemming from shifts in the global socio-economic and political landscape, along with intensified international interconnectivity, Thailand is compelled to adapt to the demands of modernity. This imperative is driven by the necessity for the nation's survival and its concurrent endeavor to attain parity with other nations in terms of development. The aforementioned rationales have perpetuated the evolutionary trajectory of Thai education, serving as a pivotal catalyst in fostering progress across multiple dimensions, including societal advancement, national economic growth, and political stability and prosperity. This discussion will delve further into the evolution of the Thai educational system.

Information technology and the Internet have played a significant role in bringing about social and cultural changes, which can have both positive and negative impacts. One positive aspect is the easy access to

information and news that the internet provides. Users can search for information from anywhere at any time, enabling them to stay informed. Additionally, the internet facilitates interactions at both individual and group levels, fostering connections and collaborations that can have long-term effects on individuals and society as a whole. However, it's important to note that along with the positive aspects, there may also be negative consequences associated with the use of the internet and information technology [2]. The emergence of web 3.0 technology has led to the formation of social networks and online communities where individuals with shared interests can interact and connect [3]. Through web 3.0, users can simultaneously act as both messengers and receivers, creating and sharing content with other community members quickly and efficiently [4]. This technology enables users to play an active role in conveying ideas, beliefs, and practices within the online community [5]. The dynamic nature of web 3.0 facilitates meaningful exchanges and collaborations among community members, fostering a sense of connection and engagement. However, along with its positive aspects, the internet and online media can also have negative impacts. Misuse of internet media can lead to the dissemination and transmission of pornographic images, violent posts, vulgar conversations, and contribute to issues such as sex trafficking, media deception, and inappropriate content. Additionally, excessive engagement with social networking, viewing online video clips with explicit or harmful content, and playing online games that promote violence and gambling can have adverse effects on individuals. It is important to be aware of these negative aspects and promote responsible and ethical internet usage to mitigate these potential harms [6]. All these factors can have a profound impact on users, potentially leading to the expression of unscrupulous and inappropriate behavior. This can manifest in various ways, including verbal and physical violence, sexual harassment, and societal issues such as crime. Therefore, it is crucial to use internet media in a responsible and creative manner. When used correctly and creatively, the internet can have positive effects on individuals and society as a whole. However, if used with malicious intent or without creativity, it can have negative consequences. Ultimately, the impact of internet media largely depends on how it is utilized by the user. Educational institutions have a crucial role in teaching digital literacy to students at all levels. They should actively encourage children and youth to use digital tools and technologies in a creative and ethical manner. Digital literacy should be formally incorporated into the curriculum to cater to the specific needs of children and youth. This involves providing them with the necessary skills and knowledge to navigate and utilize digital platforms effectively and responsibly. By promoting digital literacy, educational institutions can empower students to thrive in the digital age and contribute positively to society. According to Fleming's VARK learning preferences, individuals learn through their senses in various ways. These include visual learning (learning through seeing), aural learning (learning through hearing and

speech), read/write learning (learning through reading and writing), and kinesthetic learning (learning through body movement and touch). Importantly, learners have the flexibility to choose a learning style that aligns with their proficiency and personal preferences. It is not necessary for individuals to conform to a specific learning preference or follow the same pattern as others. Each learner can utilize their preferred style to enhance their learning experience. Indeed, the VARK learning preferences (Visual, Aural, Read/Write, Kinesthetic) can be applied in various professional fields and contexts to facilitate real-life learning. Regardless of the field or industry, individuals can benefit from understanding their preferred learning preference and adapting their learning approaches accordingly. In visual-oriented professions, such as graphic design or architecture, individuals with a visual learning preference may excel by utilizing visual aids, diagrams, and images to understand and convey information effectively. Aural learners, on the other hand, may thrive in fields like public speaking or music, where they can utilize auditory cues, lectures, and discussions to enhance their learning experience. Professions that require extensive reading and writing, such as journalism or legal studies, can greatly benefit from individuals who have a read/write learning preference. These individuals can utilize reading materials, note-taking, and written assignments to grasp and communicate complex information. Kinesthetic learners, who learn best through physical movement and hands-on experiences, can excel in fields such as sports, performing arts, or physical therapy. They may engage in practical exercises, role-playing, or interactive simulations to enhance their understanding and skills. By recognizing and applying the VARK learning preferences in various professional fields, individuals can optimize their learning experiences and improve their performance in real-life contexts [7]. VARK learning preferences can be applied in many professional fields and contexts for real-life learning. The objectives of this research can be outlined as follows: To examine the behavior of individuals in using digital media in relation to their VARK learning preferences. The study aims to investigate how individuals with different learning preferences engage with digital media and the impact it has on their learning experiences. And To develop guidelines for promoting digital literacy that are tailored to the VARK learning preferences. The research aims to create practical recommendations and strategies for educators, professionals, and individuals to enhance digital literacy skills based on an understanding of their preferred learning preference.

By accomplishing these objectives, the research aims to contribute to a deeper understanding of the relationship between digital media usage, learning preferences, and digital literacy. Additionally, it seeks to provide actionable guidelines that can be implemented to support individuals in developing effective digital literacy skills in line with their specific learning preferences.

Literature Review

VARK in Learners Dimension

Utilizing various senses is involved in the process of communicating and exchanging data. When it comes to importing and exporting requests, the data differs based on the individual's preferred substance or method of communication. The communication style used in the learning process reflects the experiences and learning of the individuals themselves, without being limited to a specific learning style or following the same pattern as others [8]. The VARK learning preferences, developed by Fleming, categorizes students into four types based on their preferences and aptitude for receiving information. This approach influences the effectiveness of learning and enables learners to design a learning environment that aligns with their individual information perception channels.

VARK in Teachers Dimension

The teaching approach will prioritize students' learning through real-life situations. This involves incorporating body movements, modeling, role-playing, demonstrations, hands-on practice with workpieces, and conducting laboratory experiments.

The VARK learning preferences, developed by Fleming, can be applied to various fields and contexts, including organizing training programs. By understanding the trainees' learning preferences, it becomes possible to design training that caters to their interests, ultimately maximizing their performance [9].

Review of Research to VARK both in Thailand and Abroad

In terms of research methodology, most studies on the VARK learning preference utilize quantitative research approaches, often employing survey methods as the primary research tool. The VARK Questionnaire is commonly used to identify learners with different learning preferences. These preferences can include both single-mode and multi-mode learning, which are categorized into two, three, or four design patterns. Understanding these preferences and designing teaching methods accordingly can significantly impact students' learning efficiency and guide effective teaching practices.

For this study, the researcher opted to focus on the VARK learning preference to determine the single learning preferences of learners. The VARK learning preference categorizes learners into four types based on their preferred modes of learning:

1. Visual learners, who learn best through visual aids and graphics.
2. Auditory learners, who prefer learning through listening and speaking activities.

3. Reading/writing learners, who excel in learning through reading and writing tasks.
4. Kinesthetic learners, who learn best through physical movement and hands-on activities.

Based on the review of concepts and research, the researcher has compiled a conceptual framework for promoting literacy and integrates the digital VARK-based learning preference specifically designed for university students. This research focuses on investigating media usage behavior, particularly in relation to digital media. It explores individuals' experiences with digital media, access to digital devices, objectives for accessing digital media, and the frequency of media usage. The study examines the regular use of digital media from Monday to Friday and daily usage patterns during the weekend (Saturday and Sunday). Additionally, it investigates how individuals utilize digital media throughout the day and explores the role of parental usage of digital media.

Methodology

The researcher conducted a quantitative research study utilizing a survey research approach to collect data. The survey was administered to a sample group of male and female university students from the Faculty of Economics who were studying at the second and third Year and had an age range of 18-19 years. The data collection method employed by the researcher involved using a questionnaire as the survey instrument. In this quantitative research, the researcher utilized various tools including a questionnaire on the VARK learning preference and a questionnaire on digital media usage behavior and digital literacy skills. These questionnaires were specifically created by the researchers to suit the sample group of second- and third-year students and align with the research's primary objective of studying digital media usage behavior and the relationship with the students' VARK learning preference and digital literacy skills.

The researcher proceeded to select a sample of students from the faculty of economics, specifically from year 2 to year 3. The sample size was determined using Taro's formula or Yamane's formula [9]. The formula takes into consideration the desired level of acceptable error, which in this case is 5 percent, to determine the appropriate sample size for the research.

Results

In this study, the researcher presents the results of data analysis obtained from the digital media usage behavior questionnaire, as well as the findings related to the VARK learning preference and cognitive skills in digital teaching within the classroom. Additionally, the researcher conducted interviews to assess the level of university student engagement and involvement in the design of a digital literacy learning

package. Moreover, data from pre- and post-training tests were collected to evaluate the effectiveness of the practical training with the digital literacy learning package. The aim of this research is to examine the digital media exposure, visual, aural, read/write, and kinesthetic (VARK) learning preference, and digital literacy skills of university, the faculty of economics students. Moreover, to promote digital literacy among learners using the VARK learning preference were developed. The guideline will be designed to enhance university students' literacy skills using digital tools and resources, while considering their individual learning preferences based on the VARK model. The goal is to create an effective and tailored approach to foster literacy development in the faculty of economics' students by leveraging digital technologies and aligning instructional methods with their specific learning preferences.

Research indicates that learners frequently engage with digital media, primarily for entertainment purposes. This aligns with Gross [11] who studied on youth in the United States, which revealed that young individuals use the internet for communication and entertainment purposes. Similarly, Andrew [12] found that youths often utilize the internet to access online gaming platforms. These findings collectively support the notion that university students' digital media usage is predominantly driven by their desire for entertainment and leisure activities. The findings suggest that youth aged between 18-19 years, both in foreign countries and in Thailand, demonstrate a similar inclination towards using digital media for entertainment purposes. Specifically, accessing online games is a popular activity among this age group. However, it is important to note that young people have distinct behaviors when it comes to utilizing digital technology compared to adults. These behavioral differences can lead to various social issues, including instances of verbal violence and online bullying, which can have a negative impact on their well-being and social interactions. The impact of excessive digital media usage on youth can be significant. It can lead to various negative consequences such as depression, low self-worth, increased anxiety, social alienation, and even symptoms of attention deficit hyperactivity disorder. Excessive digital media consumption can hinder their ability to concentrate on studies, retention of information, and may even lead to self-harm or harm towards others. Moreover, excessive exposure to digital media can affect brain development, imagination, thinking abilities, and learning behavior in learners. It is crucial to be mindful of the amount of digital media consumed by learners to ensure a healthy and balanced development. In addition, research in Poland [13] supports this finding, indicating that digital media usage should be regularly supervised and controlled by their parents. Similarly, with another research, these studies highlight the role of parents in monitoring and guiding their children on their digital media activities to ensure a safe and appropriate digital environment [14]. Indeed, it is important for parents to not only regulate digital media usage but also pay attention to their children and actively encourage engaging in

activities together as a family. This fosters a strong bond between parents and youths, creating a sense of connection and preventing them from becoming overly dependent on or wary of technology. By promoting offline activities and interactions, parents can help youths explore their creativity in digital and non-digital realms. Encouraging youths to have contact with the world beyond university, community, society, and the nation allows them to develop a well-rounded perspective and encourages safe and creative engagement with digital media.

The results of the study on the VARK learning preference of university students revealed that the majority of the samples preferred the kinesthetic learning style, which emphasizes movement and hands-on engagement. This finding is consistent with the research conducted by Chraska [15], supporting the notion that learners often exhibit a preference for learning through physical activities and practical experiences. Additionally, the finding aligns with the research conducted which explored the learning behavior and performance of different types of learners classified by Fleming's learning preferences. The study revealed that learners who excel in kinesthetic learning, characterized by a preference for body movements and hands-on practice, demonstrate a strong inclination for practical application. These learners tend to learn quickly and effectively through real-life or laboratory experiences, enabling them to apply the knowledge gained from such practice in their learning and teaching activities [15]. The aforementioned research findings support Fleming's assertion that students who prefer body movements or tactile experiences tend to learn best through active participation and hands-on activities. These learners engage their sense of touch to enhance their understanding and retention of information. Indeed, the learning preferences that favor movement or touch align with the natural learning tendencies and developmental needs of young learners. Students at this stage often learn through their senses and are highly interested in exploring their surrounding environment. They benefit from experiential learning, whether it involves real-life experiences or simulated situations. Engaging in hands-on activities, such as laboratory experiments and participating in activities outside the classroom, supports their active learning and promotes their overall educational development. These types of active and experiential learning approaches can lead to fast and efficient learning outcomes. Consequently, implementing such practices in the design and development of a digital literacy learning package for university students can be highly beneficial. A more engaging and relatable learning experience can be fostered. Additionally, incorporating group activities in the learning process further enhances the development of digital literacy skills among the students.

The subject group in this study possesses moderate-level digital literacy skills, encompassing five main skills: access skills, analysis skills, evaluation skills, communication skills, and reflection skills. These skills reflect their

abilities to access digital resources, analyze information, evaluate content, communicate effectively, and reflect on their digital experiences. However, their proficiency in practical digital skills and creative skills is relatively lower, with a focus on two skills: practical skills and creative skills. These areas may require further development and attention to enhance their overall digital literacy competencies. When examining the level of digital literacy among students, it is evident that they tend to use digital media more for entertainment purposes rather than communication or knowledge acquisition. In light of this, it becomes crucial for teachers to focus on guiding students towards using digital media for knowledge exploration and discovery. Encouraging learners to utilize digital media as a tool for learning can be highly beneficial, both in their educational pursuits and for their future professional endeavors. By integrating digital media into teaching and learning practices, students can develop essential skills that align with their daily lives and future career prospects.

Regarding analytical skills, the research found that students were capable of understanding and identifying differences in content across various digital assets. It is important to emphasize teaching content analysis to learners, focusing on discerning between good and bad content and being able to evaluate the credibility and source of digital media. Learners should also be taught to recognize the appropriateness and reliability of digital content and resources accurately. By developing strong analytical skills, learners can navigate the digital landscape more effectively and make informed decisions about the content they consume and engage with.

In terms of evaluation skills, the research revealed that learners demonstrated the ability to make judgments, sort, and evaluate content across various digital assets. It is essential to focus on teaching effective strategies for filtering and extracting content from different sources in digital media. Emphasizing critical thinking and judgment skills can help learners assess the quality, reliability, and relevance of the information they encounter online. By equipping students with these evaluation skills, they can navigate digital media more discerningly and make informed decisions about the content they engage with.

Regarding creative skills, the research indicated that university students exhibited a relatively lower level of proficiency in using digital tools for creative purposes. To enhance their creative skills, it is advisable to focus on teaching design principles, shaping, decorating, and crafting techniques using digital mediums. Additionally, guiding learners in the application of these skills to create characters and write content in various formats through digital means can foster their creativity effectively. Encouraging learners to explore different creative outlets and providing them with appropriate tools and guidance can help them develop their digital creative skills further.

In terms of communication skills, the research discovered that university students were proficient in documenting their thoughts and ideas using pictures and text through digital means. To further enhance their communication skills, it is crucial to focus on teaching learners on how to effectively express themselves, select appropriate channels for communication, and write messages that are clear and meaningful. Additionally, emphasis should be placed on educating learners about the safe and responsible use of digital media, ensuring they understand the importance of maintaining online privacy and being respectful in their digital interactions. By providing guidance on these aspects, learners can develop strong communication skills that enable them to effectively convey messages in various digital formats while being mindful of their digital footprint and online behavior.

In terms of reflective skills, the research indicated that learners demonstrated the ability to express their opinions and think critically when reflecting on the content and the university students encountered across various digital assets. To further develop their reflective skills, it is important to focus on teaching methods for providing constructive feedback, fostering their growth mindset, and promoting ethical behavior. Emphasizing the importance of responsible digital citizenship and considering the impact of their actions on society as a whole can help learners develop a sense of ethics and responsibility in their digital interactions. By nurturing these reflective skills, learners can engage with digital media in a thoughtful and responsible manner.

Regarding practical skills, the research indicated that learners exhibited a lower level of proficiency in utilizing digital media for knowledge sharing, collaboration, and contributing to society. To enhance their practical skills, it is recommended to focus on teaching learners on how to apply digital tools and platforms to create projects and assist others. This can involve teaching them how to use digital media for problem-solving, storytelling, and engaging in activities that benefit the community and society at large. By providing guidance and opportunities for learners to develop these practical skills, they can become active contributors and participants in the digital world, making a positive impact on the wider community. Based on the mentioned research findings, it can be concluded that second- and third-year students possess a medium-level of digital literacy skills, which contradicts the research conducted by Chang et al. [13]. The study found that students in Taiwan have high media literacy skills. However, it is important to note that research specifically focused on two skills, namely usage skills and communication skills. Therefore, there may be variations in the specific digital literacy skills being assessed and the cultural context in which the studies were conducted, which could contribute to the differences in findings. Indeed, if learners are provided with proper cultivation and training to promote digital literacy skills, it can significantly strengthen their technological competence and enable them to utilize digital tools in a correct and

creative manner. This, in turn, leads to the benefits of digital self-empowerment and the ability to contribute positively to the broader society. By preparing university students to become responsible digital citizens, they are equipped with the necessary skills and knowledge to navigate the digital landscape effectively and make informed choices. This prepares them for the future and ensures they can fully participate and thrive in the digital era. The research findings suggest that these insights can guide teachers in designing learning activities that align with the diverse nature of learners. By incorporating various forms of online and offline activities, teachers can create a conducive learning environment where learners can develop their knowledge and ideas. Utilizing blended learning approaches that integrate digital technology can be particularly effective in facilitating communication, interaction, and collaboration among learners. This approach not only enhances learning outcomes but also promotes the development of essential skills, such as effective communication and digital literacy, which are crucial for learners' success in today's interconnected world.

The points mentioned above highlight the importance of assessing learners' digital literacy knowledge both before and after instruction or training. This assessment allows educators to evaluate the effectiveness of their digital literacy instruction and training efforts. By conducting pre- and post-instruction assessments, educators can measure the progress and growth of learners' digital literacy skills, identify areas that require further attention, and make informed adjustments to their teaching or training approaches. This assessment-based approach ensures that the instruction or training provided is effective and helps learners develop the necessary digital literacy competencies. Students who have been taught about the skills and applications of media not only acquire knowledge but also develop a positive attitude towards using media tools. Additionally, university students who receive instruction in media literacy tend to demonstrate better skills compared to those who do not receive such education. Furthermore, these learners show an increased ability to effectively search for information using the internet which supports the notion that media literacy education positively impacts students' knowledge, skills, and attitudes towards media use [15]. Indeed, assessing learners' digital literacy knowledge before and after digital literacy instruction or training is crucial to evaluate the effectiveness of the teaching or training process. This assessment allows educators to gauge the progress made by learners, identify areas that may require further attention or improvement, and measure the impact of the instruction or training on learners' digital literacy skills. Regular assessment enables educators to make informed decisions about their instructional strategies and tailor their approach to better meet learners' needs. By assessing knowledge and skills before and after instruction or training, educators can effectively track and enhance learners' digital literacy development.

Approaches to promoting digital literacy based on the VARK learning preference.

Guideline 1: Teachers should have a comprehensive understanding of the nature and development of learners when designing digital literacy learning activities. The learning activities should be tailored to align with the individual needs, interests, and developmental stages of the students. This understanding will enable teachers to create a learning environment that maximizes the digital efficiency of students.

Guideline 2. Teachers should focus on teaching the practical know-how of digital literacy. Apart from theoretical knowledge, students should be equipped with practical skills to effectively navigate and utilize digital tools, platforms, and resources. This includes teaching students how to search for information, evaluate sources, communicate and collaborate digitally, and ensure online safety and responsible behavior.

Guideline 3. Teachers should incorporate a variety of teaching methods and resources to cater to different learning styles and preferences. This can include hands-on activities, group work, interactive digital resources, and real-life applications of digital literacy skills. By providing diverse learning opportunities, teachers can engage students and enhance their understanding and application of digital literacy concepts.

Guideline 4. Teachers should regularly assess and provide feedback on students' digital literacy progress. Assessments can be conducted before and after instruction to measure growth and identify areas that need improvement. Ongoing feedback allows teachers to address individual needs and provide targeted support to help students develop their digital literacy skills effectively. Teachers should stay updated with current digital.

Guideline 5. ends, tools, and resources. As technology advances rapidly, teachers should continuously expand their own digital literacy knowledge and skills to remain competent in guiding students effectively. This includes attending professional development workshops, exploring online learning communities, and engaging in ongoing professional learning related to digital literacy.

By following these guidelines, teachers can create a conducive learning environment that promotes digital literacy development and equips students with the necessary skills to thrive in a digital world. By integrating digital literacy across subjects, providing engaging learning experiences, staying updated with technology, promoting critical thinking, and fostering collaboration, teachers can create a holistic and effective digital literacy learning environment for students.

Conclusion

Assessment of analytical abilities

Assessment of analytical abilities, evaluation of creative skills, examination of communication, reflection, and practical capabilities indicate that learners and adolescents possess knowledge and proficiency in the digital domain, similar to their peers from other countries. Such proficiency might arise from variations in media exposure. The learning environment also encompasses guidance and support from adults, which could be attributed to parental encouragement and utilization of digital media. One of the factors contributing to the frequent and unrestricted use of digital media by youths is the presence of fast-paced and unrefined content on platforms like Aditilat. This lack of content filtering and curation fails to provide guidance on using digital media in a creative manner. Additionally, the family factor plays a role in allowing youths to regularly engage with digital devices without proper guidance. To address these issues, it is crucial to cultivate and train youths and adolescents in digital literacy skills, as this will enhance their ability to use technology effectively and creatively. This, in turn, can lead to various benefits. To evaluate the effectiveness of teaching or training digital literacy, it is essential to assess the knowledge of individuals before and after the instruction or training. This assessment helps gauge the impact of the literacy program, including both traditional and digital literacy components. Conducting pre- and post-workshop knowledge assessments ensures that practical training is effective, as participants can apply the acquired digital knowledge to teach literacy effectively. This is particularly relevant in the context of university students, where the integration of digital tools and skills into literacy instruction is becoming increasingly significant.

To promote digital literacy

The VARK model (Visual, Auditory, Read/Write, Kinesthetic) can be used to promote digital literacy. This model divides the learning approaches into three categories, which are:

Visual Approach: Teachers can incorporate visual elements such as images, videos, and infographics to enhance digital literacy instruction. This approach can involve showing learners how to navigate digital interfaces, use educational apps, and understand visual cues in online content.

Auditory Approach: Teachers can utilize audio-based resources and activities to support digital literacy learning. This can include listening to podcasts or audio recordings related to digital literacy topics, engaging in group discussions or presentations, and practicing active listening skills when interacting with digital media.

Read/Write Approach: This approach focuses on reading and writing activities to develop digital literacy skills. Teachers can provide students with age-appropriate reading materials related to digital media, encourage them to write reflections or short essays about their digital

experiences, and engage in collaborative writing projects using digital tools.

By providing detailed guidelines for teachers, including specific strategies and activities for each approach, educators can effectively integrate digital literacy into the curriculum for learners. These guidelines can serve as a roadmap for teachers to create engaging and interactive digital learning experiences that align with the VARK model and cater to the diverse learning preferences of their learners.

Effective promotion of digital literacy

The effective promotion of digital literacy can be achieved through the implementation of a robust learning management system (LMS). An LMS is a software application that helps in the organization, delivery, tracking, and assessment of digital learning materials and activities. Here are some key aspects to consider when utilizing an LMS for the promotion of digital literacy:

Content Management: The LMS should provide a centralized platform for managing digital literacy content, including educational resources, interactive modules, videos, and assessments. It should support different formats and allow for easy updates and customization.

Progress Tracking: The LMS should offer features for tracking learners' progress in digital literacy skills. This can include monitoring completed activities, assessing quiz results, and generating reports to identify areas where learners may need additional support.

Collaboration and Communication: The LMS should facilitate communication and collaboration among learners, allowing them to engage in discussions, share resources, and collaborate on digital projects. Features like discussion forums, messaging, and group workspaces can enhance interaction and knowledge sharing.

Personalization: An effective LMS should support personalized learning experiences. It can offer adaptive learning paths based on learners' individual needs and progress, providing targeted content recommendations and tailored assessments.

Assessment and Feedback: The LMS should include assessment tools to evaluate learners' digital literacy skills. It should provide timely feedback, both automated and instructor-led, to help learners understand their strengths and areas for improvement.

Professional Development: The LMS can also serve as a platform for teachers and educators to enhance their own digital literacy skills through training modules, resources, and collaborative learning communities.

By utilizing a comprehensive learning management system that encompasses these aspects, schools and educational institutions can effectively promote digital literacy by providing structured and engaging

learning experiences, tracking progress, and fostering collaboration and communication among learners.

Implication

In teaching digital literacy, learning management should prioritize the active participation of learners and foster a collaborative learning environment. Here are two important aspects to consider:

1. Learner Involvement in Activity Design: Encouraging students to participate in the design of activity content can enhance their engagement and ownership of the learning process. Teachers can involve students in brainstorming ideas, planning digital projects or assignments, and incorporating their interests and perspectives into the activities. This participatory approach gives students a sense of autonomy and empowers them to take ownership of their learning journey.
2. Learning Games: Utilizing learning games can be an effective way to build knowledge and skills in digital literacy. Interactive and gamified activities can make the learning process enjoyable and engaging for students. By incorporating elements such as quizzes, challenges, and problem-solving scenarios, learning games can reinforce digital literacy concepts and encourage active participation.

By prioritizing student participation and incorporating learning games, the learning management process can create an environment conducive to building learners' knowledge in digital literacy. It allows students to take an active role in shaping their learning experience, fosters creativity and critical thinking, and enhances their overall digital literacy skills.

In teaching digital literacy, learning management should indeed prioritize the creative process and provide opportunities for learners to practice their creative thinking skills. Here's how this can be incorporated:

1. Encouraging Creative Thinking: Learning management should foster an environment that encourages learners to think creatively and explore their ideas. Teachers can provide open-ended digital literacy activities that require learners to brainstorm, problem-solve, and come up with innovative solutions. This can be done through assignments, projects, or challenges that allow for creative expression and experimentation.
2. Cartoon Character Design: One specific activity that promotes creativity in digital literacy is cartoon character design. Learners can be tasked with designing their own cartoon characters that convey positive messages or perform good deeds in the digital media space. This activity allows learners to apply their digital literacy skills in designing visuals, storytelling, and conveying meaningful messages.

3. Showcasing Creative Works: Learning management should provide opportunities for learners to showcase and share their creative works with peers and the wider community. This can be done through digital platforms, class presentations, or exhibitions where learners can demonstrate their designed cartoon characters and the positive messages they represent. This not only boosts learners' confidence but also encourages collaboration and feedback among peers.

By integrating creative activities such as cartoon character design and providing platforms for showcasing learners' work, learning management promotes the development of creative thinking and empowers learners to express themselves through digital media. This approach enhances their digital literacy skills while fostering creativity, critical thinking, and the ability to communicate positive messages effectively.

However, it is essential for educators and educational institutions to incorporate collaboration into youths' use of digital media in order to enhance literacy learning. By utilizing media that promotes literacy, such as digital resources, teachers can facilitate tangible learning experiences for learners. Additionally, it is crucial to educate learners about the risks associated with online activities, including the potential for scams and fraud, to ensure they are not easily deceived in the future.

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