The Quality of Graduates in Community Development According to the National Qualifications Framework for Higher Education in Numerical Analysis, Communication and Information Technology Skills

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Abstracts

This article aims: (1) To survey the quality of graduates in community development, and (2) presents guidelines according to the National Qualifications Framework for Higher Education of numerical analysis, communication, and information technology skills. This research uses a mixed-method study. This quantitative study collected data everyone from 17 graduate users, and used a questionnaire. Its analysis, with software, determined the frequency, percentage, mean (mu, μ) and standard deviation (sigma, σ). The qualitative research conducted interviews and collected data of choose specific from a group of 23 people, including graduate consumers, community development graduates, and graduate producers. We selected a specific theory and evaluated the data using descriptive analysis. The results show that: (1) The quality of graduates in community development, according to the National Qualifications Framework for Higher Education in numerical analysis, communication, and information technology skills, are at a high level. (2) Guidelines according to the National Qualifications Framework for Higher Education of numerical analysis, communication, and information technology skills. This study emphasizes using computer applications for documentary work. It uses smartphones, learning communication tools, and other technology for gathering information on the community and solving their problems creatively. to use the knowledge to meet the needs of the sustainability of the community.

Keywords: The Quality Of Graduates; Numerical Analysis; Communication; Information Technology.

Introduction

On generating quality graduates according to academic and professional standards that reflect societal developments and improve research quality. Creativity and innovation help establish the educational quality standards and integrate community wisdom and world knowledge to fulfill community demands (Nakhon Si Thammarat Rajabhat University, 2020 : online). It also concentrates course administration is a program that makes students socially accountable. It includes instructing them to connect and make decisions. It enhances student engagement in the country's economic growth and provides quality citizenship. Curriculum management creates quality graduates. Teaching and learning management and student activities must follow the learning management principles established by the National Qualifications Framework for Higher Education for graduates to possess desired skills (Sangcharoon, Usaho, & Siribanpitak, 2020 : online).

It also concentrates current community development graduates are knowledgeable and skilled "community managers" that serve the community and collaborate with other departments (Department Executive director of Community Development, 2017 : 32). Community development according to the National Qualifications Framework for Higher Education in numerical analysis, communication and information technology skills, such as the ability to use the tools currently necessary to conduct computer-related jobs. The capacity to use information and communication technologies correctly. The capability of suggesting problem-solving solutions based on mathematical data or statistical representation for study and creative application to connected problems. The ability to communicate effectively and select the appropriate presentation medium for oral and written presentations (Faculty of Arts Program in Community Development Program, 2020 : 1-5). There has to be an integration of knowledge and adaption of academic abilities and course material according to dynamic situations. This helps them be current and integrate learning tools in a more "community lab" method (Jantree & Sripradit, 2019 : 655-671)

It also prepares graduates for the workplace through developing communities. According to the National Qualifications Framework for Higher Education, organizations or communities led by graduates can create excellent communities. We see this particularly in numerical analysis, communication, information technology abilities, and research capabilities of information tools or statistics to creatively solve problems and select the right media type (Nakhon Si Thammarat Rajabhat University, 2020 : online). It aims to be the highlight of the graduate production and represent the quality of curriculum development for generating graduates who will become "community developers" for community situations (Sukbunpant et al., 2018 : 77–91).

It is relevant and worthwhile to study "The quality of graduates in community development, according to the National Qualifications Framework for Higher Education in numerical analysis, communication, and information technology skills". This study questions, (1) if the quality of graduates develops community according to the National Qualifications Framework for Higher Education in Numerical Analysis Skills, What level of communication

and information technology usage do you have? (2) The guidelines for graduate quality development, community development according to the above-mentioned qualification, how do you handle communication and information technology usage? All this should follow the community's existing working situations, as well as to use the knowledge to meet the needs of community under participation and the sustainability of the community that will help increase the competitiveness of the community in the future.

Research Objestves

To survey the quality of graduates in community development and presents guidelines according to the National Qualifications Framework for Higher Education of numerical analysis, communication, and information technology skills.

Research Method

1. Research Model

This research uses a mixed-method study that is a combination of data collection approaches with quantitative and qualitative research (Chalakbang, 2017 : 124–132).

2. Quantitative Research:

This research aims to survey the quality of graduates in community development, according to the National Qualifications Framework for Higher Education in numerical analysis, communication, and information technology skills. The specifics are as follows:

The sample population consists data everyone of 17 graduates (Office of Academic Promotion and Registration, 2020 : 23-27 ; Faculty of Arts Program in Community Development Program, 2020 : 1-5).

Data collection tools include a questionnaire for graduates. This research examines papers pertaining to the quality of community development graduates, according to the National Qualifications Framework for Higher Education in numerical analysis, communication, and information technology skills (Faculty of Arts Program in Community Development Program, 2020 : 1-5). It is a 5-level assessment scale including the interpretation criteria of the graduate quality average for community development, according to the National Qualifications Framework for higher education in numerical analysis skills. It focuses on communication and information technology usage. After making a questionnaire, Cronbach's Alpha Coefficient = 0.748 determined the content Language and instrument confidence. We re-examined the questionnaire after that (Boonmak et al. 2017 : 3).

The researcher collected data from official documents of the Faculty of Humanities and Social Sciences, Nakhon Si Thammarat Rajabhat University and completed an online questionnaire https://docs.google.com/forms/d/e/1FAIpQLSdggOHlPoOFf8msU_5iYWBl4eAU3 pMS_-XhoQsKBD4RFgaSqw/closedform. They reached out to the graduates using channels like email, Line, and Facebook. After a week, they gathered 17 sets of data and got back 17 sets of questionnaires that demonstrated 100 percent correctness and completeness for usage in this study. Figure 1–4 shows a sample of this.

The researcher analyses the data on the quality of graduates in community development based on the National Qualifications Framework for Higher Education in numerical analysis, communication, and information technology skills. The table below shows the mean and standard deviation for communication and information technology usage from the questionnaire.

Figure 1–4: Example of an online questionnaire

3. Qualitative Research

It aims to present guidelines for the development of the quality of graduates in community development based on the National Qualifications Framework for Higher Education in numerical analysis, communication, and information technology skills.

There were a total of 23 key informants, including 17 graduates, 4 community development graduates, and 2 graduate producers. Select a specific type of work that has worked for not less than 1 year. The researcher will gather data until the data is saturated, and the data collection will be stopped.

The research instruments included: A structured interview form to improve the quality of graduates in community development based on the National Qualifications Framework for Higher Education in numerical analysis, communication, and information technology skills. It had 23 key informants an interview questionnaire that categorized data and facilitated data analysis (Ritchie & Lewis, 2003 : 23). It examined the tools produced, tested the interviews, and modified the interview form to ensure the quality of the tools. The participant and non-participant observations use the observation record form.

Data collection is as follows: The researcher contacted the participants individually to explain the objective of the study. They attached the information sheet to prepare before and plan the interview to get the benefits of the research, methods, interview time, and place. They did data collection using an interview form with key informants. The information recording will happen will only if the key informant agrees to provide it. They kept track of the participant and non-participant observations with important informants.

Data analysis: The researcher studied data on quality development of graduates for the community development based on the National Qualifications Framework for Higher Education of numerical analysis, communication, and information technology skills. They extracted the material of the interview, summarized, and described the issues.

Conceptual framework

The researcher employs Faculty of Arts Program in Community Development Program, (2020 : 1-5) concepts and theories of community development according to the National Qualifications Framework for Higher Education in numerical analysis, communication and information technology skills., which may be described as a conceptual framework as shown in a diagram in Figure 1.
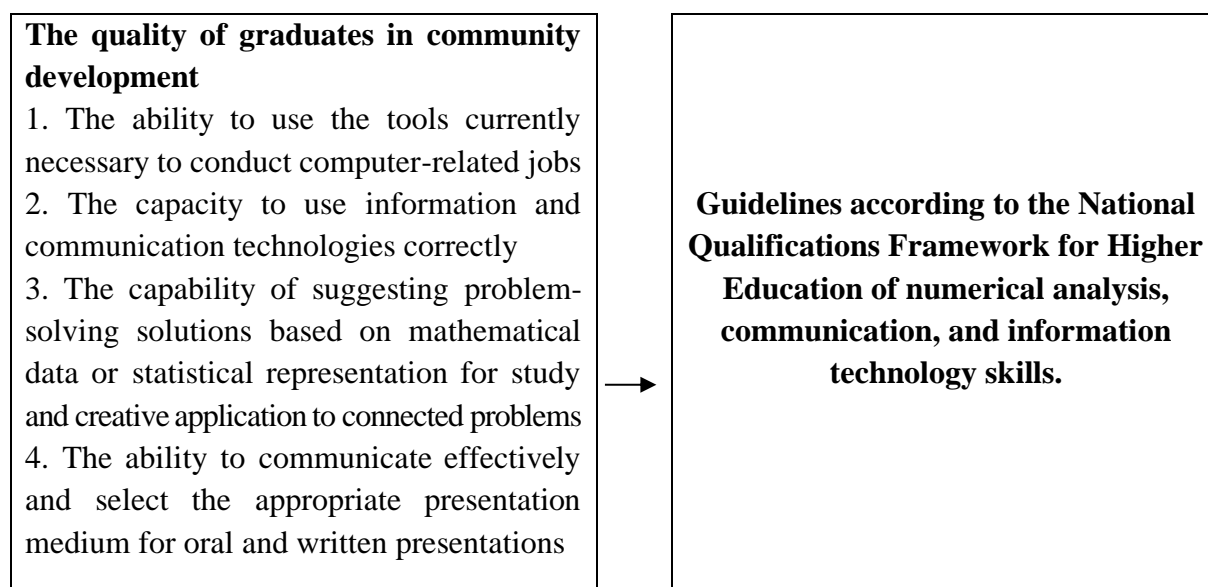
| **The quality of graduates in community development** 1. The ability to use the tools currently necessary to conduct computer-related jobs 2. The capacity to use information and communication technologies correctly 3. The capability of suggesting problem-solving solutions based on mathematical data or statistical representation for study and creative application to connected problems 4. The ability to communicate effectively and select the appropriate presentation medium for oral and written presentations | → | **Guidelines according to the National Qualifications Framework for Higher Education of numerical analysis, communication, and information technology skills.** |

Figure 1. Conceptual framework

Research Results

      1. The quality of graduates in community development based on the National Qualifications Framework for Higher Education in numerical analysis, communication, and information technology skills as shown in Table 1.

Table 1: The mean, standard deviation, and level of the quality of graduates in community development based on the national higher education qualifications standards framework in numerical analysis, communication, and information technology skills

The development of the quality of graduates in community development based on the national higher education qualifications standards framework in numerical analysis, communication, and information technology skills	Level of the quality		
	μ	σ	Interpret
The ability to use the tools currently necessary to conduct computer-related jobs	4.47	0.65	high
The capacity to use information and communication technologies correctly	4.24	0.73	high
The capability of suggesting problem-solving solutions based on mathematical data or statistical representation for study and creative application to connected problems	4.23	0.80	high
The ability to communicate effectively and select the appropriate presentation medium for oral and written presentations	4.18	0.91	high
Total	**4.28**	**0.11**	**high**

      According to Table 1, This study shows that:

      1. Overall, graduate users had opinions on the quality of graduates in community development based on the National Qualifications Framework for Higher Education in numerical analysis, communication, and information technology skills are at a high level. ($\mu = 4.28$, $\sigma = 0.11$)

      2. The ability to use the currently necessary tools to conduct computer-related jobs had the highest mean at the highest level ($\mu = 4.47$, $\sigma = 0.65$).

      3. The capacity of using information and communication technologies correctly at a high level comes next ($\mu = 4.24$, $\sigma = 0.73$).

      4. The ability to communicate effectively and select the appropriate presentation medium for oral and written presentations is at a high level, with the lowest average ($\mu = 4.18$, $\sigma = 0.91$).

The quality of graduates in community development based on the National Qualifications Framework for Higher Education in numerical analysis, communication, and information technology skills are at a high level ($\mu = 4.28$, $\sigma = 0.11$), According to the findings of Community development according to the National Qualifications Framework for Higher Education in numerical analysis, communication and information technology skills (Faculty of Arts Program in Community Development Program, 2020 : 1-5), such as use the tools currently necessary to conduct computer-related jobs. The capacity to use information and communication technologies correctly. The capability of suggesting problem-solving solutions based on mathematical data or statistical representation for study and creative application to connected problems. The ability to communicate effectively and select the appropriate presentation medium for oral and written presentations. According to the findings of Ittichinnapat, Piromjitpong, and Sawadthaisong (2016 : 142–153), research-based teaching and learning management for skill development of numerical analysis, communication, and information technology usage is at the high level (mean = 3.56, $\sigma = 0.50$) and has a high level of success ($\mu = 3.49$, $\sigma = 0.65$). This indicates that the community development graduates have numerical analysis, communication, and information technology skills for work and can solve community problems. This study shows that choosing an appropriate presentation media format for oral and written communication yields the lowest average outcome. Therefore, they should promote this field for graduates who develop and diversify communities to enhance community development.

2. Guidelines for the development of the quality of graduates in community development according to the National Higher Education Qualifications in numerical analysis, communication, and information technology skills. This study shows that:

2.1 The usage of information and communication technology tools at work shows the emphasis on documentary work, computer program training (like Microsoft Office), and the usage of cellphones to improve community research. A few excerpts from the interview are as follows:

"A concentration on documentary work." (Interviewed on May 21, 2021, by a graduate user)

"I want you to concentrate on fundamental computer usage, like Word, Excel, and PowerPoint, because it is required for work." (Interviewed on May 22, 2021, by a graduate user)

"Use your phone as a community work interface." (Interviewed on May 23, 2021, by a Community Development Graduate)

2.2 Solving community challenges creatively using information and technology revealed that smartphones can combine work and data collection for the community using the SPSS statistical program. A few excerpts from the interview are as follows:

"Use your phone to save data in the community." (Interviewed on May 29, 2021, by a Community Development Graduate)

"Use a statistical tool such as SPSS or others to assist in community activities such as data collection in the community."
(Interviewed on May 21, 2021, by a graduate user)

2.3 The appropriate use of information and technology in community work shows that graduates should learn to utilize technology, basic computers like Word, Excel, and PowerPoint, and all areas of technological communication tools. These skills have a requirement in the real workplace. A few excerpts from the interview are as follows:

"Developing digital skills and using basic computers like Word, Excel, and PowerPoint for community work." (Interviewed on May 21, 2021, by a graduate user)

"Acquaint yourself with all areas of technological communication tools." (Interviewed on May 23, 2021, by a Community Development Graduate)

Guidelines for enhancing the quality of graduates in community development based on the National Qualifications Framework for Higher Education in numerical analysis, communication, and information technology skills. The results of this study are as follows: The innovative use of information and communication technology tools like computers and smartphones for documentary work of collecting data and addressing problems of the community. This is consistent with Thaitosang & Wongchachom's research (2018: 182–188) that indicates the promotion of contemporary technology like computers, tablets, and smartphones. These mediums are useful for arranging training and teaching the community. It is also beneficial for data collection and community research. It is even consistent with Kouziokas (2016 : 347–352). The benefits of generally encouraging the development of an efficient framework of information and communication technology initiatives advances and promotes sustainable development.

Discussion

The researcher employs concepts and theories of community development according to the National Qualifications Framework for Higher Education in numerical analysis, communication and information technology skills.

1. The quality of graduates in community development based on the National Qualifications Framework for Higher Education in numerical analysis, communication, and information technology skills are at a high level (μ = 4.28, σ = 0.11).

2. Guidelines according to the National Qualifications Framework for Higher Education of numerical analysis, communication, and information technology skills. This study emphasizes using computer applications for documentary work. It helps in the creative application of information and communication technology tools like computers and smartphones for documentary purposes. It also provides information to the community and resolves local problems.

Recommendation

This article contains excerpts from the Educational Quality Assurance Program 2021, Department of Community Development, Section 3, about students and graduates according to Indicator 2.1, Graduate Quality, of the National Qualifications Framework for Higher Education. The author is responsible for this section and will gather further material on project completion. It will help improve the quality of graduate output to fulfill the demands of graduate users. In this respect, I would like to thank Nakhon Si Thammarat Rajabhat University for its contribution to the academic research, the experts and course coordinator for their support, and all of the informants for their information and suggestions.

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