

Conference Paper

Doctoral Dissertation Research Trend: A Comparative Study of Postgraduate Programs in Education Universities

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Abstract

The purpose of this study was to analyze the research trends in the doctoral dissertation program over the past three years (2016 - 2018). A qualitative approach with content analysis methods was conducted at 4 universities, selected from 12 universities of the Teacher Education and Training Institute, namely Universitas Pendidikan Indonesia, Universitas Negeri Yogyakarta, Universitas Negeri Surabaya and Universitas Negeri Jakarta. Sample in this study were study program at Educational Management, Language Education, Sports Education, Basic Education, and Education Research and Evaluation. A total of 327 dissertation were analyzed, consisted 36 dissertations from UPI, 32 dissertations from UNY, 35 dissertations from UNESA, and 224 dissertations from UNJ. The parameters used to analyze the study was focus on research issues and themes, theories used, research methods, data collection techniques, sampling techniques and data analysis techniques, novelty, citations and reading sources. The results showed in the last 3 years, UNJ produced higher numbers of dissertation compared to others university. While others, less than 40 dissertations were selected. Education research trends in each study program are very diverse, ranging from issues and research themes, research methods used to data analysis. Majority of the research methods used were descriptive qualitative, quantitative and R&D, data collection using questionnaires, observations, interviews, and documents, while data analysis uses more descriptive analysis.

Keywords: Content analysis, Educational research, Dissertation research trends

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1. Introduction

Conducting or writing a dissertation is the final stage of completion of study to obtain a Doctorate degree. This is to show that doctoral program students have reached the peak in gaining the knowledge and skills required to manage and conduct research. In general, the preparation of a dissertation is carried out through several stages that must be followed in the preparation of research to prepare a dissertation, which includes searching for research topics; setting research objectives; searching, organizing and

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critically analyzing relevant primary and secondary data; conducting a literature review; determine and use appropriate research methods; analyze selected primary data and draw on the literature in the field; draw a conclusion; and make recommendations and relevant indications from the field for further research.

The dissertation as a formal document also needs to demonstrate knowledge and understanding beyond the undergraduate level and must reach the level of scope and depth beyond those taught in class. That is, all dissertations must be presented in an appropriate academic style and format, appropriate goals, clarity of expression, grammar, use of citations and references relating to the approach clearly structured for justification and validation of facts, as well as theories presented to form appropriate argument. According to the Presidential Regulation No. 8/2012 concerning the Indonesian National Qualification Framework (KKN) related to doctoral program at the 9th level of KKN (highest level), which is as follows: (1) developing new knowledge, technology, and art in the field of his/her scientific or professional practice through research, to produce creative, original and tested work; (2) solving the problems of science, technology, and art in their scientific field through inter, multi, and transdisciplinary approaches; (3) manage, lead, and develop research and development that is beneficial to the benefit of humanity, and is able to obtain national and international recognition. Thus, research for the preparation of the dissertation of each doctoral study program must be within the scope of the development of scientific fields and expertise.

In the dissertation, findings are required from the finding of existing science and technology. The findings can be in the form of novelty in substance, method, application or review. But in fact, several dissertations show the similarity of problems, variables, objectives, methods, citations and quotations and presentation of findings. In addition, until now there is no data whether the results of the study have been made applied in the world of education or whether it just stops on dissertation works and journal articles that must be published. Meanwhile, the proliferation of research carried out at Postgraduate is referring to the educational context, causing several problems. Research results on a topic can be interconnected with each other or they can conflict because most studies are conducted independently [1]. For this reason [2] states that it is very important to examine studies and evaluate trends, methodologies and research results and so on. In addition, quantitative and qualitative research from scientific studies will enable research trends to be identified to monitor the development and change of scientific disciplines [3]. Affirmed by [4, 5] that educational research must be examined periodically the types of studies aimed at synthesizing studies in education have gained popularity and varied from narrative studies to meta-analysis [6].

Based on the results of previous research conducted abroad, most of the focus of dissertation research trend analysis refers to specific scientific fields. As an example of research trends in the field of stem cell-biology [7], analysis of trends in the use of citations and research methods [8], interdisciplinary research trends [9]. In Indonesia alone, there has been no research on dissertation research trends in the field of education, although there is a thesis and thesis research that examines mathematical analysis [10]. So there is a need for research on dissertation research trends to see the development of the research world developed in Indonesia, especially in the field of education at the level of Doctoral Education at Jakarta State University (UNJ) - in line with the start of revitalization at Postgraduate - and other LPTKs as a comparison in a period of three years last (2016 - 2018). This study focused on the selection of the background of the problem, research topics, research objectives, theoretical basis, the methods used and the value of the novelty or presentation of findings.

2. Methods and Equipment

2.1. Methods

2.1.1. Study design

This research is a qualitative descriptive study using content analysis. Qualitative research with content analysis can help researchers identify the general constructs of the dissertation and classify these constructs.

2.1.2. Population and Sample

The population of this study was all Doctoral Dissertations in Institute of Teacher Education and Educational Studies (LPTK) within 3 (three) years (2016-2018). Determination of the sample by purposive sampling. From 12 (twelve) Postgraduate LPTKs, 4 (four) LPTKs will be determined based on distance, time and cost. According to [8] the term purposive indicates precisely where the sample members are chosen with the aim of representing the location or type with respect to the main criteria. Two main reasons for this are (i) to ensure that all major constituencies of relevance to the research study are included, (ii) to ensure that, within the main criteria, some diversity is included so that the impact of the relevant characteristics can be explored.

2.1.3. Instrument

The instrument developed in this study was a validation sheet used to conduct an analysis of existing educational research dissertations. The instrument was developed by researchers through a literature review from previous research. After that, the instrument will be reviewed by a minimum of 5 experts to ensure expert review content for the test content of the developed instrument. Each expert will conduct a review of the accuracy and suitability of the question items developed to measure the expected indicators. If there are differences between experts, an expert panel discussion will be conducted. After an agreement is reached, the instrument will be revised and ready for use.

2.1.4. Data collection procedure

Data collection techniques were collected using the content analysis method which is a systematic procedure for reviewing or evaluating dissertations both printed and electronic material (computer-based and internet) and with the rubric form developed by researchers. Careful reading and recording are objective analyzes conducted by the researcher. Objective analysis especially in reading the document several times and recording findings carefully during reading. The data collection instruments in this study use a checklist sheet where the researcher has determined indicators which include: themes, theories used, research methods, data collection techniques, data analysis techniques, novelty values and sources used. Data collection will be carried out with a dissertation search in accordance with the inclusion and exclusion criteria in 3 (three) LPTK libraries that have been set. Keywords will be determined to help the dissertation search process and to do filtration with the duration of the dissertation only in 2016 - 2018.

2.1.5. Data analysis

Data analysis techniques using Content Analysis. According to [11] content analysis (content analysis) is a research model that is intended to solve actual problems in the present, by focusing on writing in a particular field. [12]states "research conducted on information documented in recordings, whether images, sounds, writings, or others commonly known as document research or content analysis. Content Analysis is carried out through several stages. First, the dissertation will be read to get an overall picture of the contents which include themes raised by the theories used, research methods, data

collection techniques, data analysis, novelty values, sources used. Second, each parameter examined from the dissertation will be categorized, determined sub-categories, and given a code. Third, the code will be compared on the basis of differences and similarities and sorted into categories and subcategories. The main researcher will do the first coding and the other researchers do the same thing separately then a meeting will be held to discuss the results of each coding and an agreement is reached [13]. Testing agreement between researchers by using test-inter rater reliability.

3. Results

The total number of dissertations obtained from all LPTKs was 327 dissertations consisting of 224 UNJ dissertations (68.5%), UPI 36 dissertations (11.0%), UNY 30 dissertations (9.2%), and UNESA 37 dissertations (11.3%). Meanwhile, based on the study program, data obtained for Education Management (MP) were 95 dissertations (29.1%), Language Education (PB) were 43 dissertations (13.1%), Sport Education (POR) were 59 dissertations (18.0%), Basic Education (PD) were 14 dissertation (4.3%); and Research & Education Evaluation (PEP) were 116 dissertations (35.5%) as shown in Table 1.

TABLE 1: LPTK, Doctoral Study Program, and Number of Dissertations

LPTK	Study program					Total
	Education Management	Language Education	Sport Education	Basic Education	Research & Education Evaluation	
UNJ	55	13	47	3	106	224
UPI	6	12	11	7	-	36
UNY	11	4	1	4	10	30
UNESA	23	14	-	-	-	37
Total	95	43	59	14	116	327

3.1. Education Management

UNJ has quite a number of dissertations for MP, while UNY has the fewest. Based on the chosen theme or issue, from 95 dissertations found a number of themes, issues, and research topics, namely 4 dissertations on managing content standards (4.1%), 1 dissertation on managing competency of graduates (1.0%), 12 dissertations on management of educational processes (12.4%), 2 dissertations on management of infrastructure (2.1%), 23 dissertations on management of Education (24.2%), 20 dissertations on management of assessment (20.6%), and 35 dissertations on management of educators

and education personnel (36.1%). Based on the approach and method used, from 95 dissertations found 29 dissertations with a qualitative descriptive approach (29.9%), 16 case study qualitative dissertations (16.5%), 2 ethnographic qualitative dissertations (2.1%), 4 phenomenological qualitative dissertations (4.1%), 1 grounded theory qualitative dissertation (1.0%), 9 dissertations by the method research and development (R&D) (9.3%), 1 dissertation with content analysis method (1.0%), 28 dissertations with survey method (28.9%), 1 dissertation with comparative experiment method (1.0%), and 6 dissertations using the correlational method (6.2%).

Data collection techniques, obtained information that from 95 dissertations found dissertations using data collection techniques through questionnaires as many as 47 (48.5%), through observation and observation 41 (42.3%), through interviews 39 (40.2%), through documents 51 (52.6%), through participation participated 12 (12.4%), and through group discussion (FGD) 1 (1.0%). Based on the sampling technique, information is obtained that using probability sampling, simple random sampling totaling 18 dissertations (18.6%), using Cluster Sampling 2 (2.1%), using Stratified Random Sampling 3 (3.1%), using Multistage Sampling 0 (0.0%), and using Proportional Random Sampling 6 (6.2%). Meanwhile, using non-probability sampling, Purposive Sampling as many as 35 dissertations (36.1%), using Saturated Samples 12 (12.4%), and Snowball Sampling 12 (12.4%). Based on data analysis, information was obtained that dissertations using descriptive analysis were 33 (34.0%), path analysis 28 (28.9%), content analysis 1 (1.0%), interactive analysis 4 (4.1%), and SEM 1 (1.0%).

3.2. Language Education

The number of dissertations analyzed was 43. In the Language Education Study Program, the issue of linguistic learning was more desirable. There are 6 dissertations related to linguistics learning (3.95%). As for the issues of translation, learning models, and action research, in 2017, each was examined by 2 dissertations (4%). Based on the data, within 3 years (2016-2018) there were 5 dissertations (11%) in 2017 that used qualitative (interactive) research methods, namely: (1) descriptive, (2) PTK, (3) Ethnography, (4) Problem Based Learning (PBL). Other methods used were qualitative (non- interactive) research methods 2 dissertations (4.6%), quantitative (quasi-experimental treatment 2x2) 1 dissertation (2.3%) and R&D, 1 dissertation (2.3%). Then the questionnaire remained a trend in 2017 but declined dramatically in 2018. For sampling, purposive sampling on non-probability sampling is a widely used technique compared to other techniques. For

data analysis, descriptive analysis and content analysis that are in demand from 2016 to 2018.

3.3. Sport Education

Based on the research topic, from 59 dissertations obtained information on themes and research topics raised in the dissertation, namely Learning Model with 23 dissertations (45.1%), Teaching Approach 2 dissertation (3.9%), Teaching Style 2 dissertations (3.9%), teaching method 4 (7.8%), Content and Knowledge Curriculum 1 dissertation (2.0%), Children's Knowledge and Context in Sports Education 14 (27.5%), and Evaluation of 5 dissertations (9.8%). Based on the research approach and method, a dissertation information obtained using descriptive qualitative was 3 (4.8%), case study 6 (9.7%), ethnography 2 (3.2%), mixed methods, research and development (R&D), concept analysis, content analysis, and meta-analysis and evaluation, respectively 1 dissertation (1.6%). Dissertations using quantitative approach and quasi-experimental methods and experiments each amounted to 9 dissertations (14.5%), research and development 16 (25.8%), quantitative correlational 3 (4.8%), and surveys totaling 8 (12.9%).

Based on data collection techniques, dissertation information obtained using questionnaires totaling 45 dissertations (76.3%), observation techniques, interviews and documents totaling 17 (28.8%), and the rest using participant observation and group discussion each 1 dissertation (1.7%). Based on the data analysis technique, information was obtained that dissertations that used descriptive analysis were 31 dissertations (63.3%) 11 dissertation path analysis (22.4%), and the rest used variant analysis and covariance of 7 dissertations (14.3%). Based on the research sampling technique, information was obtained that the dissertation using Probability Sampling: Simple Random Sampling was 22 (33.3%), cluster sampling was 3 (4.5%). While dissertations using Non-probability Sampling: Purposive Sampling are 39 (59.1%), and Non-probability Sampling: Quota Sampling is 1 (1.5%).

3.4. Basic Education

During a period of 3 years (2016 - 2018) there were only 14 dissertations produced. From the data obtained information that the issues / topics in the dissertation are grade 3 management (21.4%), learning technology 3 (21.4%), curriculum development 1 (7.1%), art education 1 (7.1%), evaluation and measurement 1 (7.1%), Social education 1 (7.1%), and Special education 1 (7.1%). Based on the research method, information was obtained

that the dissertation used a qualitative approach with descriptive methods of 1 dissertation (7.1%), case studies 4 (28.6%), ethnography 1 (7.1%), research and development (R&D) 2 dissertation (14.3%), quantitative quasi-experimental 4 dissertations (28.6%), and quantitative surveys as many as 1 dissertation (7.1%). For data collection shows that the interview is a technique that is widely used, although there are other data collection techniques such as questionnaires and observations. The majority of Basic Education Study Programs are path analysis. The sampling technique used in the dissertation in Basic Education Study Program generally uses probability sampling, namely simple random sampling and non-probability sampling, namely purposive sampling.

3.5. Research & Education Evaluation

UNJ and UNY which have education research and evaluation study programs. For the research topics / issues reviewed, of 116 dissertations found a number of research topics, namely Instrument Development and Assessment of 50 dissertations (43.1%), Program Evaluation in Education Management 37 (31.9%), Class Assessment 19 (16, 4%), Policy Evaluation 5 (4.3%). Based on the research approach and method, obtained information that the dissertation using the Descriptive Qualitative research approach were 39 (33.6%), qualitative case studies 2 (1.7%), qualitative evaluation 29 (25.0%), research and development (R&D) 11 (9.5%), quantitative experiment 8 (6.9%), quantitative non-experimental survey 14 (12.1%), quantitative non-experimental comparative 7 (6.0%), and quantitative correlational 2 (1.7%).

Based on data collection techniques, obtained information that a dissertation using a questionnaire of 66 (56.9%), observation 56 (48.3%), interviews 22 (19.0%), documents 33 (28.4%), participation participated 11 (9.5%), and group discussions were gathered 4 (3.4%). Based on the sampling technique, information is obtained that the dissertation uses Probability Sampling: Simple Random Sampling 70 (60.3%), Cluster Sampling 7 (6.0%), Stratified Random Sampling 4 (3.4%), Multistage Sampling 14 (12, 1%), and Proportional random sampling 2 (1.7%). Meanwhile, with Non-probability

Sampling: Purposive Sampling 16 (13.8%), and Non-Consecutive sampling 1 (0.9%). Based on data analysis, information was obtained that dissertations using descriptive analysis were 47 (40.5%), Path Analysis 15 (12.9%), Content Analysis 1 (0.9%), Coding Analysis 2 (1.7%), Analysis of Covariance 9 (7.8%), Interactive Analysis 2 (1.7%), Factor Analysis 2 (1.7%), and SEM analysis 1 (0.9%).

4. Discussion

For trends in the Education Management (MP) study program, the issue in the study is the management of educators and education personnel. The research method used is descriptive qualitative, while for quantitative research, surveys are still the chosen method. For data collection techniques, use questionnaires, observations and interviews. For sampling techniques, Simple random sampling for probability sampling and purposive sampling is a sampling technique that is widely used. For data analysis, using descriptive analysis. Linguistic learning is an issue of great interest in the study of Language Education (PB). For research methods, interactive qualitative research is the preferred method in language education studies. As for quantitative research using quasi-experimental and R&D. For data collection techniques, questionnaires, observations, interviews and documents became a trend in 2016. For sampling, purposive sampling in non-probability sampling is a widely used technique and for data analysis, descriptive analysis and content analysis are frequently used. In-line with [1] that in research methods, the methods used for educational research mostly use quantitative approaches, such as non-experimental, descriptive, survey and quasi-experimental.

The most raised issue in the dissertation of Sports Education (POR) is the learning model, then it is followed by children's knowledge and context in sports education. For research methods that are widely used for qualitative methods is a case study. As for quantitative, R&D is also used frequently. For data collection, questionnaires are a widely used technique and data analysis techniques use descriptive analysis. Research sampling techniques, using Probability Sampling, while Probability Sampling is a technique that has been chosen for Non-probability Sampling.

Meanwhile, for Basic Education (PD), the issues studied are very diverse, but classroom management is a widely studied issue. For qualitative research methods, case studies are the most widely used method, while for quantitative, quasi-experimental. For data collection, interviews are a technique that is widely used for data analysis techniques using path analysis and research sampling techniques using probability sampling, namely simple random sampling and non-probability sampling, namely purposive sampling. In Research and Educational Evaluation (PEP), mainly research topic or issue is program evaluation. For research methods, qualitative descriptive and quantitative surveys. For data collection, the technique used was a questionnaire. For sampling, random sampling is a technique often used of data collection using probability sampling and purposive sampling for nonprobability sampling and descriptive analysis is the most widely used. The findings of the research are supported by [3] although not entirely

that the field of education research mostly employ quantitative methods, purposive or random sampling techniques, and the data are mostly analyzed using descriptive statistics.

5. Conclusion

Based on the results of the study showed that the dissertation trend in the Doctoral program in 5 disciplines namely Educational Management, Language Education, Sports Education, Basic Education and Research and education evaluation in 4 LPTKs (UNJ, UPI, UNY and UNESA) have trends from the topics and research methods are almost the same. For issues, each study program has similarities that are tailored to each discipline. Almost the research methods used are the same, such as descriptive qualitative and case studies while for quantitative research are experiment, survey and also R&D. Research data collection data shows that the questionnaire is a technique that is widely used, although there are also other data collection techniques such as interview and observation. Simple random sampling for probability sampling and purposive sampling for Probability Sampling is the preferred sampling technique compared to other sampling techniques and descriptive analysis is the most done and then the trend turns to the path analysis.

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Conflict of Interest

The authors have no conflict of interest to declare.

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