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Development of Prototype Administration on Structural Equation Modeling Research Using Multiphase Mixed Methods Research Approach for Graduate Students of Buddhist University

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ABSTRACT

The objectives of this research are 1) to develop the structural equation model research management process using a mixed methods research methodology paradigm, multi-phase method for doctoral students at Buddhist universities; 2) to experiment with the structural equation model research management process with research methodology paradigm of mixed methods, multi- phase method for doctoral students of monastic universities, and 3) to create and evaluate a prototype of research administration, structural equation model, with a paradigm of research methodology of mixed methods, multi- phase method for doctoral students. of the Sangha University. This research is action research (Action Research) according to the PAOR process, consisting of planning (Plan), taking action (Act), observing (Observe) and reflecting (Reflect). The researcher has designed the research according to the PAOR research cycle. The research results are summarized. as follows: 1. Results of the development of the structural equation model research management process using a multi- phase mixed methods research methodology paradigm for doctoral students at Buddhist universities. It can be concluded that it is divided into 7 steps, called the SEM model research design methodology. Multi- phase mixed methods research consists of Step 1: Develop the research conceptual framework into a causal model (SEM); Step 2: Design with Multi-phase Mixed Methods Research (MMMR); Step 3: Examine variables according to the research conceptual framework as well. Qualitative research and summarize it as a foundation theory (GTM); Step 4: Confirm the causal model with quantitative research (Model); Step 5: Use the causal model to design creative activities with action research (PAOR); Step 6: Reflect on the results. Putting the model to good use (Model Utilization); and step 7, creating innovation from the results of trying out the model (innovation). 2. The results of reflection on learning about the research management process of structural equation models using the multi- phase mixed methods research method paradigm for doctoral students at Buddhist universities found that they have knowledge and understanding about creating a conceptual framework in Research into causal models. Learning the variables of Structural Equation Model research is called latent variables and observed variables. Passed variable has the ability to analyze data with advanced SEM statistics and can integrate Buddhist principles as variables within the model including the findings of the transmitted variables that can be further developed to design activities to develop target groups in real places to see empirical results. 3. Results of the evaluation of the prototype of research administration, structural equation model, with a multi-phase mixed method research methodology paradigm for doctoral students of monastic universities. From evaluating the quality of the research report, Structural Equation Model with mixed methods research, which represents a prototype of research management, Structural Equation Model with research methodological paradigm, mixed methods, multiphase method for undergraduate students, Ph.D. of the Saṅgha university, it can be concluded that the quality level is generally, at a very high level. There are 3 models with the highest quality level: the model for the effectiveness of scout administration in basic educational institutions; Buddhist learning ecosystem model and the model of effectiveness of innovative Buddhist methods for teaching and learning Thai traditional medicine, followed by

the model of Buddhist innovation based on the new way of promoting healthy development. and a causal model of Buddhist leadership characteristics in an innovative society for educational institutions.

Keywords: Development of Prototype Administration, Structural Equation Modeling, Multiphase Mixed Methods Research Approach, Graduate Students of Buddhist University

1.Introduction

Buddhist research is firmly rooted in the qualitative research format of Documentary Research, where students and faculty have expertise in studying the principles of Buddhism as they appear in Buddhist scriptures but when the trends of change in today's world society occur quickly. As a result, problems in society began to become more complex, causing research designs in Buddhism to begin adjusting to be consistent with the actual conditions of society. The research paradigm began to adjust from qualitative research to objective research. The amount that analytical statistics began to play a role in quantitative data analysis but in the context of Buddhist research. The researcher cannot refrain from conducting qualitative research, which is the heart of research science in the context of Buddhist research. How to create harmony in the research design? There is a need for integration between Buddhism and modern science. and guidelines for designing mixed methods research (Mixed Methods Research) so that students can choose to design research according to their aptitudes. where quantitative and qualitative research methods can be designed and used together. and there are methods used together according to the nature of the research design and research objectives. Many researchers use quantitative research methods along with qualitative research methods, called mixed methods research (Mixed Methods Research) (Klomkul, L. 2011; Tashakkori and Teddlie, 1998, cited in Nonglak Wiratchai, 2009) [1] [2] that can be applied to the design of Buddhist research especially in research where Buddhist principles are integrated with modern science, such as research on Buddhist education administration. At present, it is imperative that mixed methods research plays a role in research design to answer more complex research problems, especially in society during the Digital age, mixed methods research has become a widely popular research method in all sciences and fields of study and has been rapidly disseminated around the world. Therefore, for researchers who want to Learn about mixed methods research. You must strive to research and learn in order to keep up with scientific developments in order to gain guidelines for planning and doing. Mixed methods research is successful (Creswell, J.W., 2015) [3]. As with the development of progress in Buddhist research, mixed methods research is one option that faculty, researchers, or students can use and design their research in accordance with research problems in today's society.

Research to develop Structural Equation Modeling (SEM) is another research paradigm that plays an important role in quantitative data analysis and currently in educational research, it is used as a tool for quantitative data analysis to develop causal models to study the influence of variables that affect each other by analyzing the consistency of the developed model with empirical data including analysis of influence values, both direct influences indirect influence and total influence. That will be useful in putting the research results to use where statistical analysis SEM has the potential to analyze extensive data. Potential of statistical analysis SEM has analytical principles that can analyze data from the simplest statistic such as t-test to more advanced statistic and research models and SEM analysis models. The suitability of SEM analysis lies in researchers being able to use the statistics to analyze as a whole. It follows the research model and has statistics to test the validity of the research model. Importantly, the basic statistical agreement has been relaxed, normally, analytical statistics are more advanced statistics. There will be more preliminary statistical agreement but the SEM analysis shows less agreement. Therefore, another very important aspect of suitability is statistical analysis of SEM therefore depends on relaxation (Relax) basic statistical agreement. The statistical analysis of SEM takes the error term into analysis as well, makes it possible to analyze data in cases where the error terms are related. Variables in research models are subject to measurement error, or the research model can have latent variables. Predictor variables may be interrelated. An analytical model is not required, must be a positive influence model and influence in one way. It may be a multiplicative model with reversible influence and a model with reversible influence (Non-Recursive Model). It can also analyze the case of multiple variables in the model. There is a nominal level of measurement. or in ranked order as well. It also has the potential to analyze data from experiments in cases where there are hidden variables. In experimental research when the dependent, variable is created based on a measurement model and the dependent variable is in the form of a latent variable. Analysis with SEM analysis will give more accurate analysis results than analysis with traditional ANOVA, MANOVA. From the background and importance of this

problem, the researcher is interested in developing a prototype for research administration, Structural Equation Model as well. Research methodological paradigm mixed with multi-phase methods for doctoral students in monastic universities to provide guidelines for developing research paradigms that keep up with changes in problems occurring in world society that will later be developed into research problems. That requires research designs that have both greater depth and breadth.

2. Research Objectives

2.1 To develop a structural equation model research management process with a multi-phase mixed methods research methodology paradigm for doctoral students at Saṅgha university.

2.2 To experiment with the structural equation model research management process using a multi-phase mixed methods research methodology paradigm for doctoral students at Saṅgha university

2.3 To create and evaluate a prototype of structural equation model research management using a multi-phase mixed method research methodology paradigm for doctoral students at Saṅgha university.

3. Research Method

This research is action research according to the PAOR process, consisting of planning (Plan), action (Act), observation (Observe), and reflection (Reflect). The researcher has designed the research according to the PAOR research cycle as following:

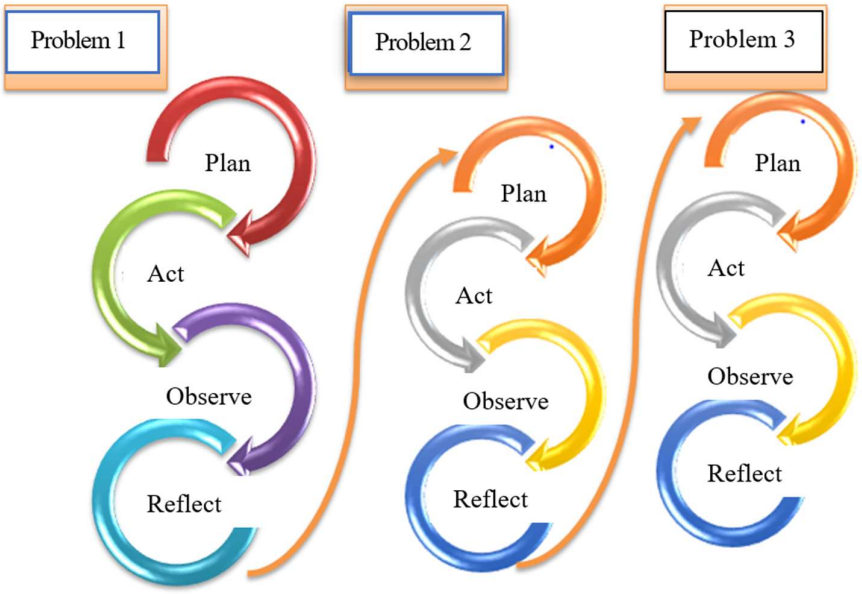

Figure 1 PAOR Action Research Cycle

From the action research cycle; the research team has designed the research to be consistent with the operations of the research project by dividing the research into each phase according to the PAOR cycle, with details as following:

Phase 1: Development of the structural equation model research management process with a multi-phase mixed method research methodology paradigm for doctoral students at Saṅgha university.

Step 1: Planning step (Plan) Planning to develop the research management process of Structural Equation Model using the process.

Perspective on multi-phase mixed methods research methodology for doctoral students at Saṅgha university. The key informants are 12 experts in educational research methodology obtained through purposive selection. The tool used to collect data is a research project development guideline form.

Step 2: Action step (Act); Actions to develop the research management process of Structural Equation Modeling (SEM) using a multi-phase mixed methods research methodology paradigm for doctoral students at Saṅgha university. The target group for process development is 12 doctoral students, obtained through purposive

selection. The tools used in the research are research management process design activities and research quality assessment form and a form for recording participation in research development activities to analyze qualitative data by creating inductive conclusions. Quantitative data were analyzed using Descriptive statistics and Reference statistics.

Step 3: Observe: Observing the results of the development of the Structural Equation Model research management process using the multi-phase mixed methods research methodology paradigm of doctoral students at Saṅgha university that is the result of the action in step 2.

Step 4: Reflect: Reflecting on the design of the Structural Equation Model research management process with a multi-phase mixed methods research methodology paradigm for doctoral students at Saṅgha university. The target group for reflecting on the results of process design is 12 people, obtained through purposive selection. The tools used in the research are process development reflection record form. Qualitative data were analyzed by creating inductive conclusions. The results obtained from the first phase of the research were the Structural Equation Model research management process using the research methodological paradigm of mixed methods, multi-phase methods for Doctor of Philosophy students of Saṅgha university.

Phase 2: Experimenting with the Structural Equation Model research management process using a multi-phase mixed method research methodology paradigm for Doctor of Philosophy students of Saṅgha university.

Step 1, planning stage (Plan), the stage of trial of the structural equation model research management process with a mixed method research paradigm, multi-phase method for doctoral students of Saṅgha university, determine the target group for trial of the developed process. There were 12 Ph.D. students who were selected from the specific design of the research tools, activities according to the research management process and research quality assessment form and a research development activity participation record specifying methods for analyzing qualitative data by creating inductive conclusions, and quantitative data was analyzed using Descriptive and Reference Statistics.

Step 2: Action step (Act) Action to try out the structural equation model research management process with the multi-phase mixed methods research methodology paradigm for doctoral students of the Saṅgha university. The target group for testing the developed process was 12 doctoral students, obtained through purposive selection. The tools used in the research are activities according to the research management process and research quality assessment form and a form for recording participation in research development activities to analyze qualitative data by creating inductive conclusions and quantitative data was analyzed using Descriptive and Reference Statistics.

Step 3: Observe; Observing the results from the experiment of using the Structural Equation Model research management process with the multi-phase mixed methods research method paradigm among doctoral students at a Buddhist university from the steps that were performed.

Step 4: Reflect step (Reflect); Reflection on the results from the experiment of using the Structural Equation Model research management process with the multi-phase mixed method research method paradigm of Ph.D. students of the Saṅgha university from the steps taken and observation of the target group in reflecting on the results experimenting with the Structural Equation Model research management process using a multi-phase mixed methods research methodology paradigm among 12 Ph.D. students of a Buddhist university through purposive selection. Tools used for reflection being a form for recording the reflection of the results of the trial of the process, analyze qualitative data by drawing inductive conclusions. And the results obtained from the second phase of the research are the results of an experiment using the Structural Equation Model research management process with a multi-phase mixed methods research method paradigm by doctoral students of the Saṅgha university.

4. Results

4.1 Results of the development of the Structural Equation Model research management process using a multi-phase mixed methods research methodology paradigm for doctoral students at Buddhist universities. It can be summarized that it is divided into 7 steps, called the SEM model research design methodology. The multi-stage mixed methods method consists of Step 1: Develop the research concept into a causal model (SEM). Step 2: Design with Multistage Mixed Methods Research (MMMR). Step 3: Examine the variables according to the research concept by Conduct qualitative research and summarize it into a foundational theory (GTM). Step 4: Confirm the causal model with quantitative research (Model). Step 5: Use the causal model to design creative

activities using action research (PAOR). Step 6: Reflect on the results of the application. The model is put to good use (Model Utilization) and step 7 creates innovation from the results of experimenting with the model (Innovation).

4. 2 The results of reflection on learning about the research management process of Structural Equation Modeling using the multi- phase mixed methods research methodology paradigm for doctoral students at Saṅgha university found that they have knowledge and understanding about creating a conceptual framework for research into causal models. Learning the variables of structural equation model research is called latent variables, observed variables, transmitted variables having the ability to analyze data with advanced SEM statistics and can integrate Buddhist principles as variables within the model including the findings of the transmitted variables that can be further developed to design activities to develop target groups in real places to see empirical results.

4. 3 Results of the evaluation of the research management prototype of the Structural Equation Model using the multi- phase mixed methods research methodology paradigm for doctoral students at Saṅgha university obtained from evaluating the quality of the research report on structural equation models with multi-phase mixed methods research that represents a prototype of research management, Structural Equation Modeling with a research methodological paradigm of mixed methods, multi- phases for undergraduate Ph. D. students of the Saṅgha university, it can be concluded that the quality level is generally at a very high level. There are 3 models with the highest quality level: the model for the effectiveness of scout administration in basic educational institutions; Buddhist learning ecosystem model and the model of effectiveness of innovative Buddhist methods for teaching and learning Thai traditional medicine, followed by the model of Buddhist innovation based on the new way of promoting healthy development and a causal model of Buddhist leadership characteristics in a disruptive innovation society for educational institutions.

5. Discussions

5. 1 From the results of developing the research management process, structural equation model, with a multi- phase mixed methods research methodology paradigm for doctoral students of Saṅgha university. In conclusion, it can be divided into 7 steps, called the SEM model research design method with multi-phase mixed methods research, consisting of: Step 1: Develop the research concept into a causal model (SEM). Step 2: Design with Mixed Multistage Method Research (MMMR). Step 3: Examine the variables according to the research concept using qualitative research and conclude with a Grounded Theory Method (GTM). Step 4: Confirm the causal model with quantitative research (Model). Step 5: Lead causal models are used to design creative activities with operations research (PAOR). Step 6 reflects the results of using the model (Model Utilization) and step 7 creates innovation from the results of experimenting with the model (innovation). It was developed through the research of Natnicha Jeadora (2022) [4] who designed the research on the Buddhist learning ecosystem model in schools under the Primary Educational Service Area Office The objectives are 1) to study the components of factors affecting the Buddhist learning ecosystem in schools under the Primary Educational Service Area Office, 2) to develop a Buddhist learning ecosystem model in schools under the Primary Educational Service Area Office, and 3) to propose a Buddhist learning ecosystem model in schools under the Primary Educational Service Area Office, and research by Thippawan Suphiphet (2022) design research on Model of administration of the monastery in the Phrapariyattidhamma School, General Education Department The objectives are 1) to study the model of administration of the Ramanisathan in the Phrapariyattidhamma School, General Education Department, 2) to develop a management model for the Ramanisathan in the Phrapariyattidhamma School Department of General Education, and 3) to propose the management model of the royal residence in the Phrapariyattidhamma School, General Education Department.

5. 2 From the results of reflection on learning about the research management process of Structural Equation Model using the mixed methods research methodology paradigm for doctoral students at Buddhist universities, it was found that they have knowledge and understanding about creating a conceptual framework in research into causal model. Learning the variables of structural equation model research is called latent variables, observed variables, transmitted variables having the ability to analyze data with advanced SEM statistics and can integrate Buddhist principles as variables within the model including the findings of the transmitted variables that can be further developed to design activities to develop target groups in real places to see empirical results. This is consistent with the research of Phramaha Prayoon Thirawaro (Trakan) (2022) [6] who have conducted research on structural equation models for the performance of professional personnel according to Buddhist principles

Mahachulalongkornrajavidyalaya University The work of professional personnel according to Buddhist principles has been integrated, and in the research of Phrakru Thamrongwongwisut (Theerasak Theerasakko) (2022) [7] who have done research on A model for developing public welfare management in the Buddhist way of the Thai Sangha with integration between components of the development of public welfare management in the Buddhist way of the Thai Sangha with the principles used in the development of public welfare management.

5.3 From the results of the evaluation of the prototype of research management, structural equation model with a mixed methods research methodology paradigm, multi-phase method for doctoral students of Saṅgha university obtained from evaluating the quality of the research report on Structural Equation Model with multi-phase mixed methods research that represents a prototype of research management, Structural Equation Modeling with a research methodological paradigm of mixed methods, multi-phases for undergraduate Ph.D. students of the Saṅgha university, it can be concluded that the quality level is generally at a very high level. There are 3 models with the highest quality level: the model for the effectiveness of scout administration in basic educational institutions; Buddhist learning ecosystem model and the model of effectiveness of innovative Buddhist methods for teaching and learning Thai traditional medicine, followed by the model of Buddhist innovation based on the new way of promoting healthy development and causal models of Buddhist leadership characteristics. All 3 research results are consistent with the research results of Ratnatee Wirojrit (2016) [8] conducted the research on "Development of a causal relationship model for happiness in love according to Buddhist psychology principles. The research objectives are 1) to study the concepts of Buddhist theory, psychology, and contemporary psychology related to happiness in love; 2) to develop a conceptual framework for creating a model of the causal relationship of happiness in love according to the principles of Buddhist psychology; and 3) to examine the validity of the model of the causal relationship of happiness in love according to the principles of Buddhist psychology.

6. Recommendations

6.1 Recommendations for using the research results

1. From the findings of this research, Structural Equation Model research management process with a multi-phase mixed methods research methodology paradigm for doctoral students at Saṅgha university divided into 7 steps, called SEM model research design methodology with multi-phase mixed methods research. It is a research management process that can be applied to dissertation advising for doctoral students who are interested in doing research that uses advanced statistical analysis.

2. Should design and create learning activities. There are activities to learn about sufficiency agriculture for students and youth in the area. and organize volunteer student activities, giving students the opportunity to learn and do spatial activities to be a process of creating a learning model that integrates Buddhist principles in every activity.

3. From the development of the research management process, Structural Equation Model, with a multi-phase mixed methods research methodology paradigm for doctoral students of Saṅgha university. This is learning about the variables of Structural Equation Model research called latent variables and observed variables passed variable having the ability to analyze data with advanced SEM statistics and can integrate Buddhist principles as variables within the model that can use Buddhist principles as important variables in analyzing and studying the results of the variables in order to link them to guidelines for actual practice.

6.2 Recommendations for further research

1. This research is action research (Action Research) according to the PAOR process, consisting of planning (Plan), action (Act), observation (Observe) and reflection (Reflect), which is research that focuses on developing a process and then putting it to experiment using with the learning of the target group to aim towards the success of research at the doctorate level for the next research, it should be designed as research and development in order to truly get the results from experimenting with this process.

2. This research is research in an educational context integrated with Buddhist principles, which is a perfect connection between the variables of interest in the study. However, in the next research should be designed that emphasizes the experimental research process to study the results of using the process that has been developed to be directly beneficial to the target groups that want to develop.

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