The Development Of Skills And Desirable Characteristics Of Digital Accountants To Increase Employment Capability

Sirirat Chengseng¹, Kwannaree Klaprabchone², Thitiporn Propho³ and Sroypet Lissani⁴

¹Faculty of Management Science, Kanchanaburi Rajabhat University, Thailand, si.326@hotmail.com ²Faculty of Management Science, Kanchanaburi Rajabhat University, Thailand, Corresponding author Email:Kwannare2992@kru.ac.th²

³Faculty of Management Science, Kanchanaburi Rajabhat University, Thailand, AmThitiporn@kru.ac.th³ ⁴Faculty of Management Science, Kanchanaburi Rajabhat University, Thailand, <u>lissa@kru.ac.th</u>⁴

Abstract

This research aimed to study the skills and desirable characteristics of digital accountants to increase employment capability, and study guidelines for developing skills and desirable characteristics of digital accountants to increase their participatory employment capability. This study is mixed-method research of quantitative research and qualitative research. The sample consisted of employers who were entrepreneurs those used graduates in Accounting in Kanchanaburi province. In this research, a purposive sample selection method was used. The sample size was three hundred and sixty-nine quantitative and ten qualitative samples. The research tools were questionnaires and interviews. The statistics used to analyze the data were factor Analysis. The results were as follows: 1) The skills of digital accountants as a whole and in all aspects were at a high level by requiring accountants to have leadership skills, followed by personnel skills, digital skills, business skills, and professional skills, respectively. The characteristics of digital accountants as a whole and in all aspects at the high level by requiring accountants to have the characteristics of interaction with others and communication features first, followed by individual characteristics, practical academic characteristics, job functions, organizational characteristics, and business management and intellectual attributes, respectively. 2) The guidelines for developing skills and desirable characteristics of digital accountants, employers would like the high level of skill development model and desirable characteristics, by requiring professional agencies or organizations should first provide training for accountants with up-to-date content following the current environment and situation. In this regard, an online training course was required for learning and assessing the skills and characteristics of accountants. Overall was at the highest level, requiring the course to have content on various accounting technologies to help the operation be more efficient and effective first.

Keywords: skills, desirable characteristics, digital accountants, employment capability.

Introduction

The digital era is the transformation of ideas and the adoption of technology in business in the digital era, from laying foundations and goals to running businesses and delivering value to consumers. The operating sector not only requires major changes, but this also includes the cultural changes that organizations and personnel from all sectors. From the executives to the bottom-line employees must participate in the adaptation of this 4.0 era to increase the organization's capacity to compete in this era of fierce competition. Laying the country's human resource development base must focus on developing and upgrading people to be quality and good human resources to be ready to develop the country to its full potential (Kachaphorn Mangprasert et al., 2022). The important accounting profession is an profession to all agencies, both public and private sectors (Woraphan Rattanasongtham et al., 2021). An accountant who can quickly adapt to the needs and abilities of today's era must always update the relevant information with accountants. Therefore, an accountant must have a good relationship with all departments in the organization, whether it is human resource management, purchasing, sales, production, etc. the accountant should emphasize teamwork, and analyze information accurately and timely, with an understanding of accounting principles well. In addition, an accountant should have a business mindset, so the accountant plays an important role in the decision-making process of an organization. Accounting information systems can be used to collect, store and process monetary and nonmonetary accounting transactions through technology and process information to support accounting information in management decisions. The stakeholder theory is a theory that has been developed continuously since the 1970s (Freeman, 1984) and focuses on organizational policies that have an impact on the stakeholders involved in the organization by considering the needs, interests, and impacts arising from the policy and the operation of the organization. The organization's sustainable existence or collapse is the legitimacy that occurs between stakeholders and the organization (McWillians & Siegel, 2001). The stakeholder theory was used to study the level of opinions of entrepreneurs about the skills and characteristics of accountants in the digital age that should have in accounting graduates and contingency theory is a concept of management that executives act depending on the situation (Fiedler, 1967). Proponents of contingency manipulation or contingency theory claim that there is no one best method for all. The situation in general, the proper conduct of activities is a situation that depends on the internal environment and outside of the entity that will affect decision-making. This contingency theory was used in the analysis of the development alignment of skills and desirable characteristics of digital accountants to increase their participatory employment capability.

Desirable characteristics of digital accountants in the use of artificial intelligence technology (AI) are Key Tools for the effective Big Data Analysis (Mckinney, Yoss & Snead, 2017) smartly. It can begin with machines learning to help organize accounting processes by scanning or photographing receipts. The system will change the message to a code and provide an account form to track customer accounts that occur immediately to verify the correctness of numbers. It can track customer accounts, and even manage financial liquidity in the organization. From the study and collecting information on the desirable characteristics of digital accountants for entrepreneurs using accounting graduates at Kanchanaburi province on the subject of preparation with the availability of digital accountants because the modern accounting brings digital technology to be used in conjunction with accounting, knowledge of information technology, and innovations (Stanciu & Ghfeorghe, 2017). The accountants can bring technology to be used to create advantages so that they can become business partners or full business partners (Pornpipatkul, 2021). There is preparation to adapt to digital accountants, digital literacy, and adjust yourself to the digital age including the ability to work as a team and having good communication skills. It is the most valuable behavioral skill from the perspective of employers (Tan & Laswad, 2018).

From such importance; therefore, the researchers are interested in studying the skills and desirable characteristics of digital accountants to increase employment capability, studying the guidelines for developing skills desirable characteristics of digital and accountants to increase participatory employment capability, and developing the potential of digital accountants. The results of this research can be beneficial to entrepreneurs and agencies or businesses to have guidelines for developing skills and desirable characteristics of digital accountants to increase their employment capability as well as being able to apply information to develop the skills and desirable characteristics of digital accountants.

Research Hypothesis

Research Hypothesis 1: The skills of digital accountants are related to skills development approaches and desirable characteristics of digital accountants to increase their employment capability.

Research Hypothesis 2: The characteristics of digital accountants are related

to skills development approaches and desirable characteristics of digital accountants to increase their employment capability.

Literature Review

Professional accountants are required to comply with the eight International Education Standards for Professional Accountants (IES) issued by the IFAC, which define qualifications of professional accountants as professional accountants must complete a minimum of a bachelor's degree in accounting or equivalent from an educational institution that offers accounting courses which have determined the method of selection systematically to study accounting and management of accounting courses (Content of Professional Accounting Education Programs). These will enable graduates to have a high level of professional accounting knowledge and be able to develop themselves as professional accountants in the future. In IES, accounting is divided into three parts, namely accounting, finance, and other related knowledge about the organization and business knowledge. Professional accountants professional capabilities must pass а assessment which will assess professional knowledge and skills as well as being valuable, professional attitudes, and ethics. Professional accountants are required to have lifelong learning as an obligation to develop and maintain professional capabilities. There are rules and regulations for accountants to have the opportunity to develop their knowledge of professional capabilities continuously and concretely.

Executive accountants have to change one-sided accounting functions to work by bringing technology to help at work and adding new skills and knowledge to create value for themselves and organizations working in the modern business world. The necessary skills for the future of working in the COVID-19 pandemic include adaptation and flexibility skills, creativity and innovation skills, data skills, analytical thinking skills, digital skills, emotional intelligence skills, and lifelong learning skills. The guidelines for skill development are (1) self-awareness (2) openmindedness (3) action (4) continuous learning applying digital technology and (5) (Kamonporn Kalayanamit, 2020). In 2019, the CGMA (Chartered Global Management Accountant) released the CGMA Competency Framework 2019 to assess the skills of accountants needed to fit in with the environment and current situation. Accounting Professions Under the Royal Patronage of His Majesty the King, 2020). The CGMA Competency Framework 2019 consists of 1) professional skills: management accountants should collect data, process, and analyze information to provide information to relevant stakeholders including the preparation of reports and for use both internally and externally according to professional standards. 2) Business skills: management accountants should know about business and management systems to transform data into business insights so that businesses can assess existing strategies, align their business for the future and focus on forward-looking. 3) Digital Skills: management should have accountants basic digital understandings of cloud computing, cybersecurity, data analytics, and digital costing and be able to solve problems well. 4) Personnel Skills: management accountants should have the ability to communicate effectively to use in decision making. 5) Leadership Skills: management accountants should have an overview of business operations, measure them, and be responsible for monitoring the implementation of strategies, and engaging in team building. The practice of accountants has changed from the past when the IFAC (International Federation of Accountants) advisory committee issued the criteria to develop accountants to become professional accountants and professionalism is one of the requirements in performing the required tasks (Lesmana & Machdar, 2015). The accountant must develop professional knowledge and capability, professional values, professional ethics, and attitudes. However, as business operations change, technology has more influence on work processes, such as the adoption of OCR (Optical Character Recognition) is used to convert text on images into letters without typing, making accounting easier. The customer only sends various documents online, they can convert the document images into automatic messages Chotivechkarn, 2021). Digital (Sirirat Technology has advanced, accountants must have developed more professionally than in the past and they must have the ability to take advantage of information technology for unlimited access to communicative knowledge or information acquisition to communicate anywhere, anytime, and anyone. These things

are emerging in the digital era that challenges digital capabilities for five key reasons (Phatichon, 2019): 1) Digital performance affects economic growth; 2) Competency of labor market demand for technology skills; 3) Innovation and entrepreneurship drive; 4) Future second language, and 5) Important complementary and supporting factors for basic skills. In conclusion, digital literacy may conclude that such skills cover four dimensions of competence, namely, use, understand, create, and access digital technologies effectively (Office of Civil Service Commission, 2019).

Therefore, the organization's sustainability or collapse is a legitimacy that exists between stakeholders and the organization (McWilliams & Siegel, 2001). Stakeholder Theory (Freeman, 1984) is, therefore, used to study the level of opinion among entrepreneurs regarding the skills and characteristics of digital accountants that should have a graduate in accounting, and contingency theory is a concept of management

Independent Variables

in which managers act depending on the situation (Fiedler, 1967). Proponents of contingency manipulation or contingency theory claim that there is no one best method for all. The situation in general, the proper conduct of activities is a situation that depends on the internal environment and outside of the entity that will affect decision-making. This contingency theory was used in the analysis of the development alignment of skills and desirable characteristics of digital accountants to increase their participatory employment capability.

Research Conceptual Framework

This study is mixed-method research. The researcher has formulated a research conceptual framework based on the concepts of Freeman (1984) and Fiedler (1967) which consist of stakeholder theory and contingency theory, with details as follows:

Dependent Variables

The skills of digital accountants of Entrepreneurs who use graduates in Accounting, Kanchanaburi Province

Characteristics of digital accountants of Entrepreneurs who use graduates in Accounting, Kanchanaburi Province

Figure 1: Research Conceptual Framework

Research Methodology

This study is mixed-method research, the research area is Kanchanaburi Province.

Population and Sample

The population is employers who are entrepreneurs and use graduates in accounting in Kanchanaburi Province, the determination of the sample size, in case the population size is unknown, uses the formula of Cochran (1953), a sample of three hundred and sixty-nine people was obtained using a purposive sample selection method from the population that Guidelines for developing skills and desirable characteristics of digital accountants to increase employment capability

-Forms of skill development and desirable characteristics

- Online courses for Learning and Assessment Skills and Desirable Characteristics of Accountants

meets the inclusion criteria by field surveying and selecting employers who are entrepreneurs and have qualify criteria for collecting information. The criteria for inclusion of target groups in this research phase were 1) being an entrepreneur who is an entrepreneur and uses an accounting graduate to do accounting for the business in which it is located in Kanchanaburi; 2) being at least 20 years of age; 3) being a person who voluntarily participates in the research project and can participate in research throughout the project. The exclusion criteria of the target group in this research phase were 1) those who did not meet the inclusion criteria and 2) those who did not voluntarily participate in the research project.

Research Tools

There are two types of research tools which are: 1. Questionnaires and assessment forms: questionnaire of skills development and desirable characteristics of digital accountants to increase employment capability to collect information about the feedback level on the skills and desirable characteristics of digital accountants to increase their employment capability is in closed-ended question, multiple-choice and opinion form according to the specified criteria and open-ended question for respondents to give their opinions and suggestions. The second to fourth parts are characterized as the estimation scale of the Likert Scale. The online curriculum assessment form of learning skills and desirable characteristics of digital accountants was divided into fourth parts. In addition, the assessment form of knowledge, understanding, and desirable skills to support future employment of digital accountants to increase the employment capability according to the needs of the employer was a closed-ended question, both multiple-choice and opinion form according to the specified criteria and open-ended questions for respondents to give comments and suggestions, was divided into three parts. Checking the quality of the content validity: the three experts checked and the scoring criteria were taken to find the Index of Item-Objective Congruence of the question item with the IOC greater than 0.50. The questionnaire was found to be appropriate and the questionnaire could be used in the questionnaire appropriately. The whole questionnaire had the IOC at 0.95. It showed that there was an IOC greater than 0.50 and one question had an IOC less than 0.50. The researchers adjusted the questions according to the recommendations of experts before being tested for reliability and the results of the questionnaire reliability test using Combmash's alpha Coefficient of 0.70 or higher, so the questions were considered confident (Nunally & Bernstein, 1994). It showed the questions about digital accountants as a whole have a confidence value of 0.853, questions about characteristics of accountants as a whole have a confidence value of 0.806, and questions about skills development and desirable characteristics of the digital

accountant as a whole have the confidence value of 0.909 used to study the development of skills and desirable characteristics of digital accountants to increase the employment capability online curriculum assessment form of learning skills and desirable characteristics of digital accountants to increase their employment capability according to the needs of employers. 2. In Seminars and workshops, the researchers used a purposive sample method employer representatives who were of entrepreneurs and used graduates in accounting in Kanchanaburi Province, a total of ten cases (Nastasi & Schensul, 2005), consisting of five representatives of employers who use graduates accounting, three representatives in of accountants, two representatives of graduates in accounting, to study the pattern of the skills development and desirable characteristics of digital accountants to increase their engaged employment capability and provide online courses to learn digital accountants' desirable skills and characteristics.

Data Collection

1. Quantitative data collection is the collection of field data by asking questions using preprepared research tools by using a questionnaire development and on skill desirable characteristics of digital accountants to increase employment capability, the online the curriculum assessment form of learning skills, characteristics of digital and desirable accountants, and an assessment of knowledge, understanding and desirable skills to support future employment of digital accountants to increase employment capacity according to the requirements of the employer.

2) Qualitative data collection is the data collection by using seminar techniques and participatory workshops among researchers, five representatives of employers who use graduates in accounting, three representatives of accountants, and two representatives of graduates in accounting, in Kanchanaburi Province, to study patterns of skill development characteristics of digital and desirable participatory accountants to increase employment capability and prepare online courses for learning skills and desirable characteristics of digital accountants between October 2021 and December 2021.

1. Quantitative data were analyzed by basic statistics and inferential statistics, namely component analysis.

2. Qualitative data use document research, analyze and synthesize the data and then write a descriptive report.

Research Results

Part 1 Results of the assessment of opinion levels on skills and desirable characteristics of digital accountants to increase employment capacity and Guidelines for developing skills and desirable characteristics of digital accountants to increase employment capacity for participatory employment

Objective I Skills and desirable characteristics of digital accountants to increase employment capacity

Table 1 shows the mean and the standard deviation of skills of digital accountants in the digital as a whole

Questions	\overline{x}	S.D.	Interpretation
1. Professional skills	4.13	0.69	high
2. Business skills	4.21	0.64	high
3. Digital skills	4.28	0.64	high
4. Personnel skills	4.30	0.67	high
5. Leadership skills	4.33	0.63	high
Total	4.25	0.65	high

Table 1 found that the skills of digital accountants overall were at the highest level with the mean ($\overline{X} = 4.25$), when considering each aspect, it found that the mean was at the highest level in all aspects. The averages were arranged in descending order, namely, namely, leadership skills with a mean ($\overline{X} = 4.33$),

followed by personnel skills with a mean (\overline{X} = 4.30) digital skills with a mean (\overline{X} = 4.28), business skills with a mean (\overline{X} = 4.21), and professional skills with a mean (\overline{X} = 4.13), respectively.

Table 2 shows the mean and standard deviation on characteristics of digital account	ntants as a whole
---	-------------------

Questions	\overline{x}	S.D.	Interpretation
1. Intellectual characteristics	4.24	0.65	high
2. Practical academic characteristics and duties	4.36	0.65	high
3. Personal characteristics	4.45	0.57	high
4. Interaction and communication characteristics	4.47	0.65	high
5. Organizational characteristics and business	4.30	0.68	high
management			
Total	4.36	0.64	high

Table 2 found the characteristics of digital accountants overall were at the highest level with the mean ($\overline{X} = 4.36$). When considering each aspect, it showed that the mean was at the highest level in all aspects. The averages were arranged in descending order, namely, interaction and communication characteristics with a mean ($\overline{X} = 4.47$), followed by personal characteristics with a mean ($\overline{X} = 4.45$), practical academic characteristics, and duties with a mean ($\overline{X} = 4.45$)

4.36), organizational characteristics and business management with a mean ($\overline{X} = 4.30$) and intellectual characteristics with a mean ($\overline{X} = 4.24$).

Objective No. 2 To study the guidelines for developing skills and desirable characteristics of digital accountants to increase participatory employment capability

Questions	\overline{x}	S.D.	Interpretation
1. The establishment should have the training to develop	4.49	0.65	high
knowledge, ability, and operational skills.			
2. The establishment should provide professional ethics training in the	4.43	0.69	high
operation.			
3. Professional agencies or organizations should provide training	4.50	0.63	high
for accountants with the content up-to-date with the current			
environment and situation.			
4. Accountants should study more in terms of operational skills,	4.47	0.62	high
legal skills, and related accounting standards.			
5. Accountants should have foreign language qualifications,	4.36	0.66	high
technology, and competencies of digital accountants.			
Total	4.45	0.65	high

Table 3 shows the mean and standard deviation of developing skills and desirable characteristics

Table 3 showed the skills development patterns and desirable characteristics overall were at the highest level with the mean ($\overline{X} = 4.45$). When considering each aspect, it showed that the mean was at the highest level in all aspects. The averages were arranged in descending order, namely, Professional agencies or organizations should provide training for accountants with the content up-to-date with the current environment and situation with the mean ($\overline{X} = 4.50$), followed by The establishment should have the training to develop knowledge, ability, and operational skills with a mean ($\overline{X} = 4.49$), accountants should study more in terms of operational skills, legal skills, and related accounting standards with a mean ($\overline{X} = 4.47$), the establishment should provide professional ethics training in the operation with a mean ($\overline{\mathcal{X}} = 4.43$) and Accountants should have foreign language qualifications, technology, and competencies of digital accountants with the mean (\overline{X} = 4.36). respectively.

Part 2 Results of the research hypothesis test

Hypothesis 1: The skills of digital accountants are related to skills development approaches and desirable characteristics of digital accountants to increase their employment capability.

Component analysis of factors affecting skills development approaches and desirable characteristics of the digital accountants to increase their employment capability found that the KMO = .832 value was close to 1, so it was concluded that the variables were correlated, or using Bartlett's Test, the Chi-Square approximate distribution was 8092.858 and the Sig. value is .000, less than .05. Therefore, H_1 , was accepted, namely, the variables are correlated, the factor analysis was performed in the next step by arranging twenty-five variables into various factors, which will be determined from the factor loading. The test result can be the first factor named the "accounting information skills factor" for use in decision-making, the second factor is named "leadership and Strategic Management Skills factor", the third factor is named "Communication and Teamwork Skills factor", the fourth factor is named as "operational competence and skills factor" and the fifth factor is named as the "process skills and data analysis factor."

Hypothesis 2: The characteristics of digital accountants are related to skills development approaches and desirable characteristics of digital accountants to increase their employment capability.

Analysis of the relationship between characteristics of digital accountants and skills development approaches and desirable characteristics of digital accountants to increase their employment capability found that KMO = .880values value was close to 1, thus it was concluded that variables are correlated, or using Bartlett's Test, Chi-Square approximate distributions can be obtained was 3604.528 and the value Sig. was .000, less than .05. Therefore, H_1 , was accepted, namely, the variables are correlated, the factor analysis was performed in the next step by arranging fifteen variables into various factors, which will be determined from the factor loading. The test result can be the first factor named "professional characteristics and information technology", the second factor is named "individual characteristics and teamwork", and the third factor is named "cognitive characteristics and analysis.

Summary of Research Hypothesis Testing Results

Results of data analysis and research hypothesis testing according to research conceptual framework, the researcher summarizes the results as follows.

N	0.	Hypothesis	Sig.	Hypothesis testing results
1		The skills of digital accountants are correlated to the approach to	0.000	accept the
		developing skills and desirable characteristics of digital		hypothesis
		accountants to increase their employment capability.		
2		The characteristics of digital accountants are related to skills	0.000	accept the
		development approaches and desirable characteristics of digital		hypothesis
		accountants to increase their employment capability.		

Table 4 Summary of research hypothesis test results

* It was statistically significant at a 0.01 level.

Part 3 Guidelines for developing skills and desirable characteristics of digital accountants to increase their employment capability

findings Research to formulate guidelines for developing skills and desirable characteristics of digital accountants to increase their participatory employment capability use the content analysis technique. The quantitative research results from the questionnaire were synthesized and the qualitative research results were analyzed from the seminar technique and a workshop to create a model for developing skills and desirable characteristics of digital accountants to increase their participatory employment capability. Then bring the research results to create an online course on learning skills and desirable characteristics of digital accountants. The results of the research are presented by the research framework as follows:

A model for developing skills and desirable characteristics of digital accountants to increase their participatory employment capacity

The results of a study on the model for developing skills and desirable characteristics of digital accountants to increase their participatory employment capacity based on the quantitative research results from questionnaires, conducting a seminar and a workshop between researchers and representatives of employers who are entrepreneurs and use graduates in accounting in Kanchanaburi Province, amounting to five persons in Kanchanaburi, three representatives

of accountants in Kanchanaburi and two representatives of graduates in accounting in Kanchanaburi Province. The researcher applied the quantitative findings with the average opinion of the first three levels, in descending order, used for content analysis.

The research findings on the skills and characteristics of digital accountants showed that most of the respondents wanted to develop the skills and characteristics of digital accountants in descending order regarding personnel skills, subject to accountants cooperating and working as a team to perform tasks to achieve the goals of the establishment. followed by digital skills, subject to accountants having basic digital understanding and ability to solve problems well and personnel skills, subject to accountants can communicate clearly and concisely when presenting, discussing and reporting in formal and informal situations both in written and oral form, respectively.

The research findings the on development of skills and characteristics of digital accountants showed that most of the respondents need a development model in an online course for learning and assessing skills with content various accounting on technologies to help work more efficiently and effectively, followed by the content of accounting related to the practice of accounting used in the performance of work and the content of finance related to the accounting profession used in the performance of work.

From the results of such research, the researchers and representatives of the sample group attended the seminar, and workshop and then conducted an analysis. It found that the skill

prepared in the form of an online course that provides knowledge and assessment of knowledge in the following areas: 1) Accounting Information for decision-making, 2) Leadership and Strategic Management, and 3) Communication and Teamwork.

Research Results Discussions

The researcher summarizes the research results according to the objectives. There are important issues to discuss the research results as follows:

1. Results of a study on skills of digital accountants at employers who use graduates in accounting in Kanchanaburi province want to increase overall employment capacity and all aspects are at the high level. Employers require accountants to have leadership skills first, followed by personnel skills, digital skills, business skills, and professional skills, respectively. It is consistent with the research results of Prasuta Nadee et al. (2021) who studied "the digital accountants' competency: Adaptive skills in a transformed world". It found that accountants placed the highest level of emphasis on adaptive digital skills in all aspects by using information technology first, executive partner followed by skills, measurable learning skills, and emotional and thought management skills. This is in line with the findings of Birt et al. (2018) who studied "ICT Skills Development: The Digital Age and Opportunities for Accountants". It showed that advancements in technologies such as Big Data Collection, Blockchain, and Bitcoin Use of hardware and software to deliver services over networks, and electronic languages developed by technology, mobile phone technology, intelligence, technology artificial drone. software application, and social media. These advances and the importance of behavioral competence such as ethical and legal practice, professional judgment, and emotional intelligence can bring many challenges and opportunities for professional accountants.

2. Desirable characteristics of digital accountants that employers who use accounting graduates in Kanchanaburi want to increase their employment capability overall and all aspects were at the high level, with employers want accountants to have interaction and communication characteristics, followed by personal characteristics, practical academic characteristics, and duties, as well as organizational characteristics and business management, and intellectual characteristics, respectively. This is consistent with the research results of Worapan Rattanasongtham et al. (2021) who studied "desirable accountants of accountants by enterprises in Uttaradit province". It showed a high level of the degree required for desirable characteristics of accountants on intellectual skills, technical and functional skills, personal skills, interpersonal and communication skills, and organizational and business management skills of enterprises, respectively, in Uttaradit province. It is also consistent with the research results of Sontana Sukjai and Prawet Penwutthikul (2019) who studied "the characteristics of accountants in the Thailand 4.0 era that affect the practice success of the Office of the Judiciary". It showed that operational skills positive relationship practice success coordination of Office of the Judiciary, language positive relationship practice success operation of Office of the Judiciary, ethics positive relationship practice success operation and services of Office of the Judiciary, and responsibility positive relationship practice success operation of Office of the Judiciary and negative relationship practice success coordination of Office of the Judiciary with statistical significance of 0.05.

The results of a study on the skills development and desirable characteristics of digital accountants to increase the participatory employment capacity found that the model of skills development and desirable characteristics of digital accountants should be prepared in the form of an online course with knowledge and assessment of knowledge in three courses: Accounting Information Course for Decision Making, Leadership and Strategic Management course, and Communication and Teamwork course. This is consistent with the research results of Piyapong Prapaisri (2020) who professional studied the development guidelines for professional accountants in the digital era". It found that professional accountants must be equipped with the technological skills that this digital era requires. Furthermore, analytical thinking and modern management are also important factors in

enabling an organization to overcome setbacks brought by digital disruption.

Body of Knowledge and Utilization

Body of Knowledge or innovation from research with the objectives of studying skills and desirable characteristics of digital accountants to increase their employment capability and to study guidelines for developing skills and desirable characteristics of digital accountants to increase their participatory employment capability. The results of the research were in the form of the online courses with knowledge and assessment of knowledge in three courses: Accounting Information Course for Decision Making, Leadership and Strategic Management course, and Communication and Teamwork course as shown in Figure 2.



Figure 2: Online courses for learning and skills assessment

Transmission and utilization: the researchers have transferred the online courses to accountants to attend training for developing the skills and characteristics of accountants who pass the learning and assessment will receive a certificate to demonstrate their development, their skills, and characteristics including educational institutions, employers, government agencies, and the private sector. The research results can be used as a guideline for developing the skills and characteristics of digital accountants.

Recommendations

This research has the body of knowledge as a model for developing skills and desirable characteristics of digital accountants and online courses consisting of three topics as follows: 1) accounting information for decision-making 2) leadership and strategic management, and 3) communication and teamwork. Importantly,

business organizations can apply to develop the skills of digital accountants and develop the characteristics of digital accountants of entrepreneurs using graduates in accounting and educational institutions, employers, and government and private agencies. There are guidelines for developing the skills and desirable characteristics of digital accountants to increase their employment capability. Educational institutions, employers, and government and private agencies have online courses for learning and assessing the desirable characteristics of accountants' skills, with a focus on the skills and characteristics of digital accountants to enhance their employment capability. The issue of the next research should study the issue of expanding population coverage at the national level, the demand, supply, and professional accounting skills model as required by enterprises, and there should be applications for up-skill and re-skill in the accounting profession lifelong learning.

References

- Kodchaporn Mungprasert, Sittiporn Prawatrungruang, and Khwanying Sriprasertpap. (2022). "Teacher competency model in the era of Thailand 4.0, Phetchaburi Secondary Education Service Area Office", Journal of MCU Buddhapanya Review, Vol. 7 No.1 (January-March): 78-88.
- Kamolporn Kalayanamitra. (2021). "Essential skills for future work performance in the post Covid -19 era", Journal of MCU Buddhapanya Review, Vol.6 No.3 (September-December):163-176.
- 3. Prasuta Nadee et al. (2021). "The digital accountants' competency: Adaptive skills in the transformed world", **Journal of Liberal Arts and Management Sciences**, 8(2) (July-December): 19-32.
- Piyapong Prapaisri. (2020). "Professional development guidelines for accounting professionals in the digital age", Journal of MCU Nakhondhat, 7(12) (December): 422-435.
- Worapan Rattanasongtham et al. (2021).
 "Desirable Characteristics of Accountants by Enterprises in Uttaradit Province", Journal of Industrial Business Administration, 3(2), 5-20
- Sirirat Chotivechkarn. (2018). "Utilization of OCR in Accounting Industry", Newsletter Federation of Accounting Professions under Royal Patronage. Retrieved December 25, 2021, from https://www.fac.or.th/upload/9414/CK&Nt ks8.pdf.
- Sontana Sukjai and Prawet Penwuthikul. (2019). "Characteristics of the accountants in the Thailand 4.0 that affect the practice of the Office of Judiciary", GRADUATE SCHOOL CONFERENCE 2019: 440-449. Bangkok: Suan Sunandha Rajabhat University.
- Federation of Accounting Professions Under the Royal Patronage of His Majesty the King. (2020). "Key Skills and Technologies for Executive Accountants", Retrieved October 20, 2020, from https://www.tfas.or.th/Article/Detail/1234 69.
- 9. Birt, J., Wells, P., Kavanagh, M., Robb, A. & Bir P. (2018). ICT Skills Development: The

- a. **Digital Age and Opportunities for Accountants**. Accounting Education Insights, International Accounting Education Standards Board (IAESB).
- Cochran, W.G. (1953). Sampling Techniques. New York: John Wiley & Sons. Inc.
- 11. Fiedler, F.E. (1967). A theory of leadership effectiveness. New York: McGraw-Hill.
- 12. Freeman, R. E. (1984). Strategic management: A stakeholder approach. MA.: Pitman.
- 13. Lesmana, R., & Machdar, N. M. (2015). Pengaruh Profesionalisme, Kompetensi, dan Independensi Auditor Terhadap Kualitas Audit. Jurnal Bisnis dan Komunikasi,
 a. 2(1), 33-40.
- 14. Likert, R. A. (1932). Technique for the Measurement of Attitude. Archives Psychological. 3(1).
- 15. McKinney, E., Yoos, C. J., & Snead, K. (2017). The need for 'skeptical' accountants in the era of Big Data. Journal Accounting Education, 38, 63-80.
- 16. McWilliams, A. and Siegel, D. (2001). Corporate Social Responsibility: A Theory of the Firm Perspective. Academy of Management Review, 26, 117-127.
- Nastasi, B. K., Schensul, S. L. (2005). Contributions of qualitative research to the validity of intervention research. Journal of School Psychology. 43, 177-195.
- Nunnally, J.C. and Bernstein, I.H. (1994). The Assessment of Reliability. Psychometric Theory, 3, 248-292.
- Office of Civil Service Commission. (2019). Digital literacy and understanding skills. [Online]. Retrieved 5 January 2021 from: https://www.ocsc.go.th/DLProject/meandlp. (in Thai)
- 20. Phati;' chon, P. (2019). Challenges in the 21stCentury: Digital Knowledge... Is It
- a. **Required?** [Online]. Retrieved 6 January 2021 from: http://www.ksr.co.th. (in Thai)
- 21. Pornpipatkul, W. (2021). Accountants Management in the Digital Age. Retrieved from
- 22. https://www.tfac.or.th/Article/Detail/1 26283
- 23. Stanciu, V. & Ghfeorghe, M. (2017). An exploration of the accounting profession-The stream

- a. of mobile devices. Accounting and Management Information Systems, 16(3), 369-385.
- Tan, L. M. & Laswad, F. (2018). Professional skills required of accountants: what do job advertisements tell us? Accounting Education, 27(4), 403-432.