

Digital Learning Space Management for Digital Nomad

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Abstract: *The aim of this paper is to provide a model for developing and managing learning spaces and for creating a digital educational environment for promoting and supporting Digital Nomads. This relates to fostering a model of the digital economy that is driven by information and communication technology involving basic online processes through data synthesis and the creation of connections. Another aim is to create a Digital Learning Space (DLS) model, which could involve the use of digital technology to increase efficiency and create added value in terms of Thailand's economic activities. This model can support decision-making on the part of executives or those who are responsible for formulating policies that will develop and promote the expansion of Digital Nomad activity and encourage digital transformation in the economy, society, industry, tourism and politics*

Keywords: Learning environment, Digital Space Learning, Digital Nomad

1. Introduction

The development of information technology and communication makes the world seem smaller. Being smaller is not because of size. Rather, it is about the ability to communicate with each other in a more accessible and easier manner. The world's population has changed in appearance and new thought patterns have emerged (Carrasco-Sáez et al., 2019). If you go back about 20 years, the dream jobs for people in Thailand would be a soldier, a police officer, a civil servant or an employee of a large private organization. However, it is different from before as newly-graduated young generations, or even people who used to be full-time employees, are increasingly interested in freelance careers. Nowadays, one mobile phone can do many tasks, such as taking photos, shooting videos, printing reports, or uploading or sending files. Furthermore, with a high-speed internet connection, it will make communication a lot easier. As people's work has begun to change, it is no longer necessary to sit and work in an office because people can work anywhere with the use of the internet. This has resulted in the freedom of time management services the popularized time allocation to correspond with lifestyle. Moreover, this leads to a new form of career that is popular with people all over the world, especially in the case of those who love to experience living abroad. Today, the society made up of these groups of individuals has grown in size, and they have become known as 'Digital Nomads' (Frick & Marx, 2021)

2. Related work and literature

2.1 Learning environment

PhD. researcher has explored and developed Smart Learning by simulating an environment that supports the connection between formal and informal learning. It does this by using data, systems and tools such as the Virtual Learning Environment,

mobile and Internet of Things devices ,making it possible to specify the nature of needs in terms of personal learning and the context of the learner. This links to the efficiency of learning in the classroom and that using online learning via mobile devices, irrespective of the learning situation and the teacher's understanding. This in turn ensures that there is no difference between the two . (Serrano-Iglesias et al., 2021) Impact of the Covid-19 Crisis has affected education and now educators realize that they need to adapt themselves to the provision of distance learning models using various digital platforms. Online teaching and e-learning are very useful and increase the resilience caused by reduce geographic barriers. There is the need to have methods for checking and following-up student progress using various techniques, systems, and methods for collecting and manipulating data, datasets, and multi-format learning data. This has to be analyzed in order to organize the educational environment. The review and discussion demonstrated the potential to change traditional teaching methods, and the possibility of driving an adaptive learning process by using mindfulness.

There is a need for scientific data multimodal learning analysis and the introduction of artificial intelligence. When used together to create a learning environment, collaborative and intelligent plug-and-play devices and software modules have great benefits for students. (Serrano-Iglesias et al., 2021)

The learning environment relates to the adoption of innovations that can support online learning in such a way as to provide a process for the continuity of education. This includes many intelligent learning processes by simulating a developed environment to support students in the learning process in such a way as to stimulate and increase interaction through the use of self-regulated learning (SRL). This is also one of the strategies that can be used to encourage students to develop metacognition skills to enhance the learning experience. All of this can be done in tandem with providing a smart learning environment that can be applied to address contextual learning, individual learning, process-based learning. and learning together. Organizing a smart learning environment will provide learners with a comprehensive learning experience. It is therefore essential when it comes to supporting the competence and skills needed to develop successfully in an online learning environment. (Gambo & Shakir, 2021) The learning environment and the Personal Learning Environment (PLE) refer to the use of existing e-learning to help manage learning for all. Using the environment in terms of both content and processes proves very helpful when it comes to implementing PLE remotely. As knowledge management is necessary, too much information can be a barrier in searching for information. It is possible to navigate learning content using Collaborative Filtering (CF). Basically, CF is a helpful way to find content that is suitable for the students' needs. It demonstrates the benefits of implementing a learning environment using a variety of applications. (Fahmy Hidayat et al., 2020) The learning environment can be applied in many forms. For example, reinforcement learning is an unsupervised learning algorithm. The learning is based on feedback from the environment through a statistical reinforcement learning algorithm. In terms of Q-learning, in the learning environment a comparison is made between the statistics of the Q-learning algorithm and the cognitive IBL algorithm. Named Frozen Lake, research shows that the IBL algorithm takes less time to learn and can adapt well to different environments. (Gupta et al., 2021) Researchers can use learning environments to design new opportunities to make learning in an environment that is difficult or impractical in normal time to be realistic. the opportunities are supported by many cognitive, architectural, and neuroscience theories that can be used to examine the difference between a real learning environment and a Virtual Learning Environment (VLE) on the effect of light on learning concentration. The result of our study is that the arrangement of lighting with regard to creating differing conditions in the VLE affects the cognitive performance of students, in that it is similar to a traditional/physical learning environment improve memory, concentration, and exercise compared to low levels of brightness. ,In addition tests with other forms of lights such as using blue (cold) light will increase students' scores in pseudo-word tests ,compared to using red (warm) light. (Velentza & Economou, 2020)

2.2 Digital Learning Space

The Digital Learning Space is the manipulation of virtual objects across devices such as PCs, mobile phones, and games. Digital learning spaces take advantage of these services. However, there's more to it technically. It is an environment that is not physically geographically located. Rather, it is a virtual geography simulation integrating learning and communication through the use of digital devices by using large technical infrastructure tools. Online interactions that are synchronous with collaborative learning and curricula can be arranged to make all operations run smoothly. In teaching, the Digital Learning Space involves students learning in physical, hybrid and digital spaces in such a way that they can analyze their learning by themselves. (Bygstad et al., 2022) Technology can provide a rich learning experience which engages teachers in terms of self-direction. Digital learning is designed to educate teachers ahead of time prior to teaching about social, physical, emotional, cognitive, and emotional and spiritual dimensions with regard to well-being. It does this through targeted module activities and community forum discussions. Furthermore, teaching design and the use of digital learning platforms to support the Digital Learning Space is taken into account in terms of the efficiency of implementation in various fields. Teachers and learners freely participate in

terms of social, physical, emotional, intellectual and spiritual well-being. (Moldavan et al., 2022) The Digital Learning Space also helps to solve the problem of gender discrimination or gender inequality in many developing countries. As the majority of the population has limited access to basic digital services, digital device allocation is an agency that influences learning, especially for girls living in low-income families. Having a digital learning space will be a tool to help. that is designed and arranged in terms of the environment and the culture to suit the learners' online learning and link it with the available platform. It would be very helpful with regard to compensating for direct teaching at schools to provide equal learning opportunities. It is to help girls access education. (Mathrani et al., 2020) The Digital Learning Space reduces the social and legal risks that dictate distance. and the scope of travel in the old check system attached to the sign in place. It also reduces the number of hours spent studying. It is to promote learning by using educational technology. It increased the development opportunities associated with digital learning at all levels of the education system during the COVID-19 pandemic by including theoretical and practical analysis. The need for competence in systems analysis and methods of managing educational system processes is studied at all levels from primary education to secondary education to higher education. It is based on scientific principles and involves the creation of practical curricula related to effective digital usage training. (Gridchina & Zavyalov, 2021) The Digital Learning Space, besides being used in education, can also be used in art work in the form of "Digital Fabrication" His was developed and expressed in the form of Alternatively, it is possible to create a museum of the future using RGB cameras and using Google's AI engine "Teachable Machine". In order to practice poses, create scripts, and apply them in a sci-fi story context, the game was created to provide a realistic user experience using virtual avatars. it is a form of presentation known as "Digital Fabrication". (Chang et al., 2021) Adopting a Sufficient Digital Learning Platform outlining the security problems of digital learning spaces requires finding solutions in order to ensure student and teacher safety. There are commonly-used web applications that are presented as such as Open Web Application Security Project Management (OWASP) and Common Weaknesses Enumeration (CWE). Using risk-limiting techniques is essential for the management of the Learning Management System (LMS) application and for Video Conferencing Tools. These techniques focus on user management to reduce problems arising from human error. (Djeki et al., 2021)

2.3 Digital Nomads

In 2010, the phenomenon of the digital nomad began to emerge from the activities of people working as a new way of travelling using a digital format. The interest in working and traveling has made this new way of life popular. As there are more people who have become "Digital Nomad," there are three components associated with this rising number personal settings (employee need for more flexibility), organizational development (additional introductions, dynamic job markets through digital platforms) and technological advancements, which refer to the development of faster internet connections and the availability of powerful mobile devices at relatively low cost. (Shawkat et al., 2021) As the concept of the digital nomad began to gain more and more attention, the phenomenon quickly spread throughout the world, especially regarding the particular type of work and lifestyle of the digital nomad, who was looking for a balance between constant free time and work time, between personal needs and independence from the work context. Working in a market context, make it work quickly and has a variety of work is positioning himself differently from other workers in the digital economy. The Digital Nomad places importance on learning and using Information Technology (IT) platforms, showing entrepreneurial behavior and having personal knowledge management practices. There is a degree of job insecurity that is typical of freelance jobs. future work experience and how to design appropriate technology It will help support and reduce feelings of insecurity. It's different from working in the office. (de Almeida et al., 2021) The Digital Nomad frequently uses coworking spaces, with the number of such spaces increasing dramatically, from just 21,000 globally in 2010 to 2.17 million by 2019. The global spread of coworking and its status has meant that two to three cities have emerged as 'coworking hotspots'. The trends in these data are interesting to Digital Nomad and it is believed that DN can drive the development of the tourism economy in various countries. One example of such a hotspot is Bali, Indonesia, where the Ministry of Tourism has emphasized the importance of attracting digital nomads. Another example is Chiang Mai in Thailand, Lisbon in Portugal, and Puerto Vallarta in Mexico (Nomad List, 2022). Changes in the hospitality industry and Thai tourism influences global trends with regard to hospitality services. The focus has turned from leisure to a hybrid approach to all-inclusive services, with both work and leisure being on offer. A format of research notes is used to assess the impact of DNs on the hospitality industry in Thailand (Orel, 2021) explained that the local service sector has begun to respond to the challenges and opportunities that have arisen. The hospitality sector has found that DNs needs to have a workspace that usually includes accommodation, one that looks like a ready-to-use office environment, incorporating design elements and social activities that tend to foster a relationship between host and guest. This needs to include a variety of work and leisure models. There is a need for help from policy makers in the area with regard to specific laws to facilitate future benefits.

Based on the above research, the researchers synthesized the Digital Learning Space Management for Digital Nomad shown in Table 1.

Table 1: Synthesize the Learning Environment and Digital Learning Space Management for Digital Nomad

Process/Phase	Authors	Description
1. Learning environment - Learner Centered Approach - Knowledge Centered Approach - Community Centered Approach - Assessment Centered Approach	(Kümmel et al., 2020) (Seraji et al., 2020) (Mogas et al., 2021)	learning environment must consist of a student-centered approach is to benefit from learning primarily with learners together with a focused approach knowledge content appropriate and necessary for actual use Contextual and approaches based on community needs at the center with a common centralized assessment approach.
2. Digital Learning Space - Government Policy - Curriculum - Integrated Instructional - Measurement and Assessment Affecting - Developing New Normal Teachers	(Li et al., 2020) (Tanabashi, 2021) (Song et al., 2020)	To manage a digital learning space requires government policies. in allowing the Ministry of Education and relevant agencies to determine the curriculum to achieve an integrated teaching and learning process, outcomes are measured and assessed in every possible way. and start developing teachers in the New Normal way to drive the whole process to happen.
3. Digital Nomad - Digital literacy - English Language Skills - Effective Communication Skills - Independent Skills - Leadership Skills	(Jarrahi et al., 2019) (Tyutyuryukov & Guseva, 2021) (HICCS, 2021)	Digital nomads must have Good digital knowledge Possessing practical English language skills in reading, speaking and writing, which will result and be used in conjunction with effective communication skills. To achieve maximum effectiveness in working independently Have independent thinking skills, flexibility and responsibility, and must have leadership skills. Have the courage to make decisions and solve problems immediately

From Table 1, we can see that the learning environment must involve a student-centered approach, i.e., one in which the student benefits from learning together with other learners. It involves self-reporting to see what each learner thinks about his or her abilities in dealing with suitable learning materials including a digital learning environment or appropriate learning outcomes. To achieve this there should be information that is free from bias, and which information should include personal relevance, commitment, self-confidence, and a recognition of the importance or belief in terms of learner behavior as observed in the evaluation of learning in a practice-oriented manner. This measure focuses on the student's goals and his or her's willingness to learn. This includes activities such as choosing a lecture that is of interest, encourages persistence, or the intention to complete the course (Kümmel et al., 2020). It is also important to provide knowledge content that emphasizes the proper guidelines and what is needed for practical use. It is necessary to benefit the learners by providing the appropriate amount of content and information, ensuring that it is suitable for use, is correct, and is constantly modified to remain up-to-date (Mogas et al., 2021). It is also necessary to take into account the context and approaches needed to meet the needs of the community by coordinating the development team, and promoting communication between them using digital tools. A plan or schedule might be

created together with a , calendar for the reservation of learning spaces or work spaces. A common central database should be created using a common centralized assessment approach, focusing on management, vision, planning, problem solving and decision making linked to strategic thinking on the part of the organization in order to develop teaching styles effectively (Seraji et al., 2020). Linking the management of digital learning spaces requires government policies. These should have the main duty of directing and planning the overall operation, including legislation with regard to providing information on the design of education models for the guidance of the Ministry of Education and other agencies involved in education, in order to formulate curricula for an integrated teaching-learning process which takes into account the economy, society, health, space management, identity and culture (Li et al., 2020). It is measured and evaluated in every practical way. on the basis of modern correct without blocking or set a framework for action. (Tanabashi, 2021). It is necessary to start developing teachers in the New Normal way to drive the whole process. This is essential because teachers are the most important actors in achieving all the necessary objectives. It is very important to develop teachers in such a way that they are modern thinking and can learn, understand and be aware digitally (Song et al., 2020). In addition, DNs must have good digital knowledge and know about trends and the rapid changes in information and communication technology, digital awareness and understanding (Jarrahi et al., 2019). They must also have practical English skills in reading, speaking and writing since these are essential when it comes to designing and setting the curriculum. The end results will be good and can be used in conjunction with effective communication skills (Tyutyuryukov & Guseva, 2021) for maximum efficiency in working independently. They must have independent thinking skills, be flexible and responsible, and must have leadership skills. They must have the courage to make decisions and solve problems immediately (HICCS, 2021) with regard to all operations. These aspects must be linked as part of the important process of promoting the final form of the digital economy in Thailand.

3. Methods and Design

The Learning environment and the Digital Learning Space Management for the Digital Nomad

Gephi is a social networking analysis tool that can be used to visualize the strength of connections between nodes (Majeed et al., 2020). As shown in Figure 1, it shows a combination of 20 nodes and 32 edges.

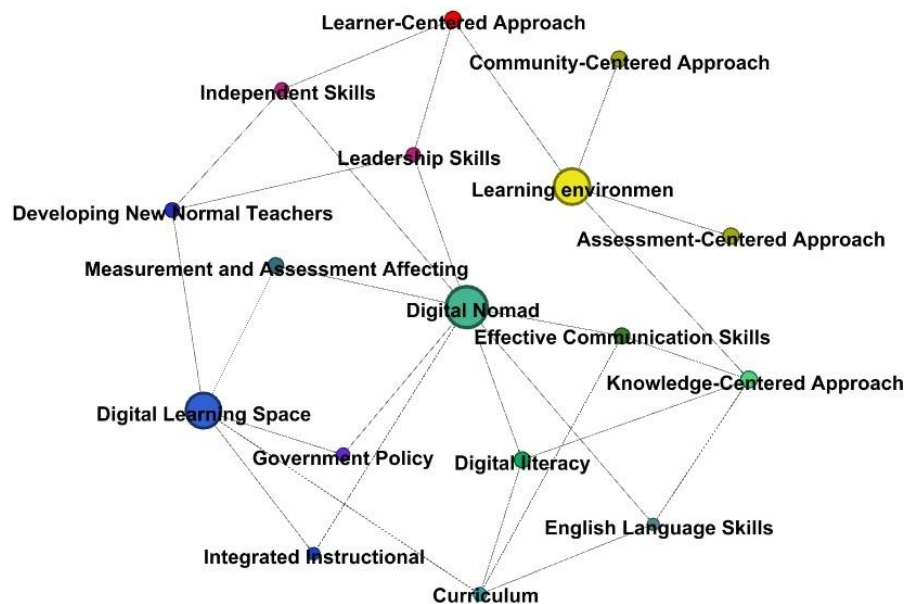


Figure 1. Modular Display Learning environment & Digital Learning Space Management for Digital Nomad

In Figure 1, it can be seen that there are interconnected elements between the learning environment, Digital Learning Space Management, and Digital Nomad, showing that the learning environment has its own sub-elements which is similar to managing a digital learning space. It demonstrates how processes and management are connected in a way that they are fostered and connected with the learning environment. Connected with some of the processes of being a digital nomad, it was found that there was a connection in that there are elements that link and function together. Hence,

it is an important tool in the design and development of the Digital Nomad. In this case, the researchers viewed it as an important part in creating the Digital Learning Space Management for the Digital Nomad Model. However, this would be an important process in terms of promoting a complete digital economy of Thailand.

4. Results

Based on the information from Table 1 and the associated components in Figure 1, we created the Digital Learning Space Management for the Digital Nomad Model as shown in Figure 2.

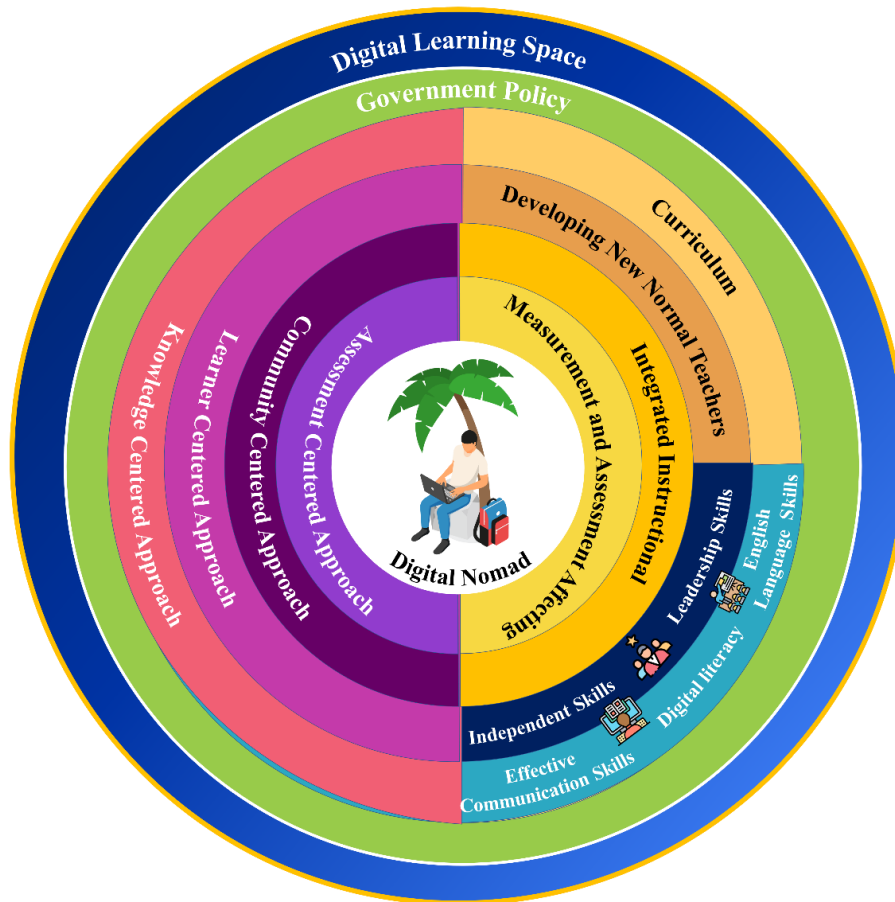


Figure 2. Digital Learning Space Management for Digital Nomad Model

Figure 2 describes the components of the model starting with the concept of implementing the Digital Teaching and Learning Ecosystem (DTLE). This is necessary to create a relationship between the things that exist in the ecosystem. It consists of living things (Biotic) and non-living things (Abiotic), including all the physical elements that form the environment in which living things interact. These include devices, tools or hardware, operating systems and applications, software, and network technology. Hence, all of this can be applied to both learners, tutors, and even the content creators. When all living things are connected, it is a learning community within a digital ecosystem (Majeed et al., 2020). There is also a process for developing this digital ecosystem into a Digital Learning Space (DLS), in which all elements are completely digital. The process can be explained and compared to DTLE. Furthermore, DLS focuses primarily on promoting the full form of the digital economy in Thailand. It requires to pay attention to information and digital operations in the field of the digital economy and the digital government. Digital Governance through Government Policy should be the starting point in determining the linkages of a learning environment that benefits from learning. This could primarily involve learners implementing the Knowledge Centered Approach, in which the content focuses on the appropriate approaches that are necessary for practical application. Additionally, this

might be in the best interests of the learners in terms of having the appropriate content of the DLS Curriculum. It could then be complete, suitable for use, correct and constantly being modified to remain up-to-date in accordance with the views of Mogas et al. (2021), which would be necessary to have the components of Digital Literacy, English Language Skills and Effective Communication Skills to support the Digital Nomad developed through an exchange of learning between students as part of the Learner Centered Approach. Moreover, there may be a focus on teachers in terms of developing New Normal Teachers in DLS as a feature of teaching and learning environments that are constantly changing. This will be in line with Mahanta et al., (2022) who modified and developed it for teachers as well as the good quality teaching process. There for, this could increase the potential to add independent skills and leadership skills to the Digital Nomad. The teaching process must be based on having a community centered approach involving the focusing on the community, as a result, this may require a body of knowledge to infer the structure for fixing and using network data to analyze emerging problems for the development of new methods of solving problems (Jin et al. 2021). By using integrated instructional coherence, all processes which are evaluated and measured independently, would be flexible and up-to-date with the assessment centered approach, linked to measurement and assessment., This is an important process that can be applied in a wide range of detailed and modern ways that can be, for example, used in the process of using robotics for medical purposes.

5. Discussion

In this study, Digital Learning Space Management for Digital Nomad can support decision-making on the part of executives or those who are responsible for formulating policies. This will develop and promote the expansion of Digital Nomad activity and encourage digital transformation in the economy, society, industry, tourism and politics. Related to practices, it will enable DNs to be developed as an important aspect of promoting the full form of the digital economy in Thailand. With the incorporation of the Digital Learning Space, the proposed model points to how the learning environment might be built. This process must be consistent and handled with great attention to detail and clarity as part of the Government Policy that is currently developing government organizations and their own personnel to be digital as soon as possible. In order to keep up with the adaptation in bringing digital technology to be a part of life, it could result in adjusting online lifestyle to avoid travel and contact because of covid 19.

6. Conclusion

Due to the digital transformation that is taking place in the economy, society, industry, and tourism during the Covid-19 crisis that is still spreading in many countries around the world, a better direction in regard to information and communication technology is still evolving. Learning and perception with respect to the use of technology is wider and less complicated to perceive than ever before. This may lead to a good outcome and possibly increases the population of DNs in the future. The model developed in this research could support researchers and policy makers in the development of tools, laws and guidelines for providing standards for creating a policy of a community or a tourism business operator. Furthermore, the information that is collected and organized to provide information can be used to make informed decisions. Large amounts of data are synthesized and prioritized to create new knowledge in order to promote the full form of a digital economy in Thailand. However, this concept is only a guide to a partial representation of the decision-making model. There may be changes in the data format, and the methods used for achieving results may depend on the community context and tourism establishments, and the format of education in each semester.

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